

Lawn care in the '80's: Further future looks

More sophisticated marketing, a move to secondary markets, customers demanding more professionalism and companies expanding their services will all be part of the lawn care industry in the 1980's, according to a number of businessmen surveyed recently.

In its December, 1978 issue, LAWN CARE INDUSTRY ran a feature entitled *Lawn Care in the '80's*, quoting a number of lawn care businessmen across the country. Following are further comments from lawn care businessmen.

Marketing sophistication. Rich Anda, ChemLawn Corp. branch manager in Arlington Heights, Ill, said: "In the '80's, we will see several pesticides important to the lawn care industry removed from the market by the Environmental Protection Agency with no substitutes available."

He also said that marketing sophistication and research will become more necessary to maintain the growth rate the industry had in the 1970's. There will be a movement into smaller second-

ary markets as all of the major markets become more saturated. Also, there will be an overall reduced number of applications of herbicides and even some insecticides in many markets.

"There will be more university research pertinent to the lawn care industry leading to changes in some of the presently established program philosophies," Anda said. "Also, there will be new, more sophisticated equipment designs allowing the lawn specialist the choice and flexibility of applying only needed pesticides on each lawn."

He also feels there will be more intelligent customers regarding lawn care as a result on the increasing age of the industry and the exposure to more

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Lawn salesmen too aggressive? Chicago sod producers say yes

Are Chicago-area lawn care salesmen telling potential customers that their newly sodded home lawns are diseased, and that the sod came that way from the producer?

Sod producers in that metropolitan area say that a number of lawn care companies are using this ploy as a sales technique, and the sod producers are up in arms about it.

"It is a beautiful sales point if you are working for a lawn care company," Dean Hupe, of Evergreen Sod, Peotone, Ill., told

LAWN CARE INDUSTRY. "But all of our sod is inspected by the state, and there is no way we can be selling sod that is not up to par."

Hupe said that any turfgrass stand can contain disease causal organisms, but "it is just a matter of how hard you want to look. There is no question that there can be disease outbreaks in some situations, but there is just no way we are selling diseased sod."

"I am not going to get into mentioning names," Hupe said, "but it has been happening, and I hope the situation does not continue where the lawn care industry is bad-mouthing the sod industry." He stressed that the majority of Chicago lawn care companies are not involved in this situation.

Bill Corriveau, of Triangle Sod Farms, and also past president of the Sod Growers of Illinois said:

"We ran into it five or six times last year. We are unhappy that some lawn care salesmen are being a bit too aggressive. We don't want it blown out of proportion, but we also don't think this situation should continue."

"It is easy to get a homeowner excited over something like this after he has spent \$1,500 for a sodded lawn, and then telling him that it is diseased," Corriveau said.

He said that the growers' association discussed the situation at meetings last year, but no definite action has been taken as of yet.

FIXED FEE

Lawn-A-Mat changes franchise agreement

Lawn-A-Mat Chemical & Equipment Corp., Westbury, N.Y., has announced a major revision in its franchise agreements for new franchised dealers.

Under the new relationship, the franchised dealer pays a fixed annual fee to the company, which entitles him to receive ongoing marketing, management, agronomy, research, equipment and other support in addition to the use of Lawn-A-Mat trademarks.

The original Lawn-A-Mat dealer agreement required the dealer to pay the company 10

percent of its gross sales to receive these benefits.

Executive vice president Pat Lore told LAWN CARE INDUSTRY:

"The 10 percent fee basis was practical for about 15 years when our business economics were different. Times have changed and we are changing with them. We believe that, ultimately, most of the other franchised services will also come to realize this, if they have not already done so."

The new fixed fee arrangement has many advantages for both dealer and home office, Lore added, and is more suitable to the larger volume of business

being done as the lawn care industry continues to expand rapidly.

"In the past, the more business a dealer did, the more he paid us and the more expen-

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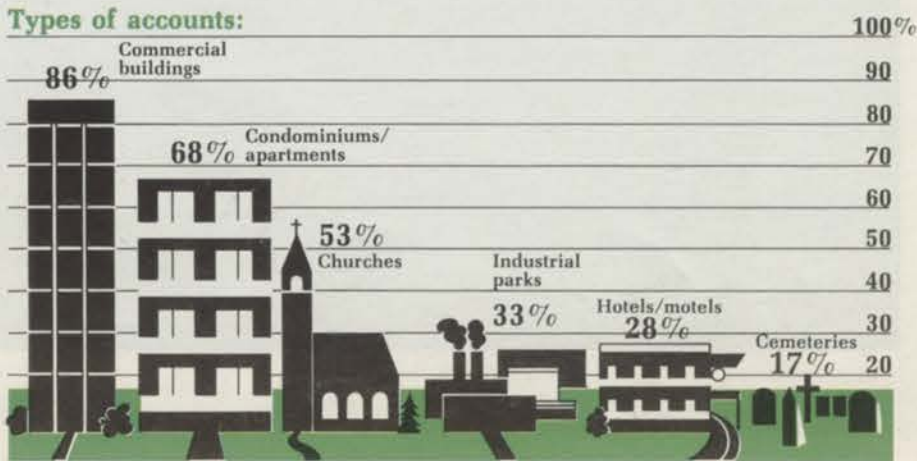
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91% of firms service more than home lawns

More than 85 percent of lawn care companies service commercial grounds, and 68 percent service condominium/apartment complexes, in addition to residential home lawn work, according to a survey conducted by LAWN CARE INDUSTRY.

Other non-residential areas mentioned in the survey and percentage of respondents who service them are: churches, 53 percent; industrial parks, 33 percent; hotels/motels, 28 percent; and cemeteries, 17 percent.

Do you service other than residential lawns? YES 91% NO 9%



QUICK STARTS

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Industry in Boston, see series of indepth business thrives. lawn care customers, they go about getting and keeping customers.



DERBY

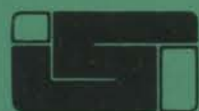
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ChemLawn's Miller to Musser board; company donates \$5,000

Dr. Robert Miller, vice president of ChemLawn Corp., Columbus, Ohio has been appointed to the board of directors of the Musser Foundation, the national organization which funds turf research.

ChemLawn has also agreed to donate \$5,000 to the Foundation over a five-year period. Dr. Miller told LAWN CARE INDUSTRY.

"The Musser Foundation is one of the few organizations



Miller

which supports turf research on a national basis, and since ChemLawn is a national company, this is one way of supporting the industry," Dr. Miller said.

He said that the company will continue to award scholarship and research grants on a selective basis across the country.

For further information about the Musser Foundation, created in honor of the late Pennsylvania State University turf professor Dr. H. B. Musser, contact: Dr. Fred V. Grau, executive director, Musser Foundation, P.O. Box AA, College Park, MD 20740, 301-864-0090.

SHOWS

PGMS meeting set for Baltimore in October

The 67th Annual International Grounds Management Seminar and Trade Show, sponsored by the Professional Grounds Management Society, will be held at the Baltimore Hilton Hotel Oct. 21-24.

David Lofgren of the Institute of Maintenance Research, Salt Lake City, Utah, will speak on "Money Management." Prof. James Faiszt of Virginia Polytechnic Institute and State University, Blacksburg, Va., will speak on "Money Management." There will also be other specialized workshops.

For further information, contact: Allan Shulder, PGMS, 19 Hawthorne Ave., Pikesville, MD 21208, 301-653-2742.

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MEMOS

ChemLawn offers 'liquid-vs-dry' booklet: In a recent full-page Sunday ad in at least one Midwestern lawn care market, ChemLawn Corp., Columbus, Ohio refuted a number of claims of competing lawn care companies, one of them being the "liquid versus dry" controversy. The copy read: "Competitor's Claim 'Dry products are best.' Try telling that to over one-half million ChemLawn customers (many of our customers have been with us 8-10 years). So what's best — liquid or dry? This question is relatively unimportant about fertilizers. There are good and not-so-good dry, granular fertilizers. Add a little water and you get good or not-so-good liquid fertilizers. Our competitors like to tell you different, because we're the largest lawn service company."

The ad continued: "Read their claims carefully: 'Liquids can cause surge growth' (so can dry); 'Liquids can be less effective' (so can dry). ChemLawn uses only the most appropriate products for your lawn, formulated by season and just for your area — based on thousands of soil tests. Weed and insect controls are definitely more effective in liquid form. Dry granular products bounce off weeds and have to be watered in to get insects. Liquid weed controls stick to weeds for maximum effectiveness. Liquids can get to the insects more easily than dry products. Be wary of simplistic claims."

The ad also included a clip-out coupon offering a free "Liquid-vs-Dry brochure."

Perf-A-Lawn runs with 'no price increase' campaign: In recent Sunday newspaper ads in at least one major Midwestern lawn care market, Perf-A-Lawn Corp., New Carlisle, Ohio announced its "no price increase" program for 1979. The ad copy read: "Perf-A-Lawn is one of the few major lawn care companies to announce no price increase for 1979. Perf-A-Lawn, in compliance with the President's anti-inflation program, is holding the line on prices to help you cut costs. You save a lot of green . . . you get a lot of green."

Lawncare offers 30% off: In its recent round of spring brochures to new customers, Lawncare, Inc., Cleveland-based lawn care company with five offices, offered a 30-percent-off plan. The offer was good through March 31. The brochures went out in mid-March. The company reports good results with the campaign.

Franchising full disclosure: After July 1, a franchisor who asks you to pay \$500 or more to set up a local outlet for any product or service must give you almost as much information as you would get in a prospectus required for new stock issues. The franchisor will be prohibited from making claims about how much money you can make from the franchise unless it provides you with a pack of facts about the records of other franchisees. If a franchisor violates the new rules (adopted by the Federal Trade Commission) it will be subject to penalties of \$10,000 for each failure to comply.

Consumer lawn marketers use TV: The top three marketers of consumer lawn care products — Scotts, Vigoro and Ortho — are turning to the tube rather than taking the traditional print route with their spring-summer stories of how to make the grass greener.

The big three are relying on television to build business in a market industry sources say is \$150,000,000 and growing. The pricing problem that plagued the lawn care area earlier in the 1970's resulting from a shortage of raw nitrogen, has now leveled off. Prices are slightly higher to the consumer, the marketers say, but only as a result of inflation.

O.M. Scott & Sons spends about \$5 million annually to advertise its Turf Builder line. The company is the acknowledged leader. Vigoro products, from the Estech division of Esmark, are considered to be the number two brand nationally. Vigoro is moving into the network market for the first time, using golfer Jack Nicklaus as a spokesman. The Ortho division of Chevron is a close competitor for the number two slot, and will spend \$5 million to promote its lines this year.

NFSA to concentrate on members: There was some talk earlier this year about the National Fertilizer Solutions Association making an attempt to offer services and programs for members of the lawn care industry.

At a recent meeting a special NFSA lawn/turf task force decided to concentrate its efforts on present members of the association who are involved in lawn and garden fertilization either in a retail or wholesale capacity. A special group was put together to write and publish a brochure emphasizing the benefits of fluid fertilizers for lawn and garden use. Another project will be to solicit university proposals for research projects that will be submitted to NFSA's agronomy committee for funding in 1980, newly appointed executive vice president David Murray told LAWN CARE INDUSTRY.

MEETING DATES

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.

Turf Equipment, Irrigation and Supplies Field Day, Rutgers University, Stadium and golf course, Route 18 (River Road), Piscataway, N.J., Oct. 2. Sponsored by Golf Course Superintendents Association of New Jersey. Contact: Dr. Henry Indyk, Box 231, Rutgers University, New Brunswick, N.J. 08903, 201-932-9453.

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 Hixson 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 30, 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. 21208, 301-653-2742.

Michigan Green Industry Seminar and Trade Show, Davisburg, Mich., Oct. 23-24. Contact: Gregory Patcham, Michigan State University, Cooperative Extension Service, North Office Building, Pontiac, Mich. 48053, 313-858-0887.

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 Seedsmens 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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FORD TRACTORS



NEWSMAKERS

Douglas Youtz recently started **Fairway Green**, a lawn care company based in Fargo, N.D.

Larry and Ed Wolf recently started **Mr. Lawncare**, a lawn service company based in East Cleveland, Ohio.

Dale Liddicoat is a tree specialist and troubleshooter for **Ed Wing Power Spraying**, Hollywood, Fla., according to company president Ed Wing.

David Swihart, Gary Buirley and Kevin Bomhard are service technicians for **Turf Gard Co.**, Troy, Ohio, according to company president Gary Weaver.

Techniturf, Inc., Boston area lawn care company based in Framingham, Mass., recently opened a branch office in Brockton, Mass. The new office services the South Shore of Boston, and is about 50 miles from the home office. New service representatives are Randy Kruk, Arthur Byers, Jim MacDonald and Michael Reed, according to fulfillment manager Jim Fothergill.

Keith Weidler, owner of **Shur-Lawn Co.**, Omaha, Neb., recently was elected vice president of the **Nebraska Turfgrass Foundation**. Shur-Lawn has a branch office in Lincoln, Neb., and recently built a new office and operations building in Omaha.

Jerry Kaplan recently started **Groundskeepers**, a lawn maintenance company based in Houston.



Tillison

Conard

In its continuing expansion program, Atlanta-based **Rollins Lawn Care** has added new supervisory and technical personnel to its branches in Marietta and Tucker, both in the Atlanta area. Heading new branch management operations for the Marietta office is Richard Tillison. George Presinger was also named as turf technician for the branch. The Tucker branch is headed by Roy Conard, and Edwards Echols has been named turf technician.

Mike Bailey owns a **Super Lawns** franchise based in Gaithersburg, Md. Michael Bussard owns company franchises in Silver Spring, Md. and Bowie, Md. Bill Tacynel owns company franchises in Columbia, Md. and Colesville, Md. Super Lawns, Inc. is based in Rockville, Md.

Alister Bell was recently named Springfield, Va. branch manager for Gaithersburg, Md.-based **Hydro Lawn**. Springfield assistants are Gary Garrick and Charles Yowell. Greg Richards is manager of the Gaithersburg branch with Jim Doll and Jim Smith as assistants.

Robert Johns, a general contractor with offices in Colum-

bus, Ohio, recently started **Summertime Lawn Care Products**. The company hopes to go into the wholesale liquid fertilizer business, as well as possibly service residential lawns.

Charles Wesson has joined **Agrilawn Corp.**, Goshen, Inc. as an agronomist, according to company president Jerry Hartsough. Wesson is a **Purdue** graduate and worked as a county agent in Kentucky. He was most recently employed by the Farm Bureau of Indiana. The company has also promoted Jim Carpenter to the post of sales manager.

Tom DeArmond has started **Pro-Grass Lawn Care Service** in Hubbard, Ore., affiliated with **Oregon Turf Farms**.

Century Landscape Contractors recently held an open house to celebrate its 10th anni-

versary and the opening of its newly completed corporate headquarters in Agoura, Calif., according to Robert Bailey and Fred Sperber.

Roger Widrig has joined **Lakeshore Equipment & Supply Co.**, Elyria, Ohio to serve as a sales representative in central and northeastern Florida. Also, Keith Langshore has joined the company to serve the Florida market.

Jacklin Seed Co., Post Falls, Idaho has opened a Pacific Coast office in Oregon's Willamette Valley at Salem, and has named Richard H. "Dick" Bailey manager of the Oregon operation. Bailey, formerly with **Turf-Seed, Inc.**, Hubbard, Ore. is currently president of the **Merion Bluegrass Association** and is incoming president of the **Oregon Seed Trade Association**. The announcement was made by company marketing manager Doyle Jacklin.

The Agricultural Chemicals



Dick Bailey



Brookhouser

Division of **Diamond Shamrock Corp.**, Cleveland, Ohio has named Roger B. Sebek business manager for fungicides. Also, the company has named Dr. Lynn W. Brookhouser as its Southwest region manager, serving Arkansas, Louisiana, Mississippi, New Mexico, Oklahoma, Texas and portions of Missouri and Tennessee.

Richard A. "Rich" Lewis has been named an agricultural sales representative for **TUCO, Division of The Upjohn Co.**, Kalamazoo, Mich., by marketing manager Owen B. Lewis.

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COST CUTTINGS

Recommend deep watering to customers

Michigan State University turf specialists stress the importance of a thorough soaking (six to eight inches deep) when watering a lawn, in order to keep it green and healthy throughout the summer. This type of information should be conveyed to your customers so that they can do their part to save you time and money.

Such soaking, however, should be infrequent "in order to encourage deep rooting and discourage diseases. The specialists also say "don't apply too much water too often.

"Overwatering can kill roots by eliminating their supply of soil oxygen. Lawns require watering at the first sign of wilt." Deep watering can be achieved by simply taking the nozzle off a hose and lying it on the ground in different areas of the lawn rather than the popular sprinkling method of watering, experts say.

MARKETS

\$365 million spent yearly on Maryland turf maintenance

Almost \$365 million is spent annually on turf maintenance in the state of Maryland, according to a recent estimate by University of Maryland extension turf specialist Dr. Charles H. Darrah.

More than \$272 million of this is spent annually on maintenance of 350,000 acres of lawns in the state, both professionally and by homeowners themselves.

Other turf areas, number of acres and total maintenance expenditures, according to Darrah's estimates are: lawn establishment, 11,000 acres, \$31.2 million; sod, 9,000 acres, \$6.4 million; golf courses, 13,500 acres, \$16.5 million; federal installations, 22,000 acres, \$11.4 million; schools and colleges, 18,-

800 acres, \$8.8 million; recreation areas, 25,000 acres, \$12.4 million; churches and cemeteries, 13,200 acres, \$2.5 million; airports, 6,200 acres, \$459,000; and highways (state roads), 24,000 acres, \$2.6 million.

Darrah said that only a well-conducted survey can verify the accuracy of these turfgrass figures, and said that to conduct such a survey, a tremendous effort is required from all facets of the Maryland turf industry.

"It is important that state legislators be made aware of the effort so that state funds can be appropriated to support the survey," he said.

UP 15%

Landscapers predict '79 business increase

Despite what economists may be predicting for this year, the landscape business will continue its upward trend, says the National Landscape Association.

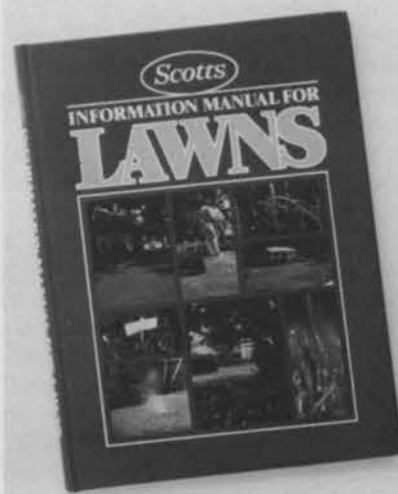
In a recent economic survey taken of NLA members, more than 92 percent of the landscape firms responding are expecting increased sales this year. The average increase expected was 15 percent, according to the survey.

Pacific Coast firms listed the highest percentage increase expected at 27 percent. Other regions of the country and expected percentage increases were: Southwest, 20 percent; Great Lakes, 15 percent; Northeast and Southeast, 14 percent; and Western Plains, 11 percent.

96 PAGES

Scotts publishes lawn info manual

Turf varieties, troublesome weeds, diseases and insects are major topics covered in the new *Information Manual for Lawns*, just published by O.M. Scott & Sons, Marysville, Ohio.

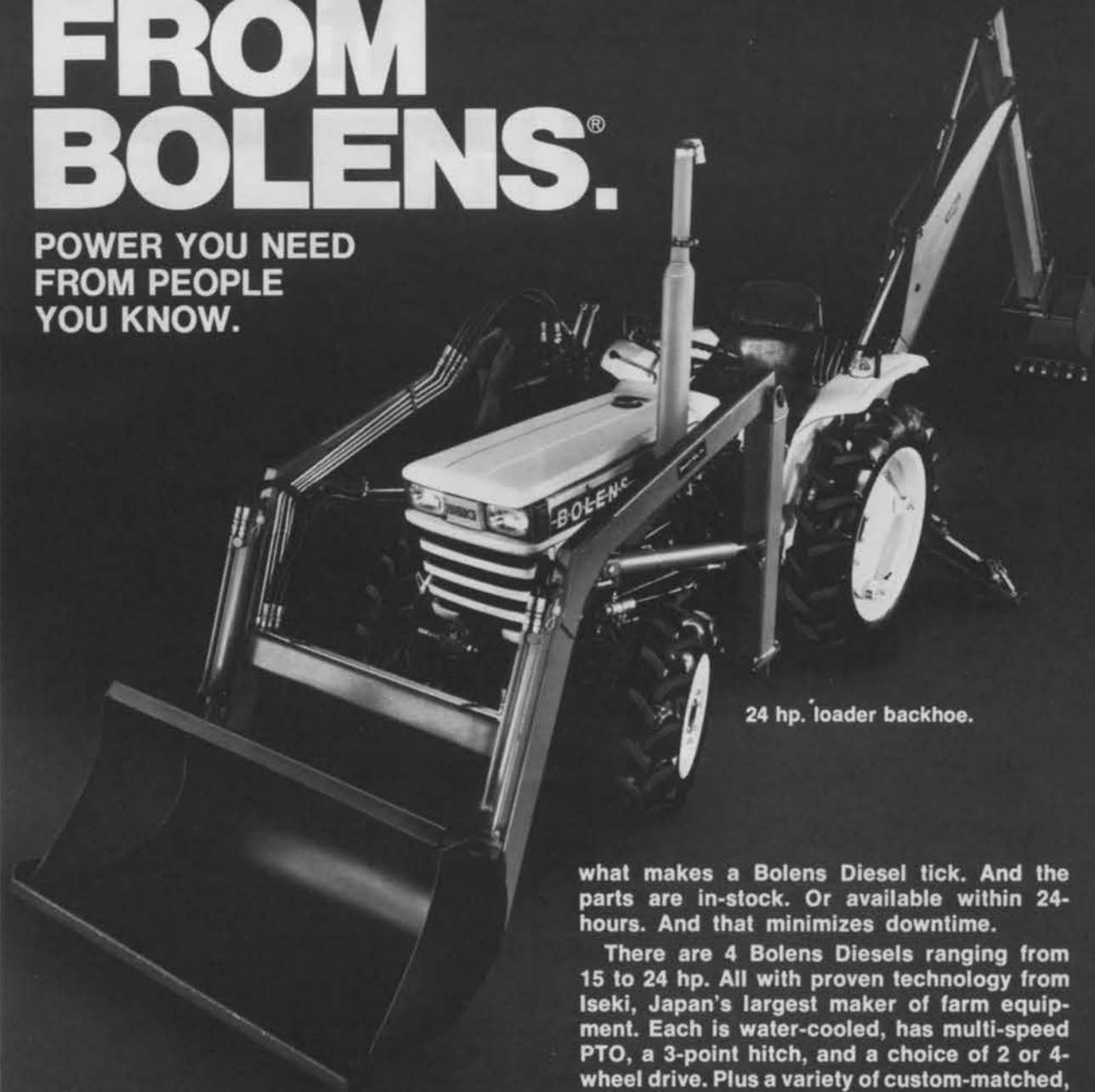


The 96-page, hard-cover book also discusses lawn planting, lawn management and spreader usage, with key concepts highlighted in more than 140 color photos and illustrations.

The manual may be ordered from: Bill Boyd, O.M. Scott & Sons, Marysville, OH 43040. Individual copies are \$7.95 each, including postage and handling.

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How to solve iron chlorosis problems

A problem that many lawn care businessmen face in the West and Southwest is iron chlorosis. In lawn care programs in these areas of the country, the importance of iron as a needed plant nutrient may be ranked just after nitrogen.

According to Dr. Jackie D. Butler and M.A. Harivandi of Colorado State University, mineral soils in Colorado may contain from 0.5 to 3 percent total iron. However, the amount of total iron in the soil does not truly reflect the amount of iron available for plant use. The two spoke on the subject at last year's Nebraska Turfgrass Conference.

Soils with high pH's and lime content (calcareous soils) are often deficient in plant-available iron, Dr. Butler and Harivandi said. Plants grown on such soils are subject to "lime-induced" chlorosis. Iron availability is at a minimum in soils with a pH of 7.5-8.0.

They said that iron deficiencies may be caused or made worse through heavy phosphorus fertilization. Nitrogen fertilization may induce or accentuate iron chlorosis of turfgrass.

High soil moisture, perhaps from overwatering — which causes lack of oxygen — may favor iron deficiencies. Also, an imbalance of metallic ions, such as high availability of copper or manganese in relation to iron, can induce iron deficiencies.

The problem. A yellowing of turf may indicate problems such as deficiencies of certain nutrients, the presence of certain insects or diseases, extended periods of cloudy weather. In the West, it is not unusual for a lawn care businessman to confuse an expressed plant need for nitrogen, or perhaps even sulfur, for the need for iron or vice versa, the two said. If the turf is weedy and lacks density, the problem is likely to indicate a need for nitrogen fertilization; while a dramatic and often patchy yellowing of the grass often indicates an iron deficiency.

An acute shortage of available iron may be expressed by a bleached, almost white appearance of the turf. If the iron deficiency is severe, the lawn may die. The foliage of turf that shows iron deficiency is often quite flaccid. And mowing may produce ragged and matted turf. If there is doubt as to the cause of a nutritional deficiency, it is possible to determine the nutrient or nutrients needed through trial applications of various fertilizers. The effect of applying iron-containing materials, such as ferrous sulfate and ferrous ammonium sulfate, normally gives a dramatic green-up in one to two days.

In the West, a routine soil test may provide information on available iron. Soil test levels of 10-15 parts per million of iron are normally considered adequate for most cool-season turfgrasses.

Solve the problem. In more arid regions of the West, iron chlorosis of Kentucky bluegrass, perennial ryegrass, red fescue

and bentgrass occurs rather frequently. Of these, the bentgrasses seem to be the least prone to iron chlorosis. The other three do not seem to differ much, under the same growing conditions, in their susceptibility to iron chlorosis. Tall fescue, smooth brome and western wheatgrass do not appear to be nearly as prone to iron chlorosis as Kentucky bluegrass.

In general, the two reported, the severity of iron chlorosis increases as the growing season advances. In Colorado, the problem normally becomes acute in August and September. In the spring in Colorado, the turfgrass will usually have its normal color, even those cultivars which will be showing extreme chlorosis in a few months. Thus, the need for supplemental iron applications may depend not only on the kind of grass grown, but also on the time of the year. Late summer applications of iron may not be necessary in

Colorado since the turf usually tends to be green without supplemental iron at that time.

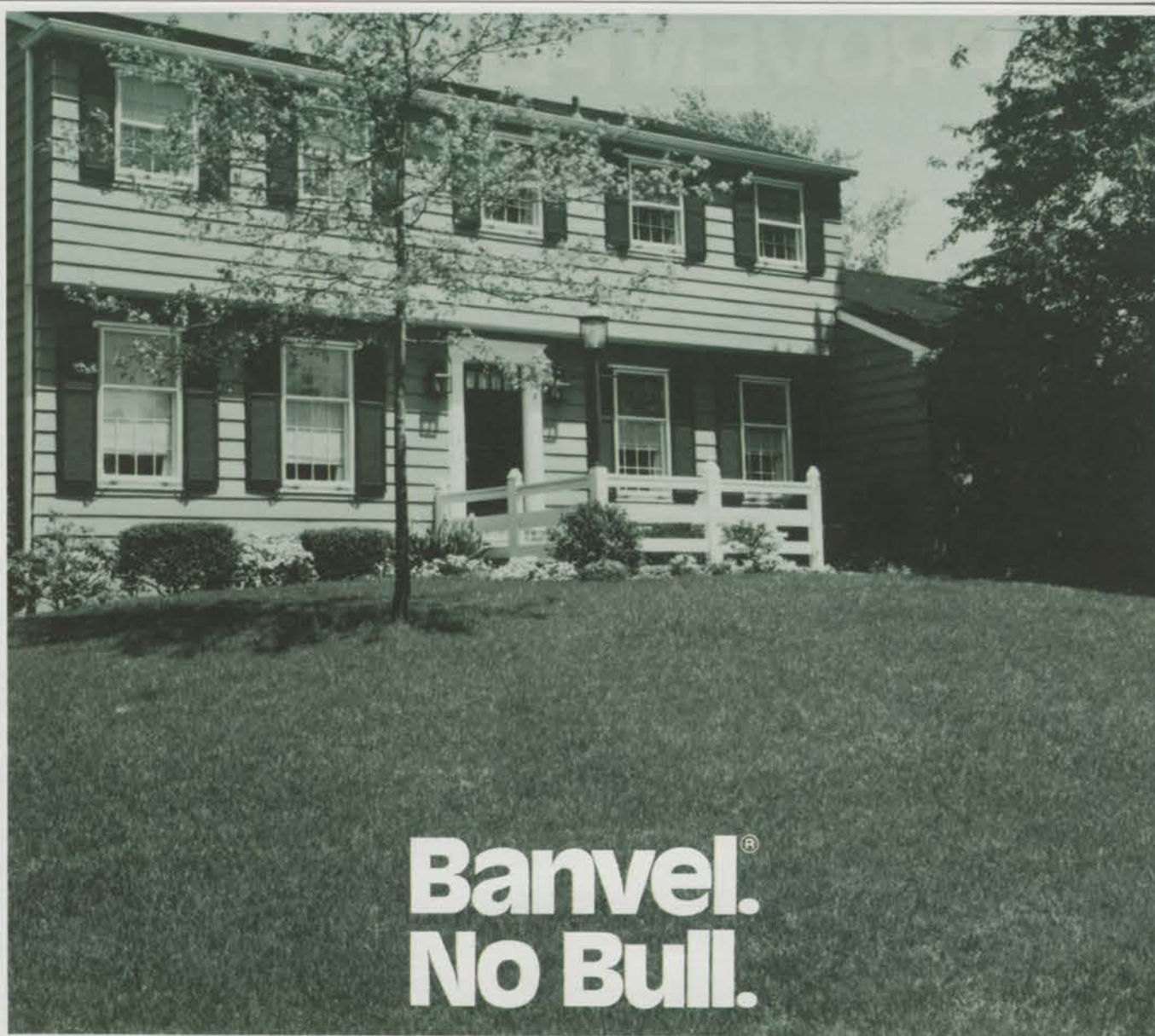
Iron applications. Several different commercial iron-containing materials are available for use on turfgrass and other landscape plants.

Both foliar and granular applications of iron are used in lawn maintenance programs. Ferrous sulfate is the commonly used iron supplement, both for dry and liquid application, for turfgrass in Colorado. Ferrous ammonium sulfate and iron chelates are also utilized to supply iron for turf. Ferrous sulfate and ferrous ammonium sulfate have generally proven satisfactory.

The amount of an iron material to use to correct an iron problem is often unknown, and unsatisfactory results can occur from the use of insufficient or excessive amounts of iron. Since the recommendations for iron usage to correct problems are of-

ten quite variable, it would be wise for the lawn care businessman to determine, through trial applications, the amount and frequency of application necessary for satisfactory results.

Foliar applications of from two to eight ounces of ferrous sulfate have been noted as a means of getting green-up. Such applications may give a rapid green-up (two to three days), but such green-ups may be short-term. Amounts applied as dry material may be high by foliar standards. Granular applications as high as 1/2 to 1 pound of actual iron from ferrous sulfate or ferrous ammonium sulfate are sometimes used on turf. But since these materials may cause phytotoxic reactions, frequent light applications may be most desirable, especially since green-up may be temporary, and repeat applications necessary, they reported.



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MARKETING IDEA FILE

Atlanta company launches customer newspaper

Rollins Lawn Care, Atlanta-based Southeastern lawn care company, has introduced a new means of communicating timely lawn maintenance tips and guidance to its growing base of customers.

Through a new newspaper entitled *Lawn Talk*, Rollins now disseminates a continuing flow of information to its clients ranging from information on feeding, watering, weed, insect and disease control, to mowing, dethatching and reseeding. The paper is distributed free of charge to all customers on a regular basis throughout the year.

Lawn Talk was introduced at the end of last year with an initial distribution of 15,000. Upon its second issue distributed earlier this year, company officials report that customer response and interest in the new communications tool has been excellent.

The types of articles featured in *Lawn Talk* include regular in-depth interviews with customers whose yards have been selected as the Rollins Lawn Care "Yard of the Month," interviews with a Rollins "Turf Technician of the Month," a

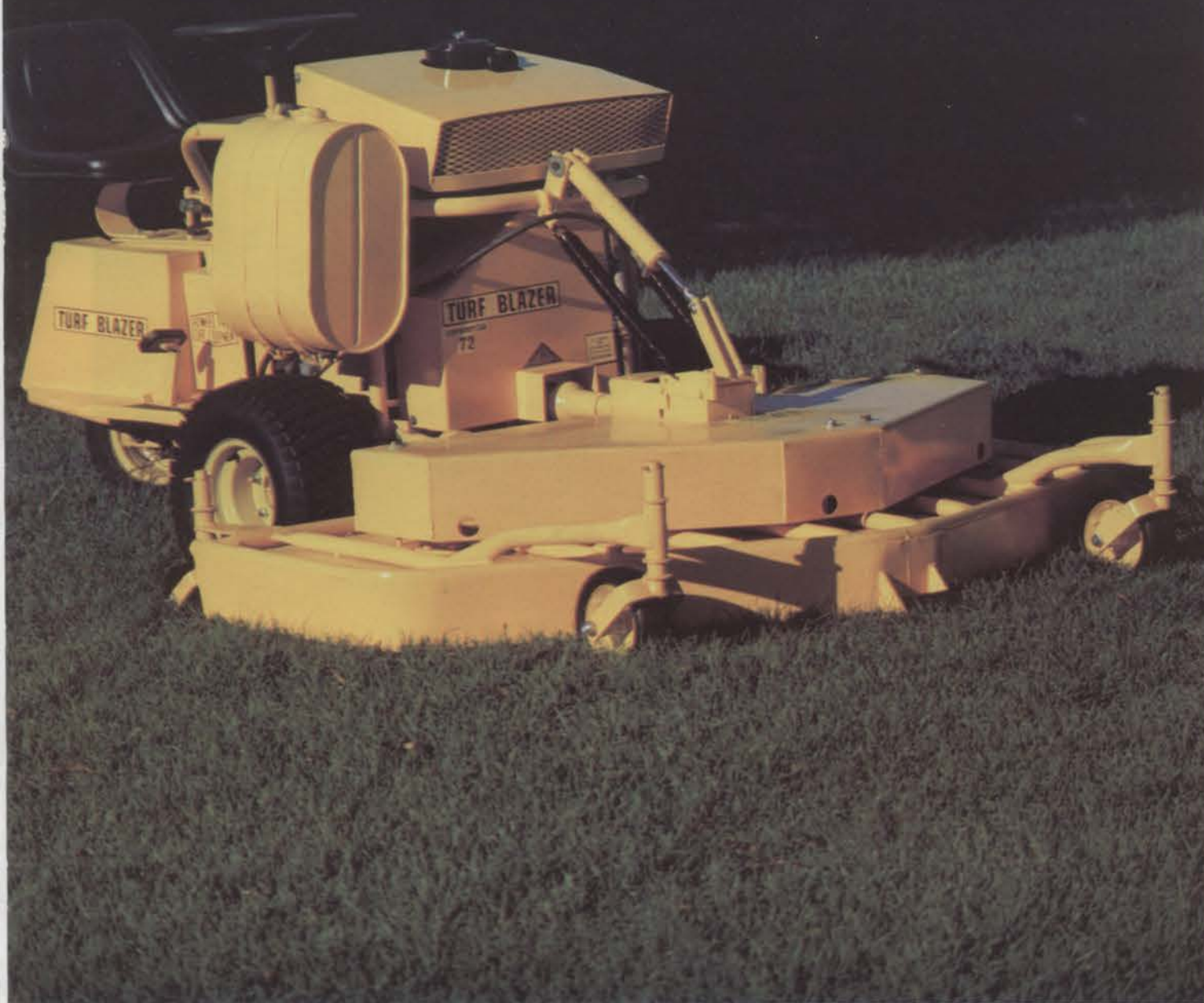
"Customer's Corner" explaining to lawn owners precisely how to prepare their lawns for upcoming Rollins treatments, and special articles catered to seasonal lawn problems and specific precautions to take in order to maximize benefits from Rollins treatments.

Additionally, Don Hastings, a recognized horticultural expert in the Southeast, contributes an editorial column in each issue on the newspaper. His most recent article, entitled, "Winter . . . No Vacation Time from Lawn Care," described the lawn care required for spring weed control and seeding. A question-and-answer series also appears in each issue, allowing customers to pose specific problems and obtain solutions.

Lawn Talk also informed readers about the introduction of the Rollins Lawn Care Speakers Bureau. This new program offers customers — also free of charge — the opportunity to engage the services of professionally trained experts to address various clubs and organizations on the subject of lawn care.

Commenting on the purpose behind the newsletter development, Rollins Lawn Care operations manager Floyd Franklin told LAWN CARE INDUSTRY: "Because the chemical treating service is relatively new, we feel the newsletter can serve as a method of providing customers a better understanding of the services offered."

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GROWTH REGULATORS

Embark distribution expanded this year

Embark plant growth regulator, commercially introduced last year with limited distribution, will this year be sold on a broader scale, according to 3M Co., St. Paul, Minn., which developed and manufactures the product.

A trained 3M sales force has been established and will be augmented by 20 distributors and custom applicators on a non-exclusive, non-franchised basis.

Primary marketing concentration will be in the Northeast and on the West Coast, where the company said there are more grass species that the product controls.

Embark minimizes for up to eight weeks the turf growth of Kentucky bluegrass, tall fescue, common bermudagrass and several native California grasses and broadleaves. It also inhibits seedhead formation.

Treatment results in less frequent mowing and trimming activities. Proper spring application can extend suppression until normal turf growth slow-up in mid-summer. When used as a turf management tool complementing conventional fertilizing, broadleaf control and mowing programs, the product provides cost savings and reallocation of labor and materials, the company said.

Uniform application is to be made to healthy, actively growing grass with standard spraying equipment and calibrated nozzles capable of applying 15 to 150 gallons of finished spray per acre. There are no seasonal restrictions on time of application. It can be made any time from after the two-week spring "green-up" period to just prior to winter dormancy. The product is now labeled for two applications per season on the same turf.

Primary applications include commercial/industrial/governmental maintenance, apartment and condominium complexes, highway rights-of-way, cemeteries, parks and golf courses.

Boston

Boston conjures up images of the American Revolution, Beacon Hill, Boston Common, and New England's beloved Red Sox, Bruins, and Celtics. Like its professional sports teams the city is strongly rooted in decades of prideful tradition. Yet Boston remains a paradox. Twentieth Century skyscrapers dwarf Nineteenth Century "brownstones," the city's theatre district is within shouting distance of its seamy "Combat Zone" (burlesque area), and "Yankee Conservatism" predominates in an area with nearly as many universities as Irish policemen.

In virtually every instance Boston offers a splendid blend of the old and the new. However, in terms of the typical Bostonian's view of lawn care the old appears to have the upper hand and at the expense of the industry.

The typical "died-in-the-wool New England Yankee" generally views the lawn care industry through, at best, skeptical eyes. It is safe to say that Boston has not exactly welcomed lawn care businessmen with open arms and it has been even less receptive to entrepreneurs espousing the virtues of spray operations.

Boston has been one of the toughest markets to crack for lawn maintenance professionals. Only 13 lawn care companies are listed under the heading "LAWN MAINTENANCE" in Boston's Yellow Pages and of those several have

already gone out of business. The most successful companies have been those which have established customer credibility in the only way New Englanders understand; by being a part of the business community for a long period of time.

Techniturf, Inc. and Turf Doctor are the two most successful companies in the Boston metropolitan area. Both are located about 25 miles west of Boston. One of the primary reasons for their business success has been their ability to stay in the market long enough to establish a name for themselves and, in turn, develop a rapport with the New England client. Techniturf has been in the Boston area for more than 20 years and Turf Doctor was established in 1970.

Boston's climate, soil composition, and extensive tree cover have proven to be nearly as troublesome as its conservatively entrenched clientele. The weather is unpredictable. Winters are generally cold and snowy, summers usually hot and sticky, and virtually any weather situation can exist throughout the year. The average temperature extremes are 29.9 in January and 73.7 in July.

New England's soil, like virtually all of the East Coast, is highly acidic and requires significant amounts of lime to produce optimum turf conditions. The average soil pH is between 5.3 and 5.5.

Predictably, the soil also con-



The city of Boston is a unique blend of the old and the new. ABOVE: The 60-story John Hancock Tower is located next to Boston's historic Copley Square. Architects I. M. Pei and Partners of New York developed the design for the 790-foot structure. An observatory, located on the top floor of the tower, provides one of the most exciting views of old and new Boston. The observatory is the highest man-made vantage point in all of New England. LEFT: One of Boston's older buildings is reflected in the thousands of panes of glass of the John Hancock Tower.

Although Bostonians have readily accepted new trends in architecture they have been less receptive to the development of the lawn care industry in New England. Boston has been one of the hardest nuts to crack for the lawn care professional. There are currently only 13 lawn companies listed under "lawn maintenance" in Boston's Yellow Pages, but one look at census figures for the area ensures that metropolitan Boston is capable of absorbing significant numbers of lawn care companies. The greater Boston area consists of 83 cities and towns covering about 1,057 square miles with a total population of more than 2.5 million.

However, the Boston market has some inherent problems including highly acidic soil, extensive shade conditions, and a conservatively entrenched clientele. The weather is also unpredictable. Winters are generally cold and snowy, summers are usually hot and sticky.

tains a high percentage of sand because of Boston's close proximity to the ocean. However, leaching has not been a particularly troublesome problem for lawn care operators in the area. Because of New England's significant amount of tree cover there are also extensive shade problems.

Yet another problem concerns the expansion of lawn care operations in the area. Downtown Boston, like most large metropolitan areas, has very little turf cover and the suburbs to the north and south are flanked by the imposing presence of Massachusetts Bay and Boston Harbor. Therefore, the only area where expansion can occur is in the suburbs to the west including Framingham, Wellesley, Holliston, Weston, and a number of other small to moderate-sized cities.

Although lawn care businessmen undoubtedly encounter more than their fair share of lawn problems in Boston, the area also possesses some important plusses. The region's generally cooler temperatures results in fewer insect problems and is detrimental to the growth of turf diseases. Further, the soil's high sand content decreases the occurrence of most compaction-related problems.

Without question, the market's disadvantages outweigh its advantages, but lawn care operators in the area agree that with correct treatment the Boston market is capable of substantial growth in the near future. One look at census figures for the area ensures that the market is capable of absorbing a substantial number of lawn care companies. The greater Boston area consists of 83 cities and towns covering about 1,057 square miles with a total population of more than 2.5 million. Even with all of the market's problems it's tough to ignore those figures.

Giles Adams, president of **Lawn King, Inc. of Weymouth**, said New England's weather and customers pose the two primary problems for lawn care operators in the Boston area. "New England customers are very tough," he said. "For the first couple of seasons I had pretty tough sledding until the people realized I wasn't trying to rip them off."

Adams, 53, described the typical New England customer as being "25 years behind the times. The old diehard Yankee is pretty tough to deal with when it comes to showing him something new," he said. "He wants to see how his neighbor's lawn comes out before he tries it himself."

The troublesome New England client and the often rugged weather are not the only problems posed by the Boston market, according to Adams. Hilly terrain and a preponderance of crabgrass are also obstacles New England lawn care operators must hurdle. "I would say we have to do about 50 percent of our lawns by hand because the terrain is so hilly that we can't get our machinery on the lawns," he said. "I'm also on the edge of the cape (Cape Cod) where it is very sandy and

there isn't much loam so you're trying to grow grass in sand and rock."

"Crabgrass is my biggest weed problem," he added, "but if I can have a lawn for two seasons the customer is very happy with the results." Adams said he doesn't think pre-emergence herbicides are particularly effective in controlling crabgrass in New England. "I believe the only way to kill a weed is while it's growing and you're only suppressing it with pre-emergence herbicides," he said. "But I don't care what you do you will never get rid of

"To protect ourselves we only deal in full services," he said. "If I can't improve a lawn I don't want to touch it. If a customer calls and says all he wants is his lawn fertilized then I turn him down," he said.

All customers receive a granular four-application service which includes:

—power aeration and rolling, fertilization, reseeding, fungus control, grub control, and weed control.

—power aeration and rolling, fertilization, weed control, chinch bug control, pre-emergence crabgrass control, sod

Once a lawn care operator corrals a New England customer his problems are not over, according to Adams. "One big problem I have with them is changing their mowing habits," he said. "For years they have been mowing their lawns right into the ground. Therefore, I insist that they raise their mowing height or I won't take care of their lawn."

And Adams is quick to point out that he has cancelled customers who have disregarded his instructions. "I've got a nice big truck with Lawn King on it and I'm certainly not going to go out into a neighborhood and have people see me working on a lawn which is in bad shape because the homeowner mows it into the ground."

Because Lawn King of Weymouth is the only Lawn King franchise within 200 miles of Boston, Adams has encountered some advertising problems. "I can't do any television advertising because I can't co-op my advertising with anyone," he said. "I've tried using a mailer service, but their coverage was very poor."

Adams' most successful form of advertising has been through fliers passed out in selected neighborhoods by high school marching bands and members of church groups. "The kids do a very good job for me and I get about a 30 percent return on the fliers," he said.

Adams attributes the good response to his flier ads to being straightforward. "I've simplified both my newspaper and flier ads and I've gotten a better response as a result," he said. "You have to be careful with these old Yankees because they've got a good idea of what they want. You're not going to Buffalo them."

Because there is only one other Lawn King franchise in Massachusetts Adams is extending himself further than he would like. "I would be more than happy to have more dealers in the area because then we could co-op our advertising and materials," he said. "I'm already extending myself about 30 miles which is too far."

Adams predicts that the Boston market will continue to grow in the future though not as rapidly as other markets throughout the country. "The Boston market is very slow for the time being, but it is gradually building up," he said. "It's new in this section of the country, but it's growing all the time."

One man who has seen both the old and the new in terms of lawn care in the New England area is Roy A. Johnson, general manager of **John D. Lyon, Inc.**, a wholesaler and retailer of lawn and garden products in Cambridge.

Johnson, 51, has been with the company since 1952. "It has become a much more complicated business since we first entered the field," he said. "It's much more competitive and there are a lot more chemical products on the market today." John D. Lyon grossed about \$500,000 in 1978 with about 50 percent of its total sales coming from the wholesale landscape industry.



Boston's public gardens, located next to famed Boston Common, is one of the most picturesque areas of the city. Both the gardens and the Common have been a part of downtown Boston since the 18th Century. They were initially established to provide green space and a recreation area for Bostonians.

crabgrass completely because it's God's way of saying there will always be something green on this earth as long as there is some sunshine.

Insects are probably the least of Adams' worries. "I haven't seen a chinchbug in five years," he said. "There have probably been some around, but I haven't had them on my lawns." Adams added that he has had some infestations of grubs, but he has never had a recurrence.

Lawn King of Weymouth was established in 1974. Adams purchased the franchise after a back operation necessitated him leaving the heavy construction business. He initially started the business as a part-time venture to supplement his regular income. At first he ran the operation by himself, but today he employs three persons and grosses \$50,000 per year from about 275 accounts.

webworm control, and fungus control.

—power rolling, fertilization, post-emergence crabgrass control, chinch bug control, sod webworm control, and weed control.

—power aeration and rolling, fertilization, reseeding, weed control, grub control, and fungus control.

Four additional check back visits are also included in the program. These visits are conducted three to four weeks after each application to determine how the lawn is responding to the treatments.

Adams said Lawn King has entered the spray field as an additional part of its service, but he is apprehensive about changing from the granular program. "I'm still convinced that a granular operation gives you a longer residual period that in the long run will give you a better lawn," he said.

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Johnson said the two major lawn care problems in the Boston area are chinchbugs and crabgrass. "Chinchbugs weren't a problem here until a few years ago," he said. "We used to read about them being in Long Island and the south, but now they're here and it looks like they're here to stay."

The two most popular products for chinchbug control, according to Johnson, are Dursban and Diazinon. "Dursban is certainly the primary choice because it seems to have four times the life of Diazinon in this soil," he said. "In fact, we've dropped Diazinon here for chinchbug control because it was not doing the job although we still handle it in liquid form."

"As far as crabgrass is concerned we have found two products that take care of 99 percent of our requirements," he added. "If you're putting in a new lawn there is only one product to use and that is Tupersan. For people who are not seeding there seems to be one product head-and-shoulders above the rest and that is Betasan."

Regarding fertilizers, Johnson said, "The granular, concentrated, high nitrogen fertilizer is the most popular. We have our own called Lyon Lawn which is a 25-10 and it's a good example of a concentrated, pelletized material which will go through a cyclone spreader easily and give good coverage."



Roy A. Johnson, general manager of John D. Lyon, Inc., is enthusiastic about fine-bladed ryegrasses.

"The 10-6-4 is still very popular, but the more concentrated fertilizers have replaced it to a large extent," he added. "We have also carried a 6-8-3 since before WW II, but it's used mostly as an all purpose tree, shrub, and garden fertilizer rather than on lawns."

Johnson said bluegrass is still very popular among lawn care professionals in the Boston area, but fescues and perennial ryegrasses are gaining ground. "Fescues are used a lot because there are a lot of shade problems in this area," he said, "but the big thing around here now are the new fine-bladed perennial ryegrasses. Fine-bladed ryes, particularly Regal, eliminates so many lawn care problems because it's so disease resistant and it germinates so quickly. We're very enthusiastic about it." Johnson added that pelletized lime and gypsum have also increased in popularity in the Boston area.

Regarding spray operations, Johnson said New England is probably the last area of the country to enter the spray field. "I think the average homeowner is skeptical of chemical lawn



Tradition and history are readily visible throughout Boston. For example, the famous warship U.S.S. Constitution is moored at Boston Harbor.

care," he said. "I think it's here to stay, but in Boston it's only a small part of the business." Johnson also cited New England conservatism as one of the primary factors for a lack of liquid

lawn care activity in the Boston area. "It's hard to change New England," he said. "The people just don't think that anyone running over a lawn with a machine is going to give it the care they

think their lawn deserves."

However, Johnson added that he thinks spray operations will have more of an impact on the market in the future. "It will become more and more popular as people find 1.) it does work and 2.) it costs less than traditional lawn care."

The individual given the difficult task of convincing New Englanders that ChemLawn Corp.'s service is effective is Chuck Deal, general manager of that company's branch in Holliston, about 25 miles west of Boston.

Surprisingly, Deal, 29, doesn't view the typical New England customer as being particularly difficult to handle. "We haven't had a particular problem with getting New Englanders to accept chemical lawn care," he said. "They were a bit skeptical at first, but after last year's business we're starting to get a lot of referrals."



"I really don't think customers here are any more demanding than they are in the rest of the country," Deal added. "Because of inflation I think customers everywhere are more aware of what they are buying."

The key to securing New England customers, according to Deal, is to have a good product. "The proof is in the pudding," he said. "We give them results with what we put down and they become less skeptical about a liquid program."

Deal attributes much of his success in dealing with New England customers to the fact that all three of his technicians are originally from New England. "It takes a New Englander to understand a New Englander," he said. "They're a little different breed of people, but that doesn't mean that they're any less likeable."

ChemLawn entered the Boston market in the spring of 1978 and currently operates

three trucks and services about 600 accounts from its Holliston office. "ChemLawn had been thinking about entering the market for a couple of years," Deal said. "Both the population and the money is here so they wanted to enter the market as

year) and the last application is in granular form rather than the traditional liquid form. "We put a granular fertilizer down in the fall because we can apply it a little heavier," Deal said, "and often times it's simply too cold to operate our pumping equipment

"We haven't had a particular problem getting New Englanders to accept chemical lawn care. They were a bit skeptical at first, but . . . we're starting to get a lot of referrals."

Chuck Deal, ChemLawn, Corp., Holliston

soon as they could without over-extending themselves."

ChemLawn's four-application program is basically the same in Boston as it is in other northern markets. The only differences are in the Boston area they must use extensive amounts of lime (40 tons last

in the fall."

Both weeds and diseases have not been a problem for ChemLawn's Boston operations. "We run into a lot of weeds you associate with older lawns like hawkweed and ground ivy, but I haven't found any unique weed problems," Deal said.

"As far as disease is concerned it is as close to non-existent here as I've seen in any market," he added. "We haven't had any problems with any real obnoxious diseases."

Deal said the biggest difference between the Boston market and others across the country is the soil composition. "I would say aside from being acidic the soil here is pretty good. As a general rule you never see a lot of compaction problems because of the high sand content in this soil," he said, "but it's generally not high enough to cause a lot of unusual leaching. There is still enough clay and loam in the soil to keep it from being totally porous."

According to Deal there is only moderate competition in the Boston area. "I don't think we have the competition pressure they do in Long Island because there is still a lot to learn about this market."

What does he look for in the



Chuck Deal, general manager of ChemLawn's Holliston office, said turf disease is almost non-existent in Boston.

future? "I would say there is no lid on the future of this market."

John Kenney has a mind for detail. Sitting in his office with his brother Drew and some other staffers, the date January 31 comes up in the conversation. Kenney tells everyone that it is the birthdate of Donny Marks, one of his childhood friends. The fact of the matter is Kenney, who is 30, hasn't seen Marks since he was eight-years-old.

Kenney has effectively applied this mind for detail to his 10-year-old **Turf Doctor** business. Statistics flow from him on every facet of the business. Percentages are not 85 or 90, but 87. He is very exact.

The former Boston College athlete started with an Auto-Lawn franchise, which changed to Lawn Doctor in 1972. He says the company's growth was very good in the beginning, but tailed off in later years. He ended last year with between 2,500 and 3,000 accounts on the books and a gross in the vicinity of \$500,000.

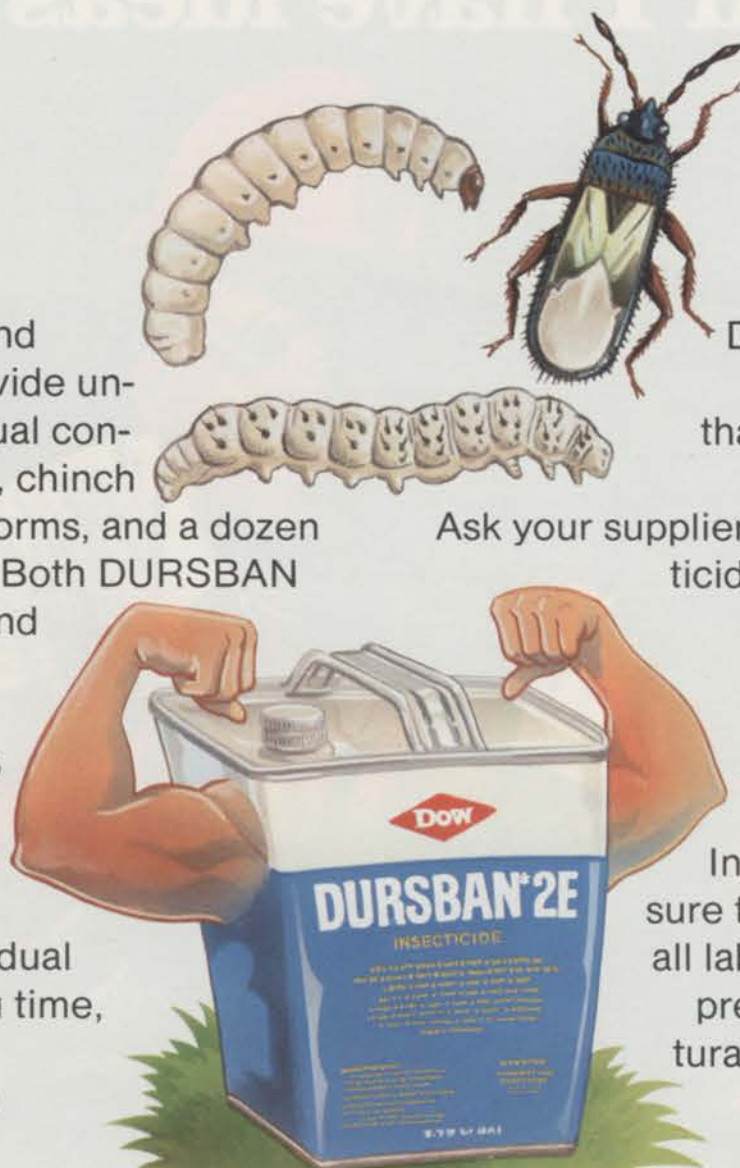
"New England is a very unique area," he said. "Consumers have a 'show-me' Yankee mentality and the customers can be very tough. When I first started out customer reaction was skeptical, very skeptical."

"In New England the consumer is not willing to take on a new idea right off the bat," he added. "If it has been around for a while and it has proven itself then New England will allow it to exist."

He said Boston area lawn

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care companies also have basic technical and timing problems in caring for turf.

"We start out about two weeks behind the rest of the country, and it can be very intense getting all of the lawns serviced," he said. "We catch up to the rest of the country by about June 1."

About 30 percent of the lawns he services are in the shade. There are "rocks everywhere, and very little topsoil." Soil acid levels are high because of the high level of precipitation. The area is also very sandy.

Turf Doctor offers three basic services to its customers — the lawn maintenance service, the deluxe lawn service and optional services.

The lawn maintenance service offers four fertilizer applications, fast-release in each application along with slow-release in early and late summer, and a balanced blend in spring and fall. It also includes vining and broadleaf weed control in all four applications, pre-emergence crabgrass control in spring, and chinchbug and sod webworm control in the summer applications.

His minimum charge for this program is for 4,000 square feet. Cost is a total of \$94, broken down into an initial payment of \$23.50 and five equal payments of \$14.10. For an 8,000-square foot lawn, the total charge is \$152. For a 10,000-square-foot lawn, the charge is \$184.



John Kenney, of Turf Doctor, said New England consumers have a "show me" Yankee mentality.

His deluxe service offers four major applications per year and six intermediate check-ups. The service includes fertilization, seeding, pre-emergence weed control, insect control, broadleaf and vining weed control, disease control and soil treatments. Kenney said that \$225 is the minimum charge for the deluxe service.

The average lawn size receiving the deluxe service is about 5,200 square feet and the average maintenance service lawn is about 7,000 square feet. He said about half of his lawns receive the deluxe program and half the maintenance program.

For the deluxe program, he tries to sell his customers on a two-year plan to build up the lawn. He offers a 10 percent discount on these lawns the second year.

Optional services are advertised as supplements to existing programs or a program can be designed to meet specific lawn needs. Services and costs for some of the options are:

Fast-release fertilizer, \$8.90 for a minimum 4,000-square-foot

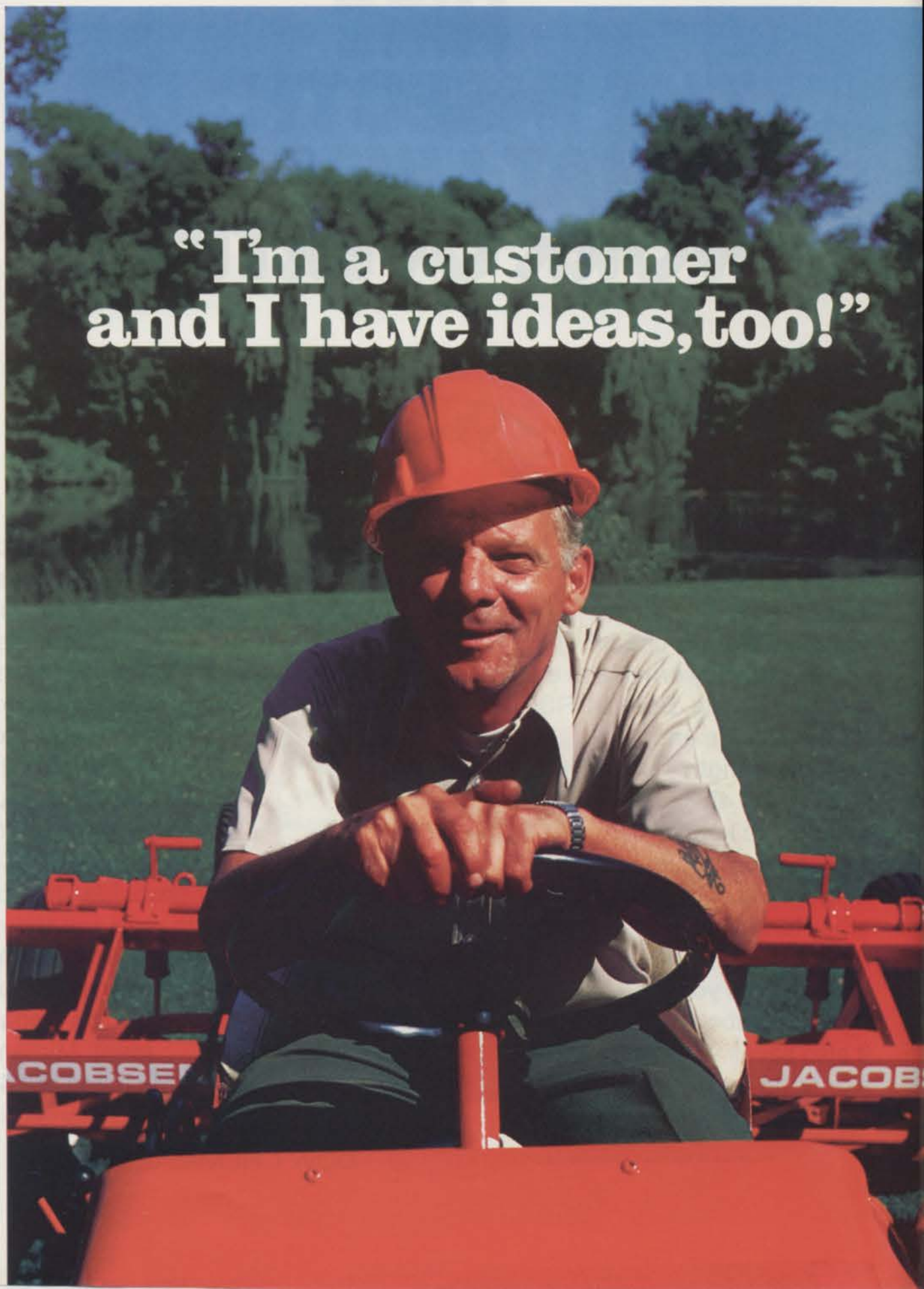


Beacon Hill is the home of Massachusetts' state government. The building's shining, copper-colored dome is visible from virtually anywhere in the city. The Hill overlooks historic Boston Common where many Bostonians have a leisurely lunch when the weather cooperates.

area, and \$1 for every 1,000 square feet after that; slow-release or balanced blend fertilizer, \$10.20 minimum and \$1.80 for every 1,000 square feet past that; overall weed control for whole lawn, \$10.40 and \$1.20; spot weed treatment, \$5.20 and \$0.60; crabgrass pre-emergence control, \$15.20 and \$2.80; chinchbug and other insect control, \$14.80 and \$2.40; grub control, \$21.20 and \$4; grub-proofing, \$13.60 and \$1.80; seeding for a whole lawn, \$28.80 and \$6.80; spot seeding, \$14.40 and \$3.40; disease control for whole lawn, \$19.20 and \$4; spot disease control, \$9.60 and \$2; power aeration and rolling, \$16.80 and \$4.20; "double" aeration and rolling, \$25.20 and \$6.30; liquid liming, \$14.80 and \$2.40; and limestone application, \$20.40 and \$3.

His brother Drew manages the sales department with four others. The sales people work six consecutive days followed by three days off. There are also ten

**"I'm a customer
and I have ideas, too!"**



part-time sales people during the peak season. Kenney pays \$3 an hour for the part-timers and offers a \$1 bonus for appointments with homeowners. He estimates that his cost of securing new customers is about 15 percent of the gross sale.

A total of 55 persons are employed at Turf Doctor and virtually all of those are local people. "We don't hire any imports because they are going to be an immediate tipoff because they don't have the right accent," Kenney said. "We really haven't had any problem finding good employees because there are an abundance of them here."

Kenney hopes to expand his business within the next few years to areas outside of eastern New England and hopes to be grossing \$5 million annually within the next ten years. And he just might do it.

If you have ever worked for a company which was successful



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largely because of the relaxed atmosphere developed by the boss then you already know an awful lot about Dean Squier.

The president of **Techniturf, Inc.**, a lawn care company based in South Berlin, Mass., is 56, but he looks more like a prematurely gray 35-year-old. The 23-year-old company will gross in the vicinity of \$1 million this year.

Squier surrounds himself with young staff members, gives them their freedom to develop the business under his direction, and is very quick to give them the credit when things go well.

He also has his business in perspective and is anything but a workaholic. Squier is active in both art and theatre in culturally rich Boston and he is also restoring an old-fashioned house on the property where his company is headquartered.

Information comes out of him in dribs and drabs and in order to get a complete thought a visitor has to slow him down. It's not that he talks too fast, but he moves quickly from one topic to the next. The points are well thought out, but a listener has to have his hand held to get from Point A to Point B at the same time Squier does.

A couple of other pertinent points: When the national lawn care giant ChemLawn Corp. moved into his territory a few



Dean Squier, president of Techniturf, advocates an integrated pest management program. Techniturf has been in business for 23 years.

years ago, at their request he showed them around his operation and gave them all the background information about Boston they needed. He also says he has never gotten anywhere by "being conventional" and the fact that just about every one of his 20 lawn care trucks is a different color attests to that.

Further, he doesn't believe in advertising, but does believe in an integrated pest management (IPM) approach to lawn care, a true lawn care "guarantee," soil and tissue testing and late fall fertilization.

Back in 1956, Squier was running a landscape business, but not making any money at it. He saw the possibilities of a volume lawn care business, started Techniturf, and was almost laughed out of the idea by his customers and fellow landscapers.

"My biggest mistake in the beginning was not charging enough," he told LAWN CARE INDUSTRY. "Now I let people decide what work they want done after I make my recommendations, and charge them accordingly."

He offers fertilization, as much as needed, averaging one application per month or more to

Dec. 1 (starting usually in April). He puts down an average of four pounds of nitrogen per 1,000 square feet per year. His basic service also includes inspection and spraying for insects and disease and seeding repairs, no matter what the cause of damage. Cost for the basic service last year was \$113.40 for his average 12,000-square-foot lawn.

In addition to these services, last year he charged \$42 for all-season broadleaf weed control, \$47 for Japanese beetle grub disease inoculation (one-time only for new customers), \$53 for pre-emergence crabgrass control for the whole season, \$67 for lawn aeration with a Howard Turf Quaker (if thatch is $\frac{3}{4}$ -inch or more this is recommended) and \$2 for a pH test at six different points in the lawn. These figures are all for his average 12,000-square-foot lawn.

"Three-quarters of my business used to be fertilization, now only one-quarter of it is," he

said. "And when we say that we guarantee our work, we mean it, even if the lawn is damaged by vandalism or a customer throwing a bucket of detergent water on it."

As we said, he and his key

with a spray unless it needs it," he said. Techniturf visits a lawn seven or more times a year. If the technician sees a problem developing, he or she sprays for it.

"Why put down a pesticide

"My biggest mistake in the beginning was not charging enough. Now I let people decide what work they want done after I make my recommendations and charge them accordingly . . . And when we say that we guarantee our work, we mean it, even if the lawn is damaged by vandalism . . ."

Dean Squier, Techniturf, Inc., South Berlin, Mass.

staff members, 27-year-old Fulfillment Manager Jim Fothergill and 28-year-old Logistics Manager Alan Bebka believe in IPM.

"Basically, IPM is simply just not going out and blasting a lawn

unless you have to?" he said. Company employees spread fertilizer with a hand-held Cyclone gravity spreader, and if they see a disease, insect or weed problem, in most cases they go back and spot spray to

control it.

A large percentage of Techniturf's first-time customers were signed on for a simple fertilization program.

"But we don't allow this curtailed program any more," he said. "People forget what they told you to do, and they blame you if they have problems even if they told you not to treat for them. When we went to this stepped-up program we expected all of our low-end customers to drop out. But our renewal rate was the same."

He has about 20 route people on his payroll, two people who handle seeding and aeration full-time, two full-time office staff people, and three maintenance people. Route people start at \$200 a week draw against commission, and work their way up to about \$250 a week by the end of the first season. With commissions based on production, Fothergill said that the route people earn about \$10,000 in eight months.



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Dean Squier shows off one of the PVC boom sprayers Techniturf utilizes in the Boston area.

Squier believes in getting a written agreement for lawn care services down on paper, because "it helps both ways" in explaining to the customer what work will be done, and protecting Techniturf against a customer coming back and saying a certain job was not done.

"It's all on paper," Squier said, "although they can cancel anytime they want just by calling us up."

Squier believes in late fall fertilization. "We like to get an application down in November," he said. "You can always pick out lawns that had this, because in spring they look a lot better sooner."



Techniturf's Logistics Manager Alan Bebka fabricates $\frac{3}{8}$ inch polypropylene spray tanks for Techniturf.

He figures it costs him \$8,000 to buy and outfit a step van for his route work and he usually gets about nine years out of a truck. The trucks are outfitted with stainless steel fertilizer bins, and square $\frac{3}{8}$ -inch polypropylene spray tanks that Bebka fabricates in the shop. He utilizes Hypro roller pumps and PVC booms, also fabricated by Bebka.

Alan Steinam, like Squier, had difficulty making his landscape business turn a profit its first few years in existence. But Steinam, 25, stuck with it and this year **Alan Steinam's Landscape and Lawn Care Service**, Framingham, is expected to gross about \$200,000.

"When I was 12 I started working on lawns in my neighborhood," he said, "and by the time I was in high school I had three guys working for me full-time. They put me through the University of Massachusetts." However, after graduating with a degree in landscape operations Steinam had difficulty supporting himself on the income from his lawn service. A change was necessary so Steinam decided to focus on a three-city area (he was servicing more than a half dozen) and charge prices which would produce a profit rather than be competitive with those charged by other landscapers in the area.



Alan Steinam, 25, put himself through college by running a lawn care service.

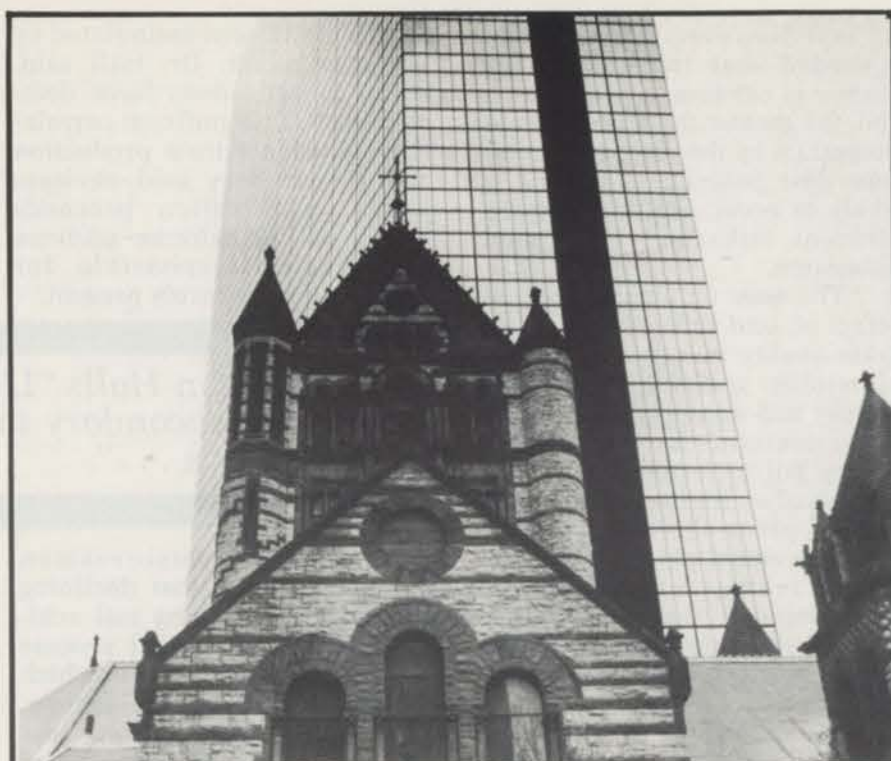
"I think getting paid what it takes to run the business turned it around," he said. "I was charging \$10 to \$12 an hour, but I couldn't make ends meet so I started charging a flat rate of \$13.50 an hour and I'm making money now."



Steinam shows off one of the yards he landscaped in an expensive suburb west of Boston.

Steinam's six-point landscaping program consists of spring cleanup, chemical lawn care, shrub maintenance, lawn mowing, shrub and insecticide spraying, and raking. "The only thing we don't do directly ourselves is chemical spraying of the lawns," he said. "I've subbed-out my lawn spraying to Turf Doctor for the past five years. It prevents a lot of headaches for me." Steinam also subs-out tree related problems to Framingham Professional Tree Co.

Steinam looks for the New England landscape market to continue to thrive. "Overall, I think people who live on the coast are more landscape conscious than those who live in the interior of the country," he said.



The old and the new co-exist in Boston, but in terms of lawn care the old appears to have the upper hand. Here, a 19th Century church is dwarfed by the John Hancock Tower.

"In fact, in the past three weeks I have outsold my entire gross for last year. I attribute that to the fact that landscaping is a hedge on inflation. People are much more willing to put \$1,000 or \$2,000 into their homes now because they think of it as an investment."

After several days of observation it becomes apparent that the Boston lawn care industry may not be in tip-top shape, but is far from being on the critical list. However, there is room for optimism because when New England embraces a trend it embraces it wholeheartedly. Take for instance jogging. Boston undoubtedly has more joggers per square foot than anywhere else in the country. Bostonians jog in the mornings, in the afternoons, in the evenings, and presumably in the wee hours of the night. Now if the industry could just convince them that lawn care is also beneficial to their health.

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Don't forget to lime, VPI researcher says

Lawn care businessmen need to be aware that soil pH is dynamic and can be rather fast-changing if conditions are right. Liming, although sometimes overlooked, need not be considered secondary to any agronomic practice in importance, said Dr. John R. Hall III, extension specialist in turf for Virginia Polytechnic Institute and State University, Blacksburg.

"Two years ago, a progressive northern Virginia lawn maintenance company sampled 1,184 customer lawns and found that 716 of those lawns — more than 60 percent — had a soil pH of less than 5.5," Dr. Hall said. "This is shocking, especially when one considers the reduced probability of producing quality turf with a soil pH of less than 5.5"

He said that the general effect of excessively acid soil pH upon turfgrass is primarily observed in (1) decreased availability of

he said. However, it is generally conceded that the greater the degree of calcium saturation in a soil, the greater the absorption of potassium by the clay, and therefore, less potassium leaching is likely to occur, leading to more efficient utilization of applied potassium.

"The most universal negative effect of acid soil pH upon turfgrass quality is considered to be aluminum toxicity," he said. "Every soil except peat or muck is considered to have the potential to kill turf plants with the release of excessive aluminum if the soil pH is allowed to get too low. The actual pH at which aluminum reaches toxic concentrations depends upon the native level of aluminum in the soil, the turfgrass species and other factors."

The process of nitrification, which converts ammonium (NH_4) to nitrate (NO_3) is important to the turf plant because nitrate is thought to be the major

source of nitrogen assimilated by the grass plant, Dr. Hall said. Many investigations have demonstrated the significant correlation between nitrate production and pH. In very acid environments, nitrification proceeds slowly and at extreme acidities the species responsible for nitrification are rarely present.

increasingly acid.

"Some nitrogen fertilizers have significant acid-forming potential and can cause decreases soil pH," he said. "For instance one pound of nitrogen applied as ammonium nitrate or urea requires 5.34 and 3.56 pounds, respectively, of pure calcitic lime to neutralize the

VPI's Dr. John Hall: "Liming need not be considered secondary to any agronomic practice in importance ..."

Lawn care businessmen should be aware that declining soil pH or increasing soil acidification is a continual process that is occurring at a rate which is determined by several factors. Nitrification, soil leaching, root activity, decomposition of organic matter, nitrogen source and other factors will influence the rate at which a soil becomes

acidity that will be produced from the nitrogen application.

"Therefore, a four pound nitrogen per 1,000 square feet per year program with nitrogen being supplied by ammonium nitrate requires 21.4 pounds of pure calcitic lime per 1,000 square feet to neutralize the fertilizer-produced acidity," Dr. Hall said.



Hall

many of the major essential elements, (2) increased availability of some elements that can be considered toxic when present in excess, and (3) alteration of microbial activity contributing to excessive thatch build-up and decreases in nitrification. These effects interact to produce low density turf with very poor root growth and response to applied nitrogen, he said.

"The decreasing availability of some of the major essential elements as a result of increasing soil acidity is primarily the result of soil chemical interactions," Dr. Hall said. "As most soils become more acid they tend to contain less calcium and so it tends to become increasingly deficient as pH decreases. Soil phosphorus is generally most available between soil pH's of 5.5 and 7.0. It becomes decreasingly available below and above this range."

At low pH, iron and aluminum tie up the phosphorus, while at high pH the calcium precipitates it. The effect of pH upon potassium release and fixation by a soil is complex and remains a controversial subject,

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'It was finally time to reap the benefits'

When Bob Feeley and Paul Fulmer marked their 10th anniversary of working for a lawn spray company in 1964, they didn't have much to celebrate. Although they practically ran the company, they had little to show for it.

So in 1965, Feeley and Fulmer bought out a lawn care business in Fort Lauderdale, Fla., and have been enjoying the rewards of ownership ever since.

Today they have 17 employees, 13 spray trucks, more than 5,000 customers and yearly billings in excess of \$500,000 in what has become one of the largest lawn care companies in the Fort Lauderdale area.

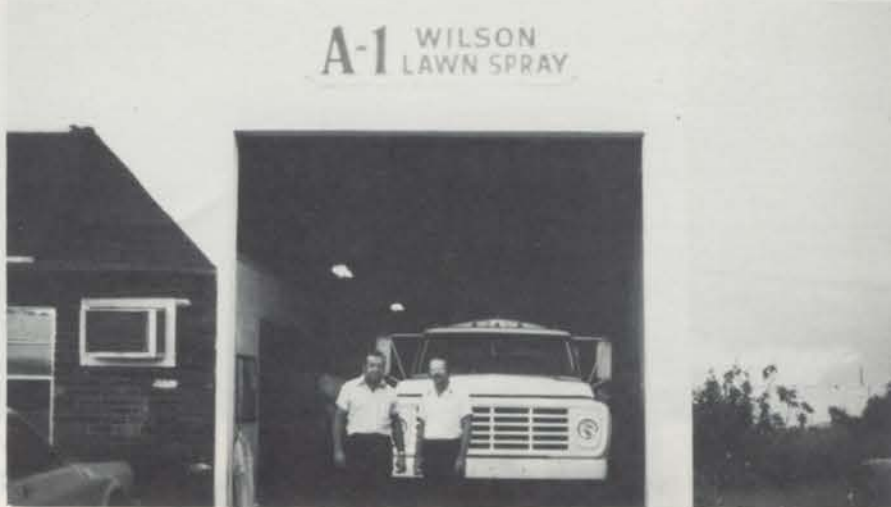
They have come a long way

considering all they had at the start was themselves, one spray truck and a secretary.

Through their corporation — A-1 Wilson Power Spraying — Feeley and Fulmer offer a monthly lawn care service to residential customers that consists of three main functions — fertilization, weed control and insect control.

In the months of October, January and April, A-1 Wilson concentrates on its lawn fertilization program. Feeley and Fulmer agree they achieve the best results when fertilizing during these cooler months of the year.

"If we fertilize in the summer, growth is stimulated too



A-1 Wilson's Fulmer (left) and Feeley: They started out with themselves, one spray truck and a secretary, today they have yearly billings in excess of \$500,000.

much and resulting lush turf tends to attract armyworms," Feeley told **LAWN CARE INDUSTRY**.

Depending upon the weather, the company adjusts the amounts of nitrogen, potassium and phosphorus it applies. The basic pur-

pose is to place the proper amounts of primary and secondary nutrients into the soil at the right times, Fulmer said.

"We use about 660 tons of fertilizer each year and representatives from W.R. Grace have told us we apply more fertilizer than any other lawn service company in southern Florida," Feeley said. W. R. Grace & Co. is based in Cambridge, Mass.

Once in autumn and again in spring, the company services its accounts by applying herbicides. The co-owners haven't settled on one product for weed control. Instead, they use a number of different products on a variety of weeds.

Because of the hot, humid climate of Fort Lauderdale, turf insect problems abound and thus present an excellent market for A-1 Wilson's insect control services. In fact, this aspect keeps the company busy from early May through September.

Three specific pests account for much of the company's insect control work — armyworms, sod webworms and chinch bugs.

For control of armyworms and sod webworms, Feeley and Fulmer rely on Sevin, manufactured by the Union Carbide Corp. Agricultural Division in Jacksonville, Fla. In June, all of A-1 Wilson's accounts are sprayed with an 80WP (wetttable powder) formulation. "It even kills caterpillars on shrubs and gives control of millipedes too," Fulmer said. "Another thing is that it has a good residual."

They also use the insecticide for controlling fleas and ticks. "Southern Florida's warm climate is ideal for fleas and the pest can cause problems when family pets carry them into homes," Feeley said.

For control of chinch bugs, the company utilizes Dursban, manufactured by Dow Chemical Co., Midland, Mich., and Diazinon, manufactured by Ciba-Geigy Corp., Greensboro, N.C. There has been some problem with chinch bugs developing resistance to these insecticides.

In addition to applying effective products, Feeley and Fulmer attribute the success of their company to gaining customer satisfaction. A high percentage of A-1 Wilson's original customers still rely on the company for lawn care. Also, the company averages 60 to 70 new accounts each month, interesting in the fact that Feeley and Fulmer do very little advertising or promotion. Their best sales tool is a recommendation.

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Recarpeting urban America

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

In a previous discussion (see *Lawns: A Concept Proven*, *LAWN CARE INDUSTRY*, April, 1979, page 9) I talked about the disturbed habitat that today is urban America, and how the most efficient, environmentally desirable, and socially acceptable means for managing much of it is probably as lawn.

During the rapid evolution of the lawn care industry, nothing has been more spectacular than the development of special lawn-grass cultivars chosen specifically for the task of clothing urban surroundings. No longer is it necessary for keepers of the lawn to have only pasture and meadow varieties to choose from, i.e., the "common" grasses that were almost alone the only thing available until fairly recently.

Today there are more named cultivars than one can keep tab of, in varying shades of color, texture, and growth habits, suited to many needs and diversified tastes. They represent not only a product tailored to the need — being low-growing, good-looking, generally tolerant of pests — but they provide the potentiality for a lawn that accomplishes more than to just "fill up space" between ornamental beds. Ever since Merion broke the premium lawngrass barrier in the 1950's, grass quality has become increasingly a concern, and the lawn can itself be a landscaping focal point. Still, for those not aspiring to such elegance, durable lawngrasses are also had which can make a relatively untended lawn passable. A panoramic glimpse of the cultivars carpeting urban America these days is the topic of this essay.

In the lawngrass game two contrasting forces are at play, one dedicated to stability and proven worth, the other to variability and competitive performance. Thus the species that yield modern lawngrasses mostly have been around a long, long time. Mainly, for top quality lawns, Kentucky bluegrass (*Poa pratensis*), lawn fescues (*Festuca rubra* in several subspecies), perennial ryegrass (*Lolium perenne*), bentgrasses (*Agrostis* spp.) and rough bluegrass (*Poa Trivialis*) for the North; bermudagrass (*Cynodon* spp. and hybrids), Manillagrass (*Zoysia japonica*), St. Augustine (*Stenotaphrum secundatum*), centipede (*Eremochloa ophiuroides*) and bahia (*Paspalum notatum*) for the South. All are introductions made mostly in Colonial times.

Their adaptability as a consort of mankind in his restructuring of the wilderness is well known. By and large the same species that we use today were the camp followers of civilization when first the soil was cultivated. These very species proved themselves in the crucible of natural selection during these

early epochs, with ecotypes and biotypes succeeding with almost no assistance (in the days of the pioneer seedbed preparation was crude, fertilization and irrigation almost nonexistent, "mowing" little more than grazing by livestock). Indeed, modern lawngrass breeders build upon a solid base of adaptability, self-sufficiency and recuperativeness that makes modern cultivars something better than pampered upstarts.

But specialization and "improvement" are the normal accoutrements of civilization, too. So from these major species

are bred new lawngrass cultivars, and spit-and-polish "varieties" are chosen. Even the earliest agriculturists selected for productivity, and for various genetic manifestations that made cropping easier and more bounteous. We have long taken this for granted for agricultural crops, even to the point of breeding high-yielding (or more suitably shaped, as for efficient harvest) types which would have a hard time surviving other than as the wards of agriculture. Strange that it took so long for this to happen with our urban "cropland", the lawns beyond

our front door! Actually, very little was done to mold lawngrass to front yard needs until the most recent quarter century, although as early as the 1930's search had begun for better golf green bentgrasses. The tempo has definitely picked up within the last decade or two, and lawngrass cultivars coming to market today are much better "engineered" for the job — survival under low mowing, suited to prevailing climatic conditions, and adapted for the many services required of them — than were their forbear pasture and field counterparts. Lawngrasses of the future can be expected to show superiority over those of the present, as additional breeding stock is assembled (and proven out), and more stringent qualifications are met.

Many avenues are open for the creation of an improved lawngrass. The most ancient method of all, the searching out

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of especially able "wild" or volunteer types, still yields remarkable returns. Merion Kentucky bluegrass, perhaps most responsible for the improved lawngrass era in the United States, was a chance discovery on a golf course apron near Philadelphia. Of course much rogueing and further detailed selection was needed, along with widespread testing, before Merion became the commercial success that it was. The same is true for Fylking, a somewhat more recent bluegrass breakthrough from Sweden, and still more recently Baron and Enmundi from Holland, Sydsport and Birka from Sweden, and several other European selections which have enjoyed success in America. Here in America Arboretum bluegrass was one of the first ecotypic isolations (from Missouri). Nugget was selected in Alaska, and more recently such notables

as Glade, Plush, Ram I and Touchdown have been proved out under aegis of the Rutgers breeding program. At least with Kentucky bluegrass there is no question but that the wealth of natural variants available to diligent search can yield first-rate cultivars.

As such worthwhile genotypes are assembled, the possi-

breeding cultivar. Yet it has proven possible for Dr. C. Reed Funk and his colleagues at Rutgers University to earmark especially effective parental bloodlines, and by employing various laboratory techniques to make crosses from which highly-apomictic progeny can be selected. Thus have come to American lawns such non-

"Ever since Merion broke the premium lawngrass barrier in the 1950's, grass quality has become a concern..."

bilities for efficacious man-directed crossings increases. Many technical difficulties confront the breeder, such as consideration of the parent plant's sexuality (apomixis is prevalent in Kentucky bluegrass) and the possibility of creating a true-

pareils as Adelphi, Bonnieblue and Majestic, among the Kentucky bluegrasses. In the South, with bermudagrass, Dr. Glenn Burton at the Georgia Coastal Plain Experimental Station has created the "Tifton" series of hybrids by crossing common

bermudagrass with an African species; the triploids resulting must be vegetatively planted, since they do not yield seed.

It is not possible in the space at my disposal to review the many breeding programs now under way in the United States. Release of the new "turf-type" perennial ryegrasses has been quite a breakthrough. Selection and directed crossing yielded a number of improved cultivars, such as NK-100 and NK-200, but not until Manhattan came along was the stage set for today's spectacular mushrooming of the polycross perennial ryes. Manhattan, another outstanding development of the Rutgers program, entailed the polycross concept, in which a number of pureline clones are interplanted and let cross willy nilly to yield the cultivar. In the case of Manhattan, sixteen parent strains are involved, which were gathered chiefly in Central Park, New York City. Pennfine is an equally notable three-clone polycross developed at Pennsylvania State University. More recently have come Blazer, Citation, Derby, Diplomat, Fiesta, Omega, Regal and Yorktown II, many utilizing germplasm accumulated at Rutgers. The polycross concept has been extended to the breeding of fine fescues, too, e.g. Banner from Rutgers, and Koket from Holland; yet equally worthwhile have been selections such as Highlight and Ruby.

By and large the northern lawngrasses have lent themselves to perpetuation as pure lines more readily than have the southern grasses, which for the most part are highly sexual and seldom come true enough from seed. Yet a great deal of interest has arisen in the South, and a large selection of breeding stock is being accumulated, especially at the University of Florida. Some turfgrass breeding and selection is the normal spinoff from other research activities at various centers, and new releases have come from California, Texas and several of the southeastern states. Great progress can be expected in the breeding of improved southern turfgrasses in the years ahead; northern grasses will likely be subject to continuing competitive winnowing and testing, yielding cultivars perhaps even more specialized than today's notables. More attention will no doubt be given such heretofore relatively ignored traits as resistance to insect pests, survival under low-maintenance, drought tolerance, and other needs-of-the-times as they evolve.

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Conditions and control of Fusarium blight

The turf disease *Fusarium* blight is primarily a problem in well-manicured bluegrass home lawns, and lawn care businessmen in the Northeast, Midwest and northern portions of the country have to know how to recognize and control it.

As a general rule, the foliar stage of *Fusarium* blight is most severe during prolonged periods of high atmospheric humidity with daytime air temperatures of 80 to 95 and night air temperatures of 70 or above, according to noted plant pathologist Dr. Houston B. Couch.

Turfgrass grown under deficient calcium nutrition is more susceptible to *Fusarium* blight than well-nourished turfgrass. Incidence and severity of the disease is also greatest under conditions of high nitrogen fertilization, he said. The development of *Fusarium* blight has been reported to be greater in turfgrass where the soil has been allowed to dry out to the point where the turfgrass plant can no longer extract enough moisture to offset transpiration losses.

While high nitrogen fertilization does increase the suscepti-

High humidity, day temperatures between 85° and 90° and night temperatures in the 70's favor Fusarium.

bility of turfgrass to *Fusarium* blight, it is unlikely that a significant reduction of the disease can be effected by reducing nitrogen levels. In general, the level of nitrogen fertilization required to significantly reduce the severity of *Fusarium* blight is well outside the range of necessary to meet the basic nutritional requirements of the grass. From a field standpoint, then, nitrogen fertilization, and its effect on the disease, should be considered with respect to thatch management, Dr. Couch said.

Since the thatch serves as the major reservoir of inoculum (pathogenic agent) in established home lawns, a successful program of *Fusarium* blight control requires that the quantity of this material be held to a minimum consistent with the proper management of the grass species in question.

For most turfgrasses, Dr. Couch reports, this optimum thickness is about 1/2 inch. In order to keep the *Fusarium* blight potential of a stand of turfgrass to a minimum, therefore, increases in the rate of nitrogen fertilization should be balanced with concurrent increases in the intensification of the thatch management program.

Ranked in order of susceptibility to *Fusarium* blight, the bentgrasses are the most prone to the disease. The fescues are most resistant.

A preventive fungicide program, coupled with cultural control, is essential for effective control of *Fusarium* blight, Dr. Couch said. The fungicide application should be made immediately after the first occur-

rence of night temperatures that do not drop below 70. For most effective control of *Fusarium* blight, Couch recommends that the lawn care businessman spray 1,000 square feet with six gallons of water containing five to eight ounces of benomyl 50 percent wettable powder, marketed under the trade name Tersan by Du Pont Co., Wilmington, Del. He says the total amount of benomyl applied to the turfgrass within one calendar year should not exceed eight ounces.

For example, Paul Constant, owner of Constant Care Lawn & Tree Service, Kansas City, Mo., has many of his customers on a preventive maintenance program to combat *Fusarium* blight. "People around Kansas City lost a lot of lawns last year to disease, but I saw it coming, and sold my customers on spraying with a fungicide. I saved the lawns and the customers," he told LAWN CARE INDUSTRY.

TURF

How to establish and care for a Zoysia lawn

There are three ways to start a Zoysia lawn by vegetative methods — sprigging, sodding and plugging, says Jack Kidwell of Kidwell Turf Farms, Inc., Culpeper, Va.

Also, *Zoysia japonica*, a low-quality species, can be propagated by seeding. May through July are good months to plant a Zoysia lawn, he said, because warm weather encourages growth and blocks of Zoysia are still available at nurseries. Since July can be a dry month in much of the South, the application of water is the most demanding requirement.

Sprigging is the most economical of the vegetative methods, but it is also the most tedious. Place a strip of sod root-

side up, wash away soil with a strong spray from a garden hose, and pull sprigs apart. Plant sprigs six inches apart, leaving grass blades above ground. A square yard of sod will furnish from 2,000 to 3,000 sprigs of grass, enough to cover 500 to 750 square feet.

Sodding is the quickest way to establish a lawn, but it is also the most expensive. By placing strips of sod side-by-side in rows on a prepared area, you can have an instant lawn for your customer. Measure the lawn area you wish to cover and buy the equivalent square feet of sod.

Plugging is easier and faster than sprigging, and much less expensive than sodding. A square yard of sod will furnish 324 two-inch plugs. With plugs staggered 12 inches apart, this is enough to plant 324 square feet of lawn area, or about 81 square feet with sprigs placed six inches apart.

Proper spacing can be facil-

How to choose the right iron.



itated by the use of carefully placed and marked strings. Tie each end of three strings to separate stakes. Stretch out two of the strings on opposite sides of the prepared area and parallel to each other. Mark them to indicate the distance between rows. Place the third string at right angles to the parallel string. Mark it to indicate the distance between plugs in a row. Dig planting holes and plant plugs of grass where the marks indicate. Move the third string to the next marks on the parallel strings, adjusting it so that marks are staggered equidistant between plugs planted in the previous row.

The time required for complete coverage can be considerably shortened by the wise use of water and fertilizer. Keep the soil constantly moist but not saturated. Give the grass a light application of nitrogen every two weeks. Keep the areas between the plugs in the rows absolutely

free of weeds and other grasses. To encourage the grass to spread more rapidly, begin mowing as soon as new shoots are about three inches high. By following these practices, you should have complete coverage for your customer within two growing seasons. Once the lawn is established, lower the mower to cut at the preferred height of 1/2 to 1 1/2 inches.

Regardless of the planting method used, thorough preparation of the area to be planted is necessary for good results. Dig soil to depth of at least six inches. Break up clods of soil, rake level and remove grass, weeds, rocks, and other debris. The soil should provide a deep rooting zone that can be easily penetrated by air, water and roots. It should hold water between rains and allow the excess to drain away. Natural fertility should be high or plant nutrients should be added.

Most soils in the South are

mixtures of sand, silt and clay, classified as sandy loams, silt loams or clay loams. Whatever the soil mixture of your customer is, the addition of two to four inches (four to eight cubic yards per 1,000 square feet) of organic matter (sawdust, ground bark, peat moss, etc.) is highly recommended.

Organic matter will improve aeration and drainage and will make soils easier to handle. To prevent the soil from settling in layers, it is essential that the organic matter be mixed thoroughly with the soil to a depth of six to eight inches. This job can be done either with a s spade or with a rotary tiller.

Practically all soils in the South are deficient in nitrogen. Also, most need additional phosphorus and potassium. In areas where the soil is very acid, lime should be applied. A soil test will determine whether or not your soil needs lime, what nutrients

are lacking, and how much of each to apply.

Lime and fertilizer can be applied on top of the organic matter and all three elements can be mixed with the soil in the same operation. Then rake the surface smooth. To avoid future weed problems, you can treat the prepared area with a preemergence herbicide.

MANAGEMENT

What your wife should know about your business

Even though your wife may have been your only supporter and perhaps only employee when your lawn care business started out, it is doubtful if she could run the business today if something happened to you.

For your own welfare as well as hers, there are a number of things she should know about the business just in case something should happen to you. LAWN CARE INDUSTRY conducted a survey of business consultants, and came up with the following points:

Who she can call upon to take over for short duration if you suddenly are incapacitated and cannot make necessary basic decisions.

Where the important book-keeping records are kept and how to read the basic information that she may need to handle some important problem.

The name of your lawyer and exactly how he is to help her during any emergency.

The entire picture of your banking relationships with respect to the business and the name of the bank officer she can call upon for assistance.

Where the safe combination can be found, the keys to locked drawers and cabinets are kept, and which ones to the job in each place.

The names, addresses, and telephone numbers, of members of the staff and the specific responsibilities each has in the business, salaries paid them, etc.

Any future programs regarding the business to which you have been committed and what she or someone else is to do about each of them.

The nature of your basic tax records, where they are kept, and to whom she is to refer for information concerning any such matters.

What promises you have made to specific staff members for the immediate future and what is to be done about them should you be absent.

A list of the insurance policies covering the business, their type and nature, where they are kept, and whom she is to contact with respect to them.

Her legal rights to the business, not just should you pass away, but while you may be totally incapacitated for a time, and how she can protect them.

What she is not to do as well as what should be done and why you so specify each such restriction.

The market value of the business just in case you should suddenly pass away.

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Whether you take care of a golf course, an estate, a campus, a park, or do roadside maintenance, you want a tractor that's versatile. Can it handle a mid-mount mower? A gang mower? Can it move dirt? Dig a hole? Kubotas can do all these things. Every Kubota has rear PTO and a 3-point hitch that can accommodate a wide variety of implements. You don't want a tractor so specialized it can do only one job.

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Our tractors range from 12 to 55.5 horsepower. Small enough for economy, large enough for heavy-duty jobs. It's wasteful to use 100 horses for some mowing. And it's impossible for 10 horses to do heavy moving or hauling.

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For specific information about any Kubota tractor, call 1-800-241-8444. (In Georgia 1-800-282-1333.) Ask for Operator 63.

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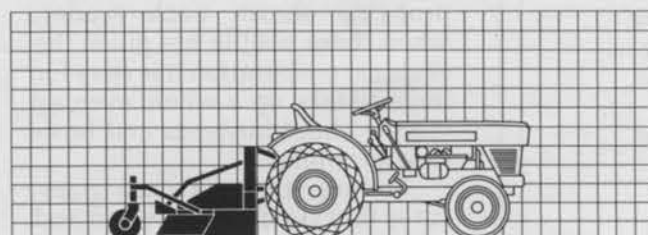
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Rear-mount mowers are available for all Kubota tractors.

Diesel engines are rugged and durable. They have no electric ignition system, so they never need a tune-up.

Are you a good boss?

Every business person wants to be known as a good "boss" not only among employees but customers as well. Usually one must determine for oneself what the score happens to be. Here are guide lines made up from a recent tabulation of scores of responses by employees themselves for LAWN CARE INDUSTRY. They offer a good method for self-rating.

You listen to ideas from employees. This pays off in practical results as well as increased interest in the business itself upon the part of your staff.

Fairness in any difficult situation is assured employees whether it involves a problem in handling a given assignment or general performance.

You keep your temper 99 percent of the time in handling all employee and customer problems and particularly those between employees and customers.

Employee's can depend upon whatever you tell them **as being truth** in itself and that you will back it up to the end each time.

Participation in planning for business operation is given to the people on your staff from time to time in order to build that worthwhile feeling of togetherness.

Communication to employees is done with clarity and clear understanding for them so that they never have to guess about instructions being given to them.

No request is ever made of employees for work beyond the established job routines except

in emergency situations or on special occasions when the need is obvious.

Favoritism for one member of the staff over another is never practiced to the slightest degree on your part in matters concerning employment assignments.

Personal interest in the lives of the people on your staff is regularly practiced but never carried to the extreme where it becomes "nosiness."

Guidance is supplied employees whenever they are given an assignment that is new and different and with which they have had no previous experience.

Compliments are not handed out patronizingly or to serve your own ends but reserved for occasions when employees actually deserve some recognition for performance.

You consistently supply your staff with the latest and **best equipment** for their job performance and never expect peak capability from old and worn out units.

All relationships are handled on a basis of equal intelligence and no member of the staff is ever made to feel inferior.

Correction or criticism is never dispensed without sound and logical reasons or explanations covering their need.

Employee questions are never evaded but answers are regularly supplied in clear and plain language so that they can be certain of your replies.

Promises made to employees are fulfilled in each case or a sound and acceptable reason given every individual why delivery upon them cannot be fulfilled.

MANAGEMENT

Do you take your work home with you at night?

Any man or woman in the lawn care industry who permits business life to consume just about every moment of his or her waking existence risks a shortened career, breakdown, exhaustion, and a dozen other misfortunes.

It is not easy to keep from taking your business life home with you each working day. Where the pressure to do so is rising, however, the following suggestions will prove of value:

Tie up all of the loose ends involved each night before leaving the premises. These comprise about 75 percent of the business element that an average man or woman will take home each night.

It takes but a few moments to do so at the end of any average day and it is time well spent. The occasional problem that cannot be so handled may safely be

taken home with one if necessary.

Build up greater interest in things to go home to and it is easier to set aside business problems. These can be recreational activities of high interest, programmed efforts in family life, association with good friends, etc.

Actually, where none are present one will often take home a business problem or two just to fill in the void sure to be there that evening.

Absolutely refuse to think about business (or worry about it) for a period of just two weeks during those after hours. If this can be done that one step will make a world of difference.

It is going to be difficult to do for the first two or three evenings but once this initial hurdle has been overcome doing so will be easier and easier as the days go by.

Schedule those small business matters for the last hour or two of each business day. Keep the involved and complicated ones for handling during the first morning hours.

It is the latter type of problem that invariably gets a tight hold and hangs on after leaving the business each night. By disposing of first thing in the morning that hazard has been overcome.

Cut short those friends and acquaintances in social circles who want to talk business after working hours; switch the subject to something else each time they show up.

As past experiences have probably shown each reader, when these people are given the slightest cooperation it is easy for them to take up a whole evening talking about business and business problems.

Reduce the personal pressures that you have acquired and which make you constantly think about business as a means toward satisfying them.

The act of doing so mixes up one's personal and business life

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We'll show you how easy it is to make more green while you make more green.

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to the extent that it will be difficult to bring about any separation of the two.

If you just must do "home work" connected with the business, limit it to one night per week. Pick the evening without any regular commitments and let everyone in the family know that it has been reserved for this purpose. Doing so makes it easier to concentrate at that time and free other evenings.

Why is it impossible to handle the business chores being taken home during regular hours rather than at night time also? Maybe the solution to the major problem is in finding the answer to that question.

Solutions often lie in better use of one's own business time and reducing waste elements therein so that everything is handled completely and there are no "leftovers" at the end of any business day.

Broaden your personal interests in life; many men and women in business take their working problems home with them each night solely because they have developed no other interests in life.

Where such a void is present it is only natural to fill it with the things that occupy your normal eight-hour day.

Maybe another reason is that you have kept yourself short-handed in the business and there is just too much for you to do in even the smoothest running day.

Saving payroll costs through increasing the load one is carrying on one's own shoulders proves to be poor business economics as well as ruining the leisure part of the individual's existence.

Does it take too long to really get going each morning? Could it be that you are actually resting during the day from the work done at home the night before?

Where there is the slightest suspicion that this is happening some shifts are definitely in order as a first step. Besides, rest is better attained at home than within the business itself.

How many interferences in the business day have you been experiencing regularly? One or two hours worth each day? Often these are not even apparent unless one takes the trouble to do some analysis on the possibility of their being present in one's business life.

Reduce them right now and the need to work overtime at home may disappear entirely.

Finally, perhaps some re-evaluations on the scale of importance of each step in your business and personal life, is the best step of all to take.

Does your business existence take up 98 percent of your time when it should occupy no more than 70 percent?

COMING

The June issue of **LAWN CARE INDUSTRY** will feature a report on the lawn care market in Washington, D.C.

Awards for the first million dollar orders of the year were accepted by C. R. McMicken (second from left), president, B. Hayman Company, Inc., Santa Fe Springs, Calif., and H. W. Graves (third from left), president, H. V. Carter Company, Inc., Oakland, Calif. Presenting the award plaques at ceremonies at the Golf Course Superintendents Association of America Turfgrass Conference and Show in Atlanta, were Jacobsen president Frank S. Depew (left), vice president, operations, Howard McPherson (right), and vice president, marketing, Richard J. Dittoe. The B. Hayman and H. V. Carter companies are distributors of turf and grounds maintenance equipment.



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

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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.

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Kids look at lawn care

by Bob Williams

(Editor's note: Bob Williams is an elementary school teacher in St. Louis. We think you'll enjoy his short story on how his students viewed a visit to a lawn care company near their school.)

During the twenty-one years that I've taught elementary school youngsters, I've found that they can come up with some unique ideas. Each year we study a unit on occupations.

In recent years, a surprising number of students have chosen to read about and report on career opportunities in the lawn care industry. Some of their comments have been hilarious; all have been expressed in the delightfully original style of children. Here's what I mean:

"I think career opportunities in lawn care are wide open. But the harder a person works the more successful he will be. When he is first getting started, he might need to work around-the-clock, twelve days a week."

"All the different kinds of

"Another name for weed killer is herbicide. But I think I will just stick with the first name and learn it good ..."

weeds there are have advanced to the point where they are no longer understandable."

"Will we ever get to the point where there are no longer weeds on peoples lawns. The chances are 999 out of a hundred."

Judging from the size of the handwriting, one tyke was under the influence of John Hancock when he took time out to report: "Another name for weed killer is herbicide. But I think I will just stick with the first name and learn it good."

Obviously, one of the fringe benefits of being an elementary school teacher is the possibility that the next paper I read will contain a "wrong" answer that is twice as captivating or thought-provoking as the expected one. Here are some thoughts from youngsters who are not reticent about expressing their opinions:

"BOO! I did not mean to scare you so bad, but that is how I feel when I think about spraying close to trees but not killing them."

"Herbicides could just as well be called something else if we could only think of another name for them."

"Lawn care people are very interesting folks. All their ways are hello ways and glad to see you ways."

"If I could get to own one, I would like to start a lawn care business in one of our city's outer skirts."

Then I don't suppose I'll ever forget the girl who remarked: "My dad's work is going around and spraying lawns. If anybody ever said people don't have to work hard at that type of job, boy

would that ever boil my temper."

The elementary school youngster's mind is evidently a vast storehouse of miscellaneous misinformation — half true, half false and wholly whimsical. I'm sure this next statement is perfectly true (if I could only figure it out):

"The lawn care business will not be like it should be until it gets like it was when we did not have any and could see all the things the lawn care business could do."

Children, like mountain climbers, must always make sure that their grasp on a fact is firm, even though they want to leap far beyond. Otherwise, they may find themselves trapped on a mental ledge called a Boner. Even when I think the class

understands the facts perfectly, I sometimes discover that something is lurking underneath — something called total confusion:

"What I would actually do as a solicitor has a very short memory in my mind."

"I am not sure how many different kinds of jobs there are in the lawn business, but trying to find out is one of my constant doings."

Last year a boy wrote of this frustrating experience: "I looked up the salary range of people who work on lawns. I looked it up twice but I forgot it three times."

Kids are fresh, original and offbeat in their thinking because that's the only way they can be. They're not like us adults who can reach into our lifetime stockpile of common expressions for a ready-made way of saying what we wish.

Much of the fun in talking to kids comes from the startling

way they can put a backspin on their answers, saying something that's ridiculous and sensible at the same time:

"When they asked my brother if he would like to have a job working for a lawn company, he rolled his eyes and flashed his teeth and said sure."

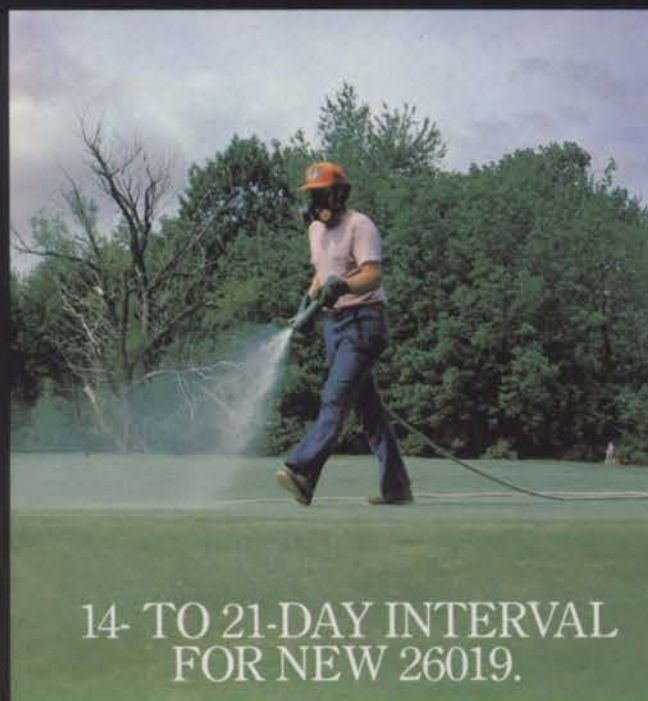
"Nitrogen is a well-known grass food few people have ever heard of ..."

"The last time we had our lawn treated was September the somethingth."

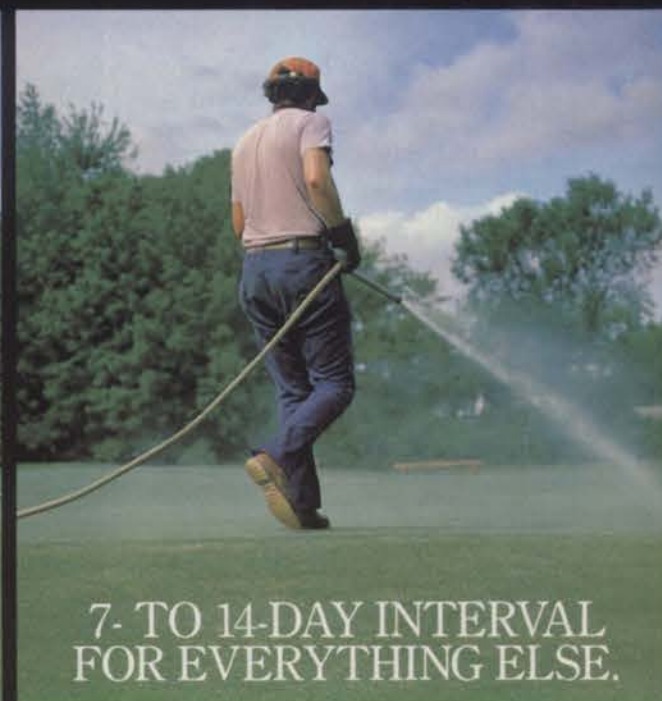
"Many ways of fighting weeds that were once thought to be science fiction now actually are."

Oliver Wendell Holmes once observed: "Pretty much all the honest truth-telling there is in

INTRODUCING CHIPCO[®] 26019 THAT WILL OUTPERFORM A 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

the world is done by children." Here are some quotes that proved to be unexpected, unconventional — and undeniably true:

"Everybody shouldn't even try to figure out all the things wrong with his lawn. He should call a person in that business. The difference between now and in the past is today we know not to try to know everything, but to specialize. Like cows give milk while chickens prefer to lay eggs."

"Oughtn't congress to pass a law so that people could borrow money to fix up their lawns like they fix up their houses? Are they thinking about it? If not, I make a motion."

One skeptical young fellow absorbed all the statistics regarding the large number of home owners who have professional lawn care, but got his skepticism across in one crushing statement: "The number of people

who have their lawns sprayed every year is more for saying than believing."

Specialists are supposed to be experts who know more and more about less and less. Kids are just the opposite because they know almost nothing about everything. But some of their

"Did I get an A on my report about job opportunities in the lawn care industry and why not? ..."

youngsterisms have a devastating logic, e.g.:

"As a matter of fact, someone in here once said that lawns should be worked on five times a year. Is this so? I think it is because I think I was the one that said it."

"Can you tell me if lawns should be sprayed four times or five times a year? I said four and Donald C. said five and I said four and he said five and I said four and so on. So can you tell us for sure? Oh well, thanks anyway."

Sometimes a new bit of information is turned upside down in a child's mind and comes out like this: "Nitrogen is a well known grass food few people have ever heard of."

Truth-telling, complete candor and awful sincerity are to be found in both the talk and the scribbles of children. This seems to be especially true when they comment on their own personal experiences. Three examples:

"My brother teased me that I was interested to read about what makes grasses healthy and weeds sick."

"Zzzzz. You would be sleepy too if you stayed up and read as

much as I did about nitrogen, phosphorus and potash.

"Did I get an A on my report about job opportunities in the lawn care industry and why not?"

This next one is from a girl who is obviously a born writer of mystery stories:

"Tell everyone to get quiet and I will tell you a mystery. One night I was asleep. Eek what was that! I heard a man talking about how to take care of lawns, but I could not see him anywhere. I finally solved the mystery by forgetting to turn off my radio."

No one looks to the future as eagerly as kids do. Two tiny forecasters made these predictions that should be of interest to the lawn care industry:

"Grass will be improved so we won't need to have people to fight weeds in a few hundred years. Just wait and see."

"Even better ways to take care of our lawns are to be found. Where they are to be found is in the future tense."

Here's one blockbuster of an idea — lost forever: "One way people in the business could spray their customer's lawns without even having to leave their office is, oh I forgot what I started to say."

I once had a moppet in my class who had a delightful way of expressing her thoughts. Here's how she summed up her feelings: "Now that I have studied about how fertilizers can help grass grow, the next time I hear fertilizers being talked about like they are important, I will just twinkle an eye and know why."

Perhaps that's an important part of an education, anyway — to be able to "twinkle an eye" occasionally.

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.

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Please read labels carefully, and use only as directed.

IRRIGATION

Installing sprinklers without trenching

A new pamphlet that explains how to install an underground lawn sprinkler system without digging trenches is available free from Charles Machine Works, Inc., manufacturer of Ditch Witch equipment.

For your free brochure, contact the company at P.O. Box 66, Perry, OK 73077.

MEETINGS

New York conference trade show expands

The New York State Turfgrass Association is pleased to announce the expansion of its trade show being held in conjunction with its annual turf conference.

This year's dates are Nov. 13-15 at War Memorial Stadium in Syracuse, N.Y. The expanded trade show has tripled in size, permitting not only more exhibitors, but also the opportunity to display heavy equipment. For complete information, contact trade show chairwoman Janet Dudones, The Ed Worthington Corp., 50 Petrova Ave., Saranac Lake, N.Y. 12983.

Circle 106 on free information card

well-trained lawn specialists. Finally, and yet most importantly, the quality of service will become the most important factor that customers will consider when choosing a lawn care company.

Fiberglass tanks. Art Brown, owner of Great Lakes Lawn Spray, Farmington Hills, Mich. said that more lawn care trucks will have tanks made of fiberglass, and that tanks will be compartmentalized to a greater degree.

"Computers will be in nearly every office by 1985," he said, "and mini-computers will aid sprayers with billing and will be on the truck to measure output of materials on the job."

He said that hydroseeding will become more popular than sodding. Also, potash will become more important, particularly in late fall and early spring applications. Concentrations of



Anda: "There will be new, more sophisticated equipment designs allowing the lawn specialist the choice and flexibility of applying only needed pesticides on each lawn."

potash will increase the root system which in turn will enable the plant to "find" food easier,

providing less leaching of applied materials.

"In the later 1980's, many lawn spray companies will use slow-release liquid preparations," he said. "These will be stored underground in large tanks or reservoirs, with automatic refill capacities into the spray trucks. Some lawn spray companies will make use of former gas stations and occupy good, visible locations."

Industry more equipment-intensive. Costs for supplies and equipment will continue to rise, according to Kenneth P. Torborg, of Chapman-Torborg Grounds Maintenance Co., Prior Lake, Minn. Turf maintenance equipment manufacturers will become more aware of the market for commercial turf maintenance equipment.

He said that customers will demand more professionalism because of the higher costs for services. Also, smaller areas of turf, but more intensely land-



Brown: "Some lawn spray companies will make use of former gas stations and occupy good visible locations."

scaped, will make maintenance more difficult.

"More commercial/industrial companies will be going to lawn services instead of their own maintenance personnel because of the growing need for greater expertise in the care of turf areas," he said. "Also, due to rising wages and benefits, the lawn care industry will become more equipment-intensive rather than labor-intensive, as it is now."

Expanded services. In an effort to retain customers, lawn care companies in the past have expanded services, says Peter Connelly, Hydro Lawn Spray, Salem, Va.

"They seem to begin to offer their customers more home services after they have established



Grove: "Equipment companies will realize that lawn care companies need mowers designed specifically for their needs."

a solid customer base," he said. "I think this is for two reasons. One, to generate more income in the same locations, minimizing advertising expenses per dollar of revenue generated. Two, to increase customer satisfaction in the fact that you do offer more services."

He feels that lawn care companies may explore such unrelated areas as painting services, gutter repair and others. "The customer is a virtual gold mine, with hundreds of possibilities," he said.

Marion Grove, owner of Greenlawn of Greenville, S.C. says that the general public will become even more aware that professional lawn care is the best buy for their money. Also, she says that equipment manufacturers will realize that lawn maintenance companies must have equipment designed specially for lawn care, rather than equipment designed for golf courses and other areas.

Circle 136 on free information card

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.

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., C-3NF St. Louis, Mo. 63166 (314) 694-1000. R1-O1D

Change through conflict. John M. Kenney, general manager of Turf Doctor, Framingham, Mass. said: "If, as it is said, change can only come from conflict, then lawn care in the 1980's will be a combination of what is good today, of what problems remain unsolved then, and of the unknown solutions to conflicts which yet have to surface."

"The industry was sired by suburban growth in the 1950's, in the post-war baby boom exodus from the inner city."

"The industry was born in the confusion of the building of the tract developments of the prosperous 1960's. The industry's early growth has taken place in



Connolly: "The customer is a virtual gold mine, with hundreds of possibilities... offer customers more home services after they have established a solid customer base..."

the over-regulated, under-supervised 1970's, where economic and environmental instability has kept the consumer basically uninformed, skeptical and unenthusiastic.

"The successful lawn care companies of the 1980's will be keen students of history. They will not be those who have great ideas, but rather those who make ideas that have already been put forth work. They will not depend on anything new, but will maximize the best of the past. They will not do just what needs to be done, but also what should be done."

52-inch cut, mow up to 18 acres a day

Toro Co. has available a free, detailed data sheet on its Groundsmaster 52, what the company calls a new dimension in riding rotaries — the perfect mid-size mower. It is big enough



A new dimension in riding rotaries, the perfect mid-size mower. Big enough to mow up to 18 acres a day. Maneuverable enough to mow, and trim, an acre or less. Groundsmaster 52. With hydrostatic drive and chain, simple engineering all the way. Haven't you done without a new Toro long enough?

to mow up to 18 acres a day. Maneuverable enough to mow, and trim, an acre or less. Hydrostatic drive gives superior maneuverability: single-pedal controls forward-reverse with no gears, no shifting, no wasted time. Also, there is a continuous range of ground speeds (0 to 5 miles per hour mowing) for great cutting control under all conditions.

Circle 213 on free information card

Information available on new perennial rye

Many new varieties of perennial ryegrass are appearing on the market that will have to prove their performance for home lawn, commercial/industrial and other turf uses. Since the introduction of Citation perennial ryegrass, developed by Rutgers University and Turf-Seed, Inc., its special qualities are becoming evident under usage, the company said. Further information is available about

Citation. In thorough testing throughout the nation, excellent ratings were achieved for withstanding high summer temperatures as compared to many improved turf-type perennial ryegrasses. In the cool-season grass zone, Citation blends very well with Kentucky bluegrass, the company said. In the South, it is becoming an outstanding overseeding grass to produce excellent winter turf in bermudagrass areas. In tests in Tifton, Ga., Citation rated highest in disease resistance, desirable texture and pleasing color over 10 other perennial ryegrasses and ryegrass mixtures for overseeding. Among special qualities include: less mowing, less fertilizer needed to maintain attractive green color, fast germination, dense turf-type growth and high quality seed, the company said.

Circle 220 on free information card

Diamond announces new Daconil formulation

The Agricultural Chemicals Division of Diamond Shamrock Corp. has announced a new formulation for its broad-spectrum fungicide Daconil 2787. It is now available in a 500-gram per liter formulation. Ron DeZemmer, manager of marketing and sales, said that the reduced viscosity will make the fungicide easier to handle, faster to pour and allow it to disperse more evenly in the spray tank. The fungicide controls copper spot, *Curvularia* leaf spot, dollar spot, gray leaf spot, *Helminthosporium* leaf spot and melting out, large brown patch, red thread, stem rust of bluegrass, and in California, *Alternaria* leaf spot on dichondra.

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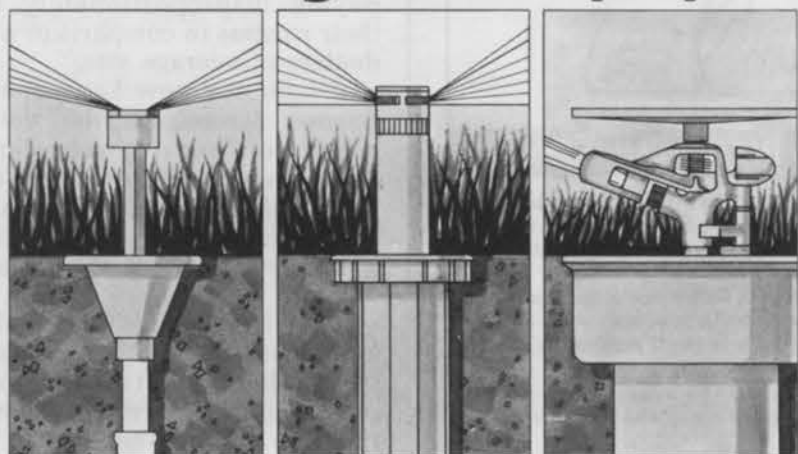


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TOOLS, TIPS & TECHNIQUES

Blend bluegrasses for best disease resistance

By Dr. William A. Meyer, vice president-research
Turf-Seed, Inc., Hubbard, Oregon

The primary objective of a lawn care company is a satisfied customer with an attractive lawn. Having the most disease-resistant and well-adapted varieties in a customer's lawn should reduce the inputs needed to maintain a high-quality lawn.

Most of the turf areas in the northern United States planted before the early 1950's consisted of common Kentucky bluegrass and fine fescue mixtures. The seed sources of Kentucky bluegrass used for these lawns were collected by stripping wild naturalized stands. A majority of the plants

from these common bluegrass lots were susceptible to *Helminthosporium* leaf spot. Delta and Geary are two varieties developed in the 1930's, respectively, that were also susceptible to leaf spot. Park, Newport, Prato and Kenblue were later developments that also are susceptible.

Merion was the first Kentucky bluegrass variety that would be considered an improved type. This low-growing, turf-type bluegrass was found to be widely adapted throughout the cool-season growing area of the United States, and also possesses a good level of resistance to leaf spot diseases. Unfortunately, this variety was later found to be susceptible to powdery mildew, stem rust, stripe smut and *Fusarium* blight.

Since the mid to late 1960's, many varieties were released that were considered to be more resistant than Merion to stripe smut and the other previously mentioned diseases. Unfortunately, some varieties were later found to be more susceptible to dollar spot than other varieties and also have very poor winter color and spring green-up. Fylking and Pennstar were later found to be more susceptible to *Fusarium* blight.

Despite the tremendous effort put forth to date to develop

TABLE 1. RELATIVE PERFORMANCE OF
IMPROVED TURF-TYPE KENTUCKY BLUEGRASSES^A

VARIETY	HELMINTHOSPORIUM LEAF SPOT	STRIPE SMUT	FUSARIUM BLIGHT	POWDERY MILDEW	DOLLAR SPOT	STEM RUST	STRIPE RUST	LEAF RUST	SHADE TOLERANCE	HEAT TOLERANCE
A-34 ^B	+	+	—	=	+	=	=	C	+	=
Adelphi	+	+	+	—	+	+	=	+	—	+
Aquilla	=	+	=	+	=	+	=	=	—	=
Baron	=	=	=	—	=	=	=	=	=	=
Birka	+	+	=	+	=	—	=	+	+	=
Bonnieblue	+	+	=	—	=	+	=	+	=	=
Bristol	+	+	+	+	=	+	=	+	+	+
Columbia	+	+	+	=	+	+	=	+	=	+
Fylking	+	=	—	—	=	=	=	=	—	—
Glade	=	+	+	+	=	+	=	+	+	=
Majestic	+	+	=	—	+	+	=	+	—	=
Merion	+	—	=	—	=	—	=	=	—	+
Nugget	+	+	=	+	—	—	=	+	+	=
Parade	+	+	+	=	+	+	=	+	=	+
Plush	=	+	=	=	=	+	=	=	=	=
Ram I	=	+	=	=	=	=	=	=	=	=
Shasta	+	+	=	—	=	=	+	=	—	=
Sydsport	+	+	=	=	=	=	=	=	=	=
Touchdown ^B	+	+	=	+	=	—	—	+	+	=
Victa	=	=	=	—	=	=	=	=	=	=

A. + means that this variety has an improved level of disease resistance or environmental tolerance when used in a blend.

= means that this variety has had an average level of disease resistance and environmental tolerance being considered and shouldn't change the level of turf performance up or down considerably in a blend.

— means that this variety will most likely produce a negative effect in a blend with reference to the disease or environmental stress being considered.

B. These two varieties are very competitive in blends and tend to predominate under high maintenance levels and short cutting heights.

C. Information not available.



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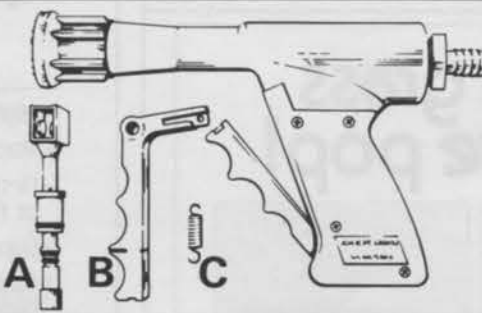
24 in., 5 or 8 H.P.
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32 in., 8, 10, 11 H.P.
36 in., 8, 10, 11, 16 H.P.
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Circle 134 on free information card

LAWN-A-MAT from page 1

sive paperwork and accounting we both had to do to keep track of sales and payments," he said. "The larger volume dealers, in particular, felt that they were paying disproportionately for their success in comparison with dealers of average size."

Under the new Lawn-A-Mat license agreement, the dollar amount of fees for each year is determined in advance when the agreement is signed and remains the same regardless of how high a dealer's volume of business may go.

"In this way, the dealer knows exactly what his license fee will be and that if he goes all-out to build his business, he will not have to share the fruits of his extra effort," Lore said.

Because of the fixed fee, the dealer need not make the voluminous time-consuming reports on his business activity that were necessary in the past. The home office bookkeeping and accounting expenses are also substantially reduced because there is no need to monitor and record mountains of paperwork.

the perfect variety of Kentucky bluegrass, most recommendations today call for a blend of three or four disease-resistant, well-adapted varieties to develop the best available Kentucky bluegrass turf. The blends should be designed to compensate for the known weaknesses of the individual varieties. More information is needed on the compatibility of varieties in a blend. The very aggressive varieties — such as Touchdown, A-34 or Brunswick — can be used in blends as a lesser percentage because of their competitive abilities.

The accompanying table lists the varieties of improved turf-type Kentucky bluegrass that are presently available as

seed or that should be available this coming fall. Lawn care businessmen can use this table as a guide in choosing varieties for blends. They should strive to choose varieties for blends by considering which disease or environmental stresses are most prevalent in their customer's lawns.

There is still much breeding and selection work to be done to find Kentucky bluegrass varieties with even better levels of disease resistance and environmental tolerances. Varieties with improved levels of insect resistance are also badly needed to make the care of lawns an easier task.

To accompany Dr. Meyer's article, LAWN CARE INDUSTRY asked a number of seed marketers for their comments:

Mike Robinson, marketing manager, **Pickseed West, Inc.**, Tangent, Ore., said that although Dr. Meyer's chart shows Touchdown listed as average in resistance to *Fusarium* blight, trials conducted at the University of Illinois and Michigan State University showed Touchdown to have an improved level of resistance. Also, Robinson said that Northeast regional trials showed Touchdown to have an improved level of resistance to dollar spot.

Richard Hurley, director of research, **Lofts Pedigreed, Inc.**, Bound Brook, N.J., said that according to data submitted for its Plant Variety Protection certificate, Ram I shows an improved level of resistance to powdery mildew, and an average level of resistance to leaf rust.

Doyle Jacklin, agronomist and marketing manager for **Jacklin Seed Co.**, Post Falls, Idaho, had a number of comments. Based on trials across the country and years of experience, he said that A-34 should be listed as having an average level of resistance to *Fusarium* blight and dollar spot, and an improved level of resistance to powdery mildew.

Jacklin said that Adelphi should be listed as having an average level of shade tolerance.

Also, Birka should be listed as having improved resistance to *Fusarium* blight and dollar spot. Bonnieblue should be listed as having an average level of resistance to powdery mildew. He said Fylking has an improved level of resistance to stripe smut, an average level of resistance to powdery mildew, an average shade tolerance level and feels that it would produce a negative

effect in a blend in regards to dollar spot resistance.

Jacklin said Majestic has an average level of resistance to powdery mildew and an average level of shade tolerance. He said Merion would produce a negative effect in a blend in regards to *Fusarium* blight and dollar spot resistance, and that it has only an average level of heat tolerance. He said Nugget would

have a negative effect on a blend in regards to *Fusarium* blight and heat tolerance.

He said Plush has an improved level of resistance to *Fusarium* blight and an improved heat tolerance. He said Ram I has an improved level of resistance to powdery mildew, and improved level of shade tolerance, and an average level of heat tolerance.

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ease by any member of the crew.

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REGULATION

Federal court upholds 2,4,5-T, silvex ban

A federal court in Flint, Mich. last month upheld a temporary ban on use of the herbicides silvex and 2,4,5-T.

Dow Chemical Co., Midland, Mich., Chevron Chemical Co., San Francisco, and nine other plaintiffs had requested an injunction to prevent the federal Environmental Protection Agency (EPA) from enforcing the ban, but the request was denied.

The EPA recently ordered an emergency suspension of most uses of the products after a study indicated a "significantly higher" rate of miscarriages occurred in an Oregon town soon after forests there had been sprayed with 2,4,5-T.

The ban was to remain in effect until at least late April when the EPA was to conduct hearings on the chemicals.

A decision is required by July, with an additional 10 days for EPA Administrator Douglas Costle to review the decision before it becomes effective.



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PRODUCTS

Hydraulic lift table

Mechanics for lawn care companies no longer need to work at floor level with the new hydraulic lift table developed by Hanson Industries. Reel and rotary mowers can be easily lubricated, blades adjusted, engines worked on. The lift table works as a hydraulic dock lift as well, providing ease in loading and unloading equipment.

Circle 207 on free information card

New heavy-duty tractor available from Jacobsen

Available from Jacobsen Division of Textron, Inc. is a new heavy-duty tractor that features a Kohler Quiet-Plus four-cycle,



twin-cylinder, 19.9-horsepower engine with automatic transmission. The hitch system allows deck detachment in minutes with no pins, bolts, or tools. Available attachments include: 60-inch rotary mower, 48-inch snow thrower, 54-inch trip dozer blade and 48-inch tiller. The unit is standard with power steering, fully adjustable cushioned seat, fender-mounted headlights and individual wheel braking.

Circle 206 on free information card

Data sheet features Buckner rocker jet

New literature from Johns-Manville details design advantages and performance characteristics of the company's Series 500 Buckner rocker jet. Information provided includes pressure at sprinkler base, flow rate, radius of coverage, maximum triangular spacing and precipitation per hour for three models — 1/2-inch, 3/4-inch and one-inch male IPS. The data sheet is IR-189.

Circle 222 on free information card

Growth regulator for ornamentals

Atrinal plant growth regulator has been registered by the federal Environmental Protection Agency for use on certain ornamental plants, according to Maag Agrochemicals. The product received a good reception at the recent Maintenance Symposium sponsored by the Associated Landscape Contractors of America in San Jose, Calif. Applied as a foliar spray, Atrinal acts systemically as a chemical pinching agent for azaleas and other plants. It can be used as a growth retardant for landscape plantings of shrubs, hedges and ground covers, and to prevent flowering and fruit set of certain woody ornamentals and street trees. Further detailed information is available from the company.

Circle 223 on free information card

Record filing system

Shannon Systems, Inc.'s new Datatray is an efficient and visible record filing system ideally suited for many small businesses. The system has a pull-out tray that holds up to 70 five-inch by eight-inch filing cards, each in a protective manila pocket. The cards overlap so that only their lower edges are visible, and



information typed on the edges serves as an index to the information on the tray. Cards are available for inventory control, payroll, personnel, accounts payable and receivable and other record-keeping functions. Color signals may be attached to the card edge to indicate special situations such as overdue bills or low inventory. Based on modular design, the capacity of the system may be increased in small increments as your lawn care business grows. Trays attach to each other, but may be added or removed anywhere in the stack and easily glide in and out. Cards are securely held so they can be written on while in the tray and can be quickly removed or replaced without distributing other cards.

Circle 224 on free information card

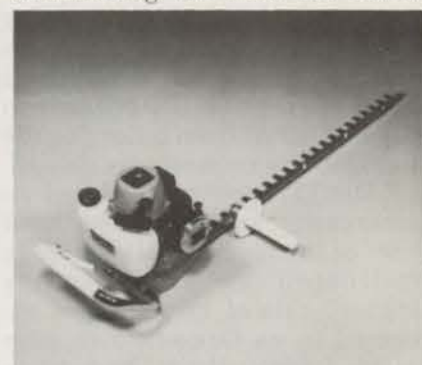
Tree feeding

Creative Sales, Inc., manufacturer of systemic tree care products, has introduced new Medicap MD. The new product was developed for use with a soil-feeding program to promote dark, green leaf development and stimulate feeder root growth. A small Medicap MD implant cartridge slowly releases a special formulation of water-soluble, concentrated plant nutrients directly into a tree's sap flow. The cartridges have a high N-P-K analysis and also contain micronutrients essential to optimum tree growth. The product is recommended when trees suffer from poor soils, confined root areas, disease, insect stress, frost or flood damage, pruning shock, surgery, air pollution or any condition that inhibits normal nutrient consumption.

Circle 225 on free information card

Hedge trimmer

A completely new, heavy duty, gas-powered hedge trimmer, powered by a dependable two-cycle Kioritz engine, has been introduced by Echo, Inc. The new Echo HT-200 is powered by a 21 cc Kioritz engine, eliminating the need for exten-



sion cords that go with electric models. The 30-inch cutter, along with easy-starting two-cycle engine, is designed with a permanently lubricated gear housing that is built to last the life of the engine. The cutting bar can cut hedges through diameters up to 1/4-inch thickness.

Circle 230 on free information card



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Circle 129 on free information card

MONEYWISE

Aggressive management makes the difference

The Grow It Green by Mike Jones lawn care company, Tacoma, Wash. was not staying in the green — moneywise, that is. Owner Mike Jones, 36, felt his money was going out needlessly, and that he should be netting more than his \$1,000 a month.

Last year he made some changes, drastic ones. He fired his entire crew, except for one person, and began looking for new help. His January net was \$27 and by July he had gone through 37 employees. But he had also attained an effective, well-functioning staff, his net had jumped to \$3,000 a month, and, based on growth over the first two quarters, he projected \$170,000 gross on his maintenance work for the rest of the year.

Jones says that now his one crew does the amount of two crews before, and that, before, what took five days, is now done in four. Now the work is completed, the machinery cleaned and oiled by 1:00 p.m. Friday, and Jones is happy to let them take the rest of the day off, with pay. He points to an apartment complex and says, that, whereas before it took a crew eight hours to cut and edge the lawn and blow the parking lot, now his workers are in by 8:00 a.m. and out by 11:15 a.m.

The reasons for the dramatic change? Jones admits part of the fault was his. "I wasn't supervising closely enough," he says. "Now I stay in much closer contact with what's going on



Owner Mike Jones (left) and foreman Harold Caruthers repair a sprinkler system. Once Jones got good workers, he was able to instill in them a pride for their work.

and am able to solve the problems as they come up." He adds, though, that he's working his way out of this job for he's evolved two good foremen who are able to oversee the operations effectively.

A large part of the solution was simply finding the right combination of workers. "Getting good help and good machinery are the two biggest problems in the lawn care business today," Jones says. About the help he maintains, "the work ethic is gone, and people just don't want to work anymore. Cutting grass is hard work, and many people would rather sit around and live on welfare and food stamps." He simply set his mind on getting employees who would put in a full day's work, and hired and fired until he found them. Now that he's got people that work together well there's much higher morale among the employees. "Now they have so much pride in their work they won't even let me take on a partial job on a crummy complex, unless they're allowed to do the entire maintenance up right."

Another key factor was organization. Now each job is planned ahead of time, to utilize the most effective use of manpower and machinery. "Before one guy would be working the big cutting machine, another would be using the blower, and another a weedeater, all going in different directions. Now their efforts are coordinated, and when one person finishes his job, he doesn't knock off. He realizes he's a part of a team and all work together until the job is completed."

As a part of his move toward greater efficiency, Jones has his cutting crew, made up of 20 to 25 year olds, specialize only in cutting and blowing the parking lot. Now that this crew is functioning well he is building another that will specialize only in weed control, trim, and clean-up. He points to the 13 or 14 youths he's hired to take care of the summer weeds and says this is because he hasn't had time to organize this area as he has the cutting crew. "Next year at this time we'll have a crew of three out there instead of 13, because they will have been doing it all year round and they'll know what they're doing."

Jones's drive to get the most for his money also extends to his equipment. His basic machinery includes two 21-inch Bobcats and one 36-inch, all walk-behinds, since he believes the riding machines don't cut evenly enough. His crew has three backpack blowers, an edger, and weedeater. Each

to page 38

PRODUCTS

Lawn/tree sprayer

Kim Mfg. Co., Inc. announces availability of Model P-47 electric lawn and tree sprayer. The



unit features a rugged steel frame finished with an epoxy coating for corrosion resistance. It includes a self-cleaning strainer and built-in tank agitator. The unit will operate continuously from the battery and generator system on a lawn tractor. A hand gun is included along with a boom system.

Circle 211 on free information card

Bluegrass variety gives early spring green-up

A data sheet is available on Ram I Kentucky bluegrass, a joint release of Lofts Pedigreed Seed Co. and Jacklin Seed Co. The sheet explains that Ram I is a moderately low-growing, leafy turf type variety with an attractive, rich dark-green color. The companies said it is an excellent bluegrass variety for home lawn uses. It has excellent compatibility with Baron, Glade, Touchdown and many other improved bluegrasses, or in mixtures with the improved fine-leaved ryegrasses and fescues. It provides early spring green-up. It has good competitive ability against *Poa annua* invasion and excellent resistance to stripe smut and powdery mildew.

Circle 215 on free information card

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PRODUCTS

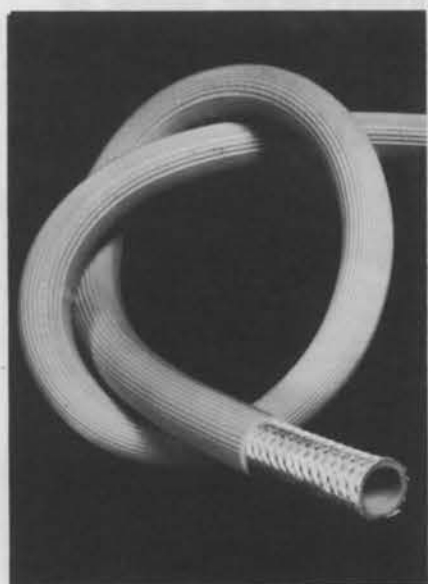
250,000 square feet in one tank load

The Liqui-Matic, manufactured by Hill's Liqui-System, performs like the biggest tank truck, the company said, but its gross vehicle weight is 10,000 pounds. Lawn treatment load is 250,000 square feet. Tree feeding load is 1,000 caliper inches. The unit's patented metering system gong signals each 2½ gallons pumped. It is furnished complete with truck, hose and tools.

Circle 202 on free information card

High-pressure hose is extremely flexible

Flexispray, a high-pressure spray hose, has been introduced by Flexitube International Corp.



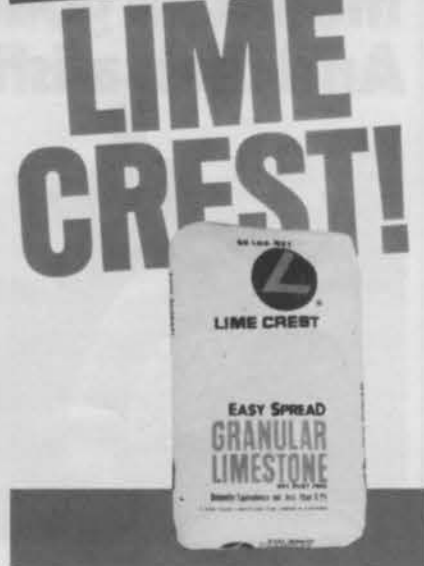
Tough, lightweight and extremely flexible, the hose is ideal for insecticides, herbicides, fungicides and fertilizers. It features a tightly woven inner nylon layer, making it superior to other spray hose reinforced with loose braid. Highly resistant to most spray solutions, the hose is manufactured with a smooth inner tube for easy flow and boasts a whopping, 2000 pounds-per-

square-inch burst strength. It is available in ¼-inch to ¾-inch inside diameters, and in standard coils of 300 feet. A free new catalog, as well as samples of Flexispray are available upon request.

Circle 217 on free information card

Easy-spreading granular limestone

Limestone Products Corp. offers a four-color brochure on its Lime Crest easy-spreading granular limestone. The product,



in addition to reducing soil acidity, improves soil structure; provides a perfect balance of calcium and magnesium (dolomite equivalent is 9.1 percent); "unlocks" plant nutrients, making fertilizer more active; is 90 percent dust-free, no matter what kind of spreader is used.

Circle 216 on free information card

Slide-back carrier hauls lawn tractors

Huller Industries has introduced a smaller-sized carrier to its slide-back series.



Designated the Mini "H" unit, this model has up to a 3,000-pound capacity, ideal for hauling lawn maintenance tractors. Available in 11- and 12-foot lengths, the body is power-take-off-hydraulically operated, sliding back, then down to the ground for loading. After securing the vehicle to the bed, the Mini "H" is placed back into traveling position, ready to transport the load.

Circle 214 on free information card

New sprayer developed for the lawn care market

FMC Corp. recently unveiled a sprayer developed for the lawn care market. Designed with the lawn industry in mind, the unit comes complete with tank, body,



hose reel, gun, lights and safety equipment. The unit features a baffled 1,200-gallon fiberglass tank with a stainless steel mechanical agitator. Either a 10- or 20-gallons-per-minute pump is available on the unit. The pumps feature hardened stainless steel seats and valves. Power is supplied by the truck power-take-off or a 12-horsepower Kohler engine with electric start.

A Hersey water meter is built into the unit for recording output. Also, piped in is a nitrogen filled accumulator, reducing pulsation and a cutoff bypass system for high-pressure operation. This allows the operator to utilize the full pressure of the pump for high-pressure requirements such as spraying trees. The body features an integral frame, 25-inch side platforms, and a rear platform that is big enough for an extra tank for touch-up work. One tool box comes with the unit and a second is optional.

The high-speed return FMC hose reel features a ½-horsepower electric motor for dependable operation. To apply materials, FMC has designed a



spray gun especially for lawn spraying. Made entirely of stainless steel, the gun features a ball seat which virtually eliminates plugging. The trigger-type shutoff features a lock on and the output can be regulated for touch-up or finish spraying. And interchangeable discharge discs allow three or five gallons-per-minute application rates.

Lights and safety equipment built into the unit include body clearance lights, reflectors, flasher beacon light and safety back-up horn. Mud flaps are also standard equipment. The complete unit can be easily mounted in the field or at the company's plant.

Circle 204 on free information card

New catalog features turf care equipment

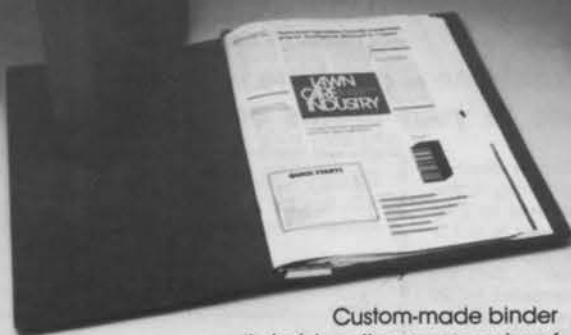
Ryan's professional turf care equipment line, which can handle lawn care duties ranging from thatch removal to grass mowing, is showcased in a new catalog available free upon request from the manufacturer.



Although essentially product-oriented, the 16-page catalog explains basic turf maintenance techniques such as aerification. It also contains color photos, illustrations and specifications of the 14 products in Ryan's 1979 turf maintenance line.

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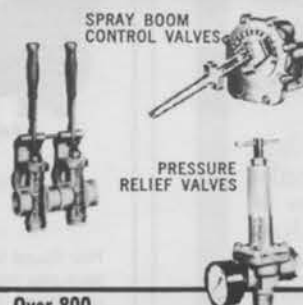


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PROMPT SHIPMENT FROM STOCK

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Lakeshore to market ChemLawn spray gun

The spray gun designed specifically for the professional lawn care market by ChemLawn Corp. is now available from Lakeshore Equipment and Supply Corp. These guns only have four moving parts and are made of tough, durable nylon with an internal assembly made of self-lubricating Delrin. The company said that the advantage to using these materials is that they do not corrode like the materials found in metal guns that have been adapted to the needs of the lawn care industry. Quantity prices are available.

Circle 208 on free information card

Herbicide spray tips outlined in brochure

Picture your toughest broad-leaf weed problem. Then control it with Banvel. A new



brochure describing the uses of Banvel 4-S and Banvel + 2,4-D on lawns is available from Velsicol Chemical Corp. Contained in the new brochure are label specifications, a weed susceptibility chart and herbicide spray tips. A special feature of the brochure is a graphic explanation of Banvel's translocation properties.

Circle 203 on free information card

Nylon liquid strainers

Spraying Systems Co. introduces the new 124 liquid strainers in nylon. The liquid strainers, available in 1½-inch and 1½-inch NPT (F) connections, feature a threaded bowl that can be easily unscrewed by hand for quick and

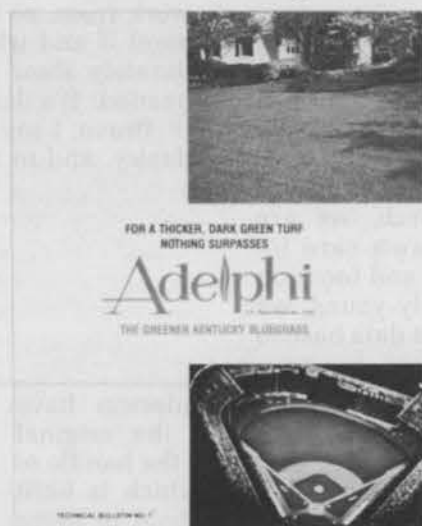


easy removal for cleaning of screens. Only a 2½-inch space below the bowl is required for removal. Data sheet No. 15353 is available for free.

Circle 212 on free information card

Adelphi offers brochure on its hybrid bluegrass

Adelphi is offering a new, four-page brochure which describes the features and benefits of the "man-made" hybrid Kentucky bluegrass. The



four-color literature illustrates Adelphi from its planting stage to harvesting with photos in use on home lawns and other turf areas. It spells out in detail its development in 1962 to the establishment and care. It is listed as Bulletin Number 7.

Circle 209 on free information card

Granular applicators outlined in brochure

Gandy Co. has just published an eight-page, four-color brochure illustrating its complete line of turf equipment. The



literature includes descriptions and specifications of Gandy fertilizer spreaders and granular chemical applicators for lawn use. Application accuracy, long service life and stainless steel components are emphasized.

Circle 210 on free information card

New close-trimming tractor/mower introduced

The Bunton Co. introduces a new tractor/mower that allows close trimming with both sides. This 19.6-horsepower unit, with either a 71-inch or 61-inch front-

center mower attachment, eliminates the side discharge of clippings. Instead, the mower mulches clippings and drops them evenly. Since there is no side-discharge or chute extension, it is easy for the operator to trim closely with either side of the mower. The front-center



mower attachment is raised by a hydraulic lift for climbing curbs and transporting. A 60-inch rotary broom and a 60-inch snow plow attachment are available as options.

Circle 205 on free information card

Hyprow sprayer pumps

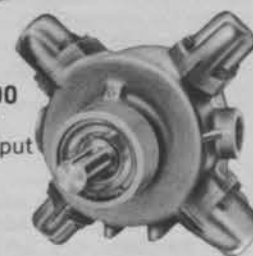
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Finally, An Aid For Teaching Turfgrass

Purdue University's turf experts, Dr. William H. Daniel and Dr. Ray P. Freeborg, have coauthored a comprehensive, organized approach to learning turfgrass science and care. Based upon years of teaching experience at Purdue, Drs. Daniel and Freeborg cover management of all major turf uses today. The book, a valuable reference, includes specifications for planting, fertilizing, regulating growth, mowing, and other maintenance practices. Whether for quick reference or as a basis for all turf knowledge, the book will be among books by Couch and Beard on the reference shelf. The book is 420 pages and contains 16 pages of color illustrations.



W. H. Daniel
R. P. Freeborg

Harvest Publishing Company, 1979

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BEHIND THIS ISSUE



You know those little four-color charts we run on page one of each issue of **LAWN CARE INDUSTRY**? Some lawn care businessmen I visit have them tacked up on their walls, and many others often thank me for the information, saying that they use the information for planning.

As much as I'd like to, I can't take credit for them, or any of the other research on the lawn care industry that we do. That's hard work, and the man that does it is our market research manager Clarence Arnold.

In addition to the information contained in those charts, Clarence has worked up our annual "Profile of the Lawn Care Industry," our survey of "Million Dollar Lawn Care Companies," a survey of consumer attitudes on lawn care and is just beginning a series of monthly "pulse reports" on product movement in the green industry. On top of that, he is a pretty fair forward on our lunchtime basketball team.

The former college professor of marketing and statistics says: "Through our research, we are trying to develop a history of the lawn care industry, and take that one step further and focus on trends. Since the industry is relatively young, we are still in the process of establishing a data base to



Marketing manager Arnold

work from, so that we can build upon it to document if and where growth is taking place and ultimately show where the industry as a whole is headed. It's definitely in a growth period now."

Bravo, I say. To the growth of the lawn care industry, and to the job he's doing to document it.

Bob Earley

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MONEYWISE from page 35

piece has a back-up double.

Jones was having such trouble with rakes that now he is manufacturing his own. The basic model he's using is that invented in 1943 by a man, aged 93, in Seattle, with the ominous name of Joseph Stalin. Five different companies started producing the rake, and five went broke. Jones says that a primary reason is that the rake is too good. "companies have a hard time selling a second rake to a customer if the first one is still working fine," says Jones. He's gone into partnership with Ray Henderson in Oregon. This separate organization is called Henderson Enterprises and the rake is named the "Smoothie Lawn and Nut Rake." Jones points out the main advantages being that it rakes cleaner and faster than other rakes that it will rake out gravel without roughing the turf, or clean out a flower bed without hurting the flowers. It sells retail for \$5.29.

Jones and Henderson have also improved on the original model by designing the handle to go into a holder which is built into the rake and held in place with a tack, as opposed to the riveted fastening which was more apt to break. The rake had not been on the market for about seven years before Jones and Henderson put \$40,000 into the enterprise to get it back into the public eye. Though Jones hopes to make money through merchandising the rake, he says it was his own needs in his lawn care business which impelled him to involve himself with it. "Before we'd go through a gross, or 144 rakes a year," he says. "Now we go through no more than two dozen, and that's working them hard."

Jones's other creative thinking in terms of machinery lies in lawn mowers. Jones began in residential work, for another company in '64. He formed a partnership in '67, and in '68 continued on his own. His early work was all residential, but he gradually grew into apartment complexes. Now this is his specialty. At present he cares for 14 complexes, ranging from \$7.25 to \$11.00 a unit. He says that lawn mowers are made mainly for residences or golf course-type maintenance, but not for the work he's involved in. "They're not designed for the rolling undulating grounds of an apartment complex. There's always problems of scalping. And they're not made to take the abuse of being hauled onto and off of a truck."

He says that for the past nine years he's been asking manufacturers to help him design a machine which will cut at six miles an hour, and will, in two minutes, change to a parking lot brush and vacuum. A machine that will also cut evenly on rolling ground and moreover will cut efficiently, and pick up grass in the rain. This is especially important in the Northwest where it may rain 50 percent of the time. "People said I was crazy," Jones says. But he adds that he's found an inventor of harvesting equipment in California who thinks the machine can be made.

Each blade will have its own separate oil motor, which will

move, not stiffly together, but rather independently of each other, and so roll with uneven ground. The machine will have no belts or chains, and, instead of a 20 horsepower will have the equivalent of a Ford Pinto engine. The motor will be so quiet, that, if need be, a parking lot can be swept at night without waking apartment dwellers. Jones hopes to have the first one ready for testing in about a year. "It will sell at \$10,000 to \$12,000, but will be worth every penny of it," Jones maintains. "Machines now are in the \$7,000 bracket, but you have to put \$3,000 a year into them in repairs. This one will last three to five years without major problems, only needing new blades, oil changes, and tune-ups."

Jones uses a similar aggressiveness in his purchasing of conventional equipment. Local wholesalers won't sell him their goods for a wholesale price, but he uses enough of it so he doesn't think he should have to pay retail. Several years ago he began taking vacations in various parts of the country, during which he would search out the best gardeners in the area, find out what they were using, and ask around until he discovered "cut-throat dealers" who would offer me a good price. By doing so he's cut his equipment costs by 30 percent.

When Jones first went into the business he determined to understand what he was doing, and learn how to do it most effectively. So he's always worked closely with university extension programs in fertilizer and herbicides, and has been licensed to treat flower beds, ornamental turf, trees, the outsides of swimming pools and ponds, and other areas.

In terms of advertising Jones used to invest heavily in conventional forms, radio, TV, newspapers and Yellow Pages when he did residential work. He still does newspaper and yellow pages promotion, but now feels his most effective efforts are those in which he deals directly with the key people who can provide him with business.

— Story and photos by Mike Major

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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.

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