

### Pre-payment plans generate quick cash

With interest rates near 22 percent and still climbing, many lawn care companies are finding that a customer pre-payment discount plan is a way to generate quick cash without the aid of a bank.

The way such plans usually work, is that the lawn care company offers its customers anywhere from a two to a 10 percent discount on the total yearly charge if he is willing to pay the cost of a full year's service at one time.

The advantages of using a discount plan are that it gives companies extra revenues that help offset the pre-season start-up costs incurred by businesses for items such as advertising and new equipment, or to enhance the company's ability to engage in research and development.

This year, 14 percent of Davey Lawnscape's customers took advantage of that company's five percent discount plan, bringing in nearly \$900,000 in early revenues that were used to purchase new trucks and equipment. Davey is based in Kent, Ohio.

A similar plan, which was test marketed in two Michigan locations by Spray-A-Lawn, Inc. brought in nearly \$25,000 in early revenues. Larry Brandt, president of the Cincinnati-based firm, was pleased with the results. "The one Michigan location received about 25 percent of its payments in advance and the other location nearly 20 percent. I'd call that excellent."

Brandt pointed out another advantage of using a discount plan. By getting money in early, the lawn care businessman himself can take advantage of early payment discounts offered to him by manufacturers and suppliers.

Most important, however, is that money obtained through early payments is cheaper in many cases than money borrowed from a bank. "The way interest rates are going, if you

to page 16

## Will standard customer retention practices keep negative option issue out of the courts?

If the potentially volatile "negative option" issue is to stay out of the courtroom, lawn care businessmen will have to standardize their customer retention practices.

Taking the time to insure that the consumer is made aware of the company's intention to follow such a policy is the first, and most important step.

How the negative option approach works, is that the lawn care company provides service on a continuing basis from application to application, or even year to year without notifying the customer, unless the customer

specifically requests that the service be discontinued.

Such negative option plans are accepted as standard practice in the lawn care industry, and the problems most businessmen run into are minor ones. "Some people forget to call us when they move," says Marty Erbaugh, president of Lawnmark Association in Peninsula, Ohio, "or they sign up with another lawn care service and forget to call their former lawn care service. A typical problem is that in the spring, we get ready to make applications on all of our lawns, we apply the product, and people call the office and say, 'I didn't

order it this year.'"

A far more serious problem that faces many lawn care businessmen like Marty Erbaugh is when these dissatisfied customers turn to agencies such as the Better Business Bureau (BBB). Although the BBB has no legislative authority, it is recognized as a powerful voice in the consumer rights arena.

"Some customers think they are being ripped off," Erbaugh explains. "We come out, do the application and send out the bill for it, when they didn't ask for the service."

However, it is the impracticality of contacting every customer prior to each application that prompts lawn care companies to use the negative option plan in the first place. "We have 3,000 customers and we make four applications a year. If we had to call them back in the spring, or get signed contracts from 3,000 people, it would be a horror show," Erbaugh says. He adds that the cost of confirming each application would be phenomenal, and in fact, an unnecessary inconvenience to many customers who have no intention of discontinuing the service. The negative option approach also permits the lawn care company to schedule the

to page 19

# LAWN CARE INDUSTRY

Serving lawn maintenance and chemical lawn care professionals.

JUNE 1980 • VOL. 4, NO. 6 • A Harvest Publication

#### MEETINGS

### ChemLawn to hold turf insect symposium

The ChemLawn Corp. will hold its "Symposium on Turfgrass Insects - 1980" Oct. 14-15 at the Sheraton-Columbus Hotel, in Columbus, Ohio.

Some of the major topics of the two day symposium include:

- Host Resistance to Insects and Mite Pests of Warm Season Grasses

- Evaluation of Cool-Season Turfgrass Varieties for Susceptibility to Injury from Chinchbug
- Evaluation of Turfgrass Varieties for Susceptibility to Injury from Bluegrass Billbug
- Pilot IPM Studies on Southern Turfgrass
- Use of Sex Pheromones in Turf Management
- New Directions in Lawn Care—A Working IPM Program
- Influence of Soil and Climatic Factors on Insecticide Toxicity
- Distribution and Persistence

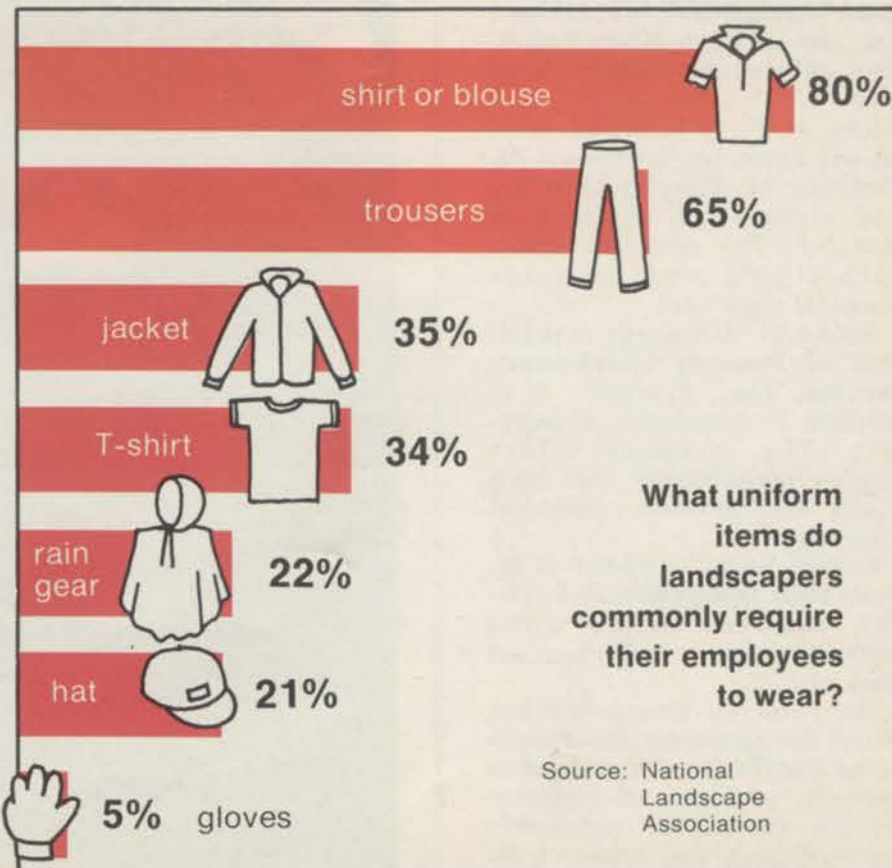
of Chlorpyrifos and Diazinon in Soil When Applied to Turf

- Persistence and Movement of Four Insecticides in Soil and Thatch
- Absorption of Insecticides on Thatch
- Persistence of Insecticides in Water With Special Reference to pH
- The Incidence of Insecticide Resistance in Surface Inhabiting Pests in Turfgrass
- Soil Inhabiting Pests
- Chinch Bug and Bluegrass

to page 5

## QUICK STARTS

Meeting the industry's research needs .....	page 8
Scheduling fertilizer applications .....	page 10
Landscape standards may be developed .....	page 10
Coping with toxic chemical spills .....	page 18
Virginia Tech's Dr. Shoulders retires .....	page 19
NEWSMAKERS .....	2
MEETING DATES .....	4
MEMOS .....	5
COST CUTTINGS .....	6
MARKETING IDEA FILE .....	12
TOOLS, TIPS & TECHNIQUES .....	16
PRODUCTS .....	20
CLASSIFIEDS .....	22



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# NEWSMAKERS

The Sensation Corp., Omaha, Neb. has appointed two new distributors. **Port Huron Machinery**, Lincoln, will handle portions of Nebraska, and **Property Care, Inc.**, Omaha, will handle Omaha, Nebraska, Iowa and Missouri.

Robert G. Novelli is president and Judith A. Novelli is secretary/treasurer of **PGMS, Inc.**, Mount Airy, Md. The company offers mowing/maintenance and both liquid and granular chemical lawn care.

Terry O. Alexander has joined **Heckendorn Mfg. Co., Inc.**, Cedar Point, Kans. as eastern regional sales manager. He was formerly vice president of sales with **OME, Inc., Excel Industries and Zaun Equipment**. He will establish planned sales procedures for Heckendorn.



Alexander Heller

Warren R. Heller has been named manager of international sales orders for **Jacobsen Division of Textron, Inc.**, Racine, Wis.

Tim Saunders is manager of **Mission Viejo Pest Control**, Mission Viejo, Calif. The company offers liquid chemical lawn care and structural pest control.

Steve M. Worthington is owner of **Triangle Lawn Care**, Raleigh, N.C.

Brian E. MacDonell is owner of **Traverse Outdoor Maintenance**, Traverse City, Mich. The company offers landscaping, irrigation installation and maintenance and mowing/maintenance.

A.Y. De Loaf is president of **Great Lakes Lawn Spray**, Farmington, Mich. The company offers chemical lawn care.

Sam Moreno is president of **Lawn Management, Inc.**, Elkhart, Ind. The company offers both liquid and granular chemical lawn care.

John F. Flory is president of **Liberty Lawn, Inc.** Levittown, Pa. Christine M. Flory is secretary and Douglas R. Battson is manager. The company offers both liquid and granular chemical lawn care.

Arthur D. Ainsworth is president of **Property Maintenance Service, Inc.**, Fairport, N.Y. Marilyn P. Ainsworth is secretary. The company offers mowing/maintenance and both liquid and granular chemical lawn care.

Ronald Kuerz is owner of **St. Louis Hills Lawn Care**, St. Louis. The company offers mowing/maintenance and chemical lawn care.

Dr. Peter H. Dernoeden has joined the agronomy department at the **University of Maryland** as assistant professor of turfgrass science. He will be responsible for extension and research in

turfgrass management. He holds a B.S. degree in horticulture from **Colorado State University**. He also received his M.S. degree in turfgrass management from Colorado State, and his Ph.D. from the University of Rhode Island.

Ted Hadeed is president of **Agro-Lawn Systems, Inc.**, Landover, Md. The company was formerly known as **Lawn-A-Mat of Prince Georges County, Inc.** Jon Perdew is company agronomist. The company is involved in chemical application of granular materials.

Richard Johnson is president of **All Seasons Arborists, Inc.**, Latham, N.Y. Dale Boswell is vice president. The company applies liquid fertilizers and pesticides to lawns.

**Kohler Co.'s Engine Division**, Kohler, Wis. recently appointed Wayne Bee manager of international field sales and Richard Lundin international area manager.



Bee Lundin

Larry Holtzman is president of **Lawn Growers, Inc.**, Atlanta, Ga. Eric Rosenberg is vice president; Toby Holtzman is secretary/treasurer; and Jeff Fibus is manager. The company offers both liquid and granular chemical lawn care.

Keith and Kathy Hargrave are co-owners of **Turf Master**, Athens, Ga. The company offers mowing/maintenance and both liquid and granular chemical lawn care.

Al Woods is president of **Tree Lawn Corp.**, El Paso, Texas. Vern Autrey is vice president, and Marv Lou Woods is secretary. The company offers liquid chemical lawn care and tree service.

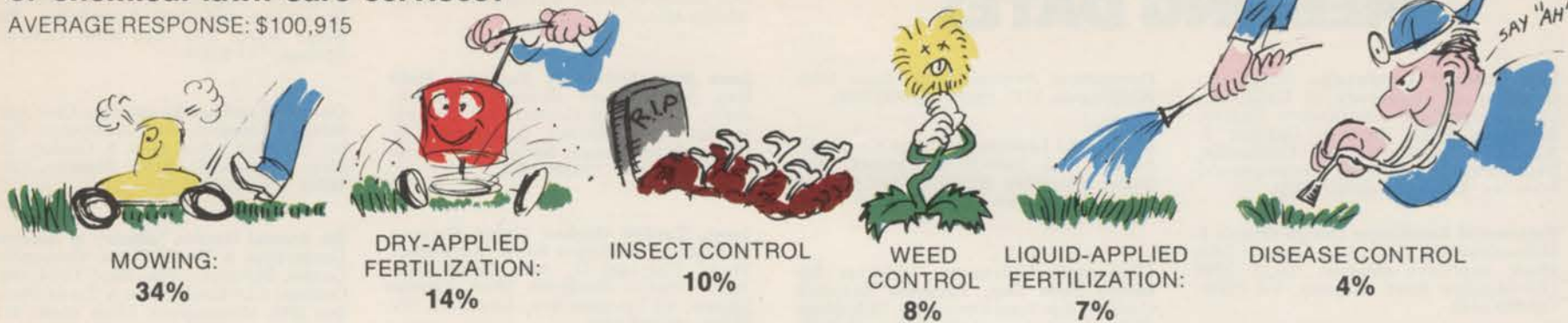
Ronald Grove is president of **Lawn Aid, Inc.**, Tipp City, Ohio. LeRoy Gaskin is vice president and Bill Blankenship is production manager. The company offers both liquid and granular chemical lawn care.

James A. Girard is owner of **Jim Girard Landscape Maintenance**, Glens Falls, N.Y. William Meneely is maintenance foreman. The company offers mowing/maintenance, granular chemical lawn care, landscaping and cemetery maintenance.



## What were your gross receipts in 1978 for mowing/maintenance or chemical lawn care services?

AVERAGE RESPONSE: \$100,915



Source: 1979 LCI survey

## Average lawn care businessman grosses \$100,000-plus annually

The average reader of LAWN CARE INDUSTRY grossed \$100,915 in 1978, according to a recent survey conducted by the magazine.

The survey, conducted late last

summer, asked the question: "What were your gross receipts in 1978 for mowing/maintenance or chemical lawn care?"

The \$100,915 figure, when projected across the percentage of

LAWN CARE INDUSTRY's readership that derives more than 50 percent of its income from either chemical lawn care or mowing/maintenance, comes to a total of \$950 million of gross

receipts in 1978 for the readership of LAWN CARE INDUSTRY. The industry has been growing at a rate of between 20 and 25 percent a year, other magazine surveys have shown.

When asked the question: "Please write in as best you can estimate the percentages of your 1978 gross receipts that came from the following sources," the following percentages were received in the survey:

Mowing, 34 percent; dry-application fertilization, 14 percent; insect control, 10 percent; weed control, eight percent; liquid-application fertilization, seven percent; and disease control, four percent.

"As you can see," said Clarence Arnold, LAWN CARE INDUSTRY's market research manager, "roughly 77 percent of the readers' total gross receipts were in the lawn care industry."

The average reader of LAWN CARE INDUSTRY grossed \$100,915 in 1978. Projected across the magazine's readership, a total of \$950 million in gross receipts was reported.

The answer to our first question should be interpreted as that part of the readers' receipts that are from mowing/maintenance or chemical lawn care services." Many LAWN CARE INDUSTRY readers are also involved in such activities as landscape contracting, structural pest control and other activities.

According to Arnold, the names for the sample upon which the gross receipt figures were based were chosen by an nth name selection from all subscribers to LAWN CARE INDUSTRY.

A letter and a questionnaire, and coin incentive were mailed July 10. A follow-up letter, questionnaire and dollar incentive were mailed to non-respondents only, on August 4.

Returns were closed August 27 with 47.4 percent of the original 500 contacts responding.

Further information about the survey is available upon request from Arnold, at 9800 Detroit Ave., Cleveland, OH 44102, or by calling 216-651-5500.

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## MEETING DATES

**18th Annual Landscape Irrigation Conference**, University of California Lake Arrowhead Conference Center, Riverside, Calif., June 8. Contact: P. Angiolillo, University of California, Department of Soil & Environmental Sciences, Riverside, Calif. 92521.

**Residential Landscape Design Course I**, Milwaukee, WI, June 18-20. Contact: John Shaw, executive director, ALCA, 1750 Old Meadow Road, McLean, VA 22101, 703-893-5440.

**Metropolitan Tree Improvement Alliance**, Rutgers University, New Brunswick, NJ, June 18-20. Contact: Dr. David F. Karnosky, Cary Arboretum, Box AB, Millbrook, NY 12545, 914-677-5343.

**Residential Landscape Design Course I**, Tucson, AZ, June 23-25. Contact: John Shaw, executive director, ALCA, 1750 Old Meadow Road, McLean, VA 22101, 703-893-5440.

**1980 Tax Seminar**, Hyatt Regency O'Hare, Chicago, IL, June 24-25. Contact: International Franchise Association, 1025

Connecticut Avenue, N.W., Suite 1005, Washington, D.C. 20036, 202-659-0790.

**Residential Landscape Design Course II**, Phoenix, AZ, June 26-28. Contact: John Shaw, executive director, ALCA, 1750 Old Meadow Road, McLean, VA 22101, 703-893-5440.

**Ohio State University Turfgrass Research Field Day**, Turfgrass Research Center, Ohio State University, Columbus, Ohio, Aug. 5. Contact: Keith Karnok, OSU Department of Agronomy, 1827 Neil Ave., Columbus, Ohio 43210, 614-422-2591.

**Illinois Landscape Contractors Association Annual Summer Field Day**, Chicago Horticultural Society Botanic Gardens, Glencoe, Ill., Aug. 6. Contact: Lucile Little, ILCA, 202 W. Main, Box 1049, St. Charles, Ill. 60174, 312-584-5770.

**1980 Rutgers Turfgrass Research Day**, New Brunswick, NJ, August 6. Contact: Ralph E. Engel, P.O. Box 201, New Brunswick, NJ 08903, 201-932-9427.

**Residential Landscape Design Course I**, Seattle, WA, Aug. 7-9. Contact: John Shaw, executive director, ALCA, 1750 Old Meadow Road, McLean, VA 22101, 703-893-5440.

**Iowa State University Turfgrass Field Day**, Horticulture Research Station, Ames, IA, Aug. 12. Contact: A.E. Cott, extension horticulturist, Department of Horticulture, Iowa State University, Ames, IA 50011, 515-294-1870.

**Lawn, Garden Outdoor Living**, Division of National Hardware Store, McCormick Place, Chicago, IL, Aug. 13-16. Contact: National Hardware Show, Charles Snitow, 331 Madison Ave., New York, NY 10017, 212-682-4802.

**Tan-Misslark Trade Show**, Astro Hall, Houston, TX, Aug. 16-19. Contact: Bill Fullingim, Texas Association of Nurserymen, 512 E. Riverside Drive, Austin, TX 78704, 512-444-7489.

**Rhode Island Turfgrass Field Day**, Turf Research Farm, University of Rhode Island, Kingston, RI, Aug. 20. Contact: Professor C.R. Skogley, Plant and Soil Science Department, University of Rhode Island, Kingston, RI 02881, 401-792-2570.

**Western Regional Grounds Maintenance and Equipment Show**, Bear Creek Park, Colorado Springs, Aug. 26. Contact: Frank Cosgrove, regional director, National Recreation and Park Association, 3500 Ridge Road, P.O. Box 6900, Colorado Springs, CO 80934.

**Ohio Turf and Landscape Day**, Ohio Agricultural Research and Development Center, Wooster, Ohio, Sept. 9. Contact: Dr. Dave Nielsen, OARDC, Wooster, Ohio 44691, 216-264-1021.

**6th Annual Garden Industry of America Conference & Trade Show**, Convention Center, Baltimore, Md., Sept. 12-14, 1980. Contact: GIA Conference & Trade Show, Box 1092, Minneapolis, Minn. 55440, 612-374-5200.

**National Lawn & Garden Distributors Association Annual Convention**, Century Plaza Hotel, Los Angeles, Calif., Sept. 16-19. Contact: Nancy S. Irving, executive director NLGDA, 1900 Arch St., Philadelphia, Pa. 19103.

**International Franchise Association Tax Seminar**, Hyatt Regency O'Hare, Chicago, Ill., Sept. 22-24. Contact: IFA, 1025 Connecticut Avenue, N.W., Suite 1005, Washington, D.C. 20036, 202-659-0790.

**Northwest Turfgrass Annual Conference**, Sunriver Lodge, Sunriver, OR, Sept. 22-25. Contact: Dr. Roy Goss, executive secretary, Northwest Turfgrass Association, Western Washington Research and Extension Center, Puyallup, WA 98371, 206-593-8513.

**Central Plains Turfgrass Foundation**, Kansas State University Turf Conference, KSU Union, Manhattan, KS, Sept. 30-Oct. 2. Contact: R.N. Carrow, secretary/treasurer, Horticulture Department, Waters Hall, Kansas State University, Manhattan, KS 66506, 913-532-6170.

**Kentucky Turfgrass Conference & Field Day**, Eastern Kentucky University, Richmond, KY, Oct. 7-9. Contact: Kenneth B. Rue, president, Kentucky Turfgrass Council, 3110 Brownsboro Road, Louisville, KY 40206, 502-893-7137.

**Franchise Management Workshop**, Beverly Hills Hotel, Beverly Hills, Calif., Oct. 8-9. Contact: International Franchise Association, 1025 Connecticut Avenue, N.W., Suite 1005, Washington, D.C. 20036, 202-659-0790.

**Symposium on Turfgrass Insects**, Holiday Inn, Columbus, Ohio, October 14-15. Contact: Dr. B.G. Joyner, Plant Diagnostic Labs, ChemLawn Corp., 6969 Worthington-Galena Road, Suite L, Worthington, Ohio 43085, 614-885-9588.

**Southwest Turfgrass Association Conference**, New Mexico State University, Las Cruces, NM, Oct. 16-17. Contact: Arden A. Baltensperger, secretary-treasurer, Southwest Turfgrass Association, New Mexico State University, P.O. Box 3-Q, Las Cruces, NM 88003.

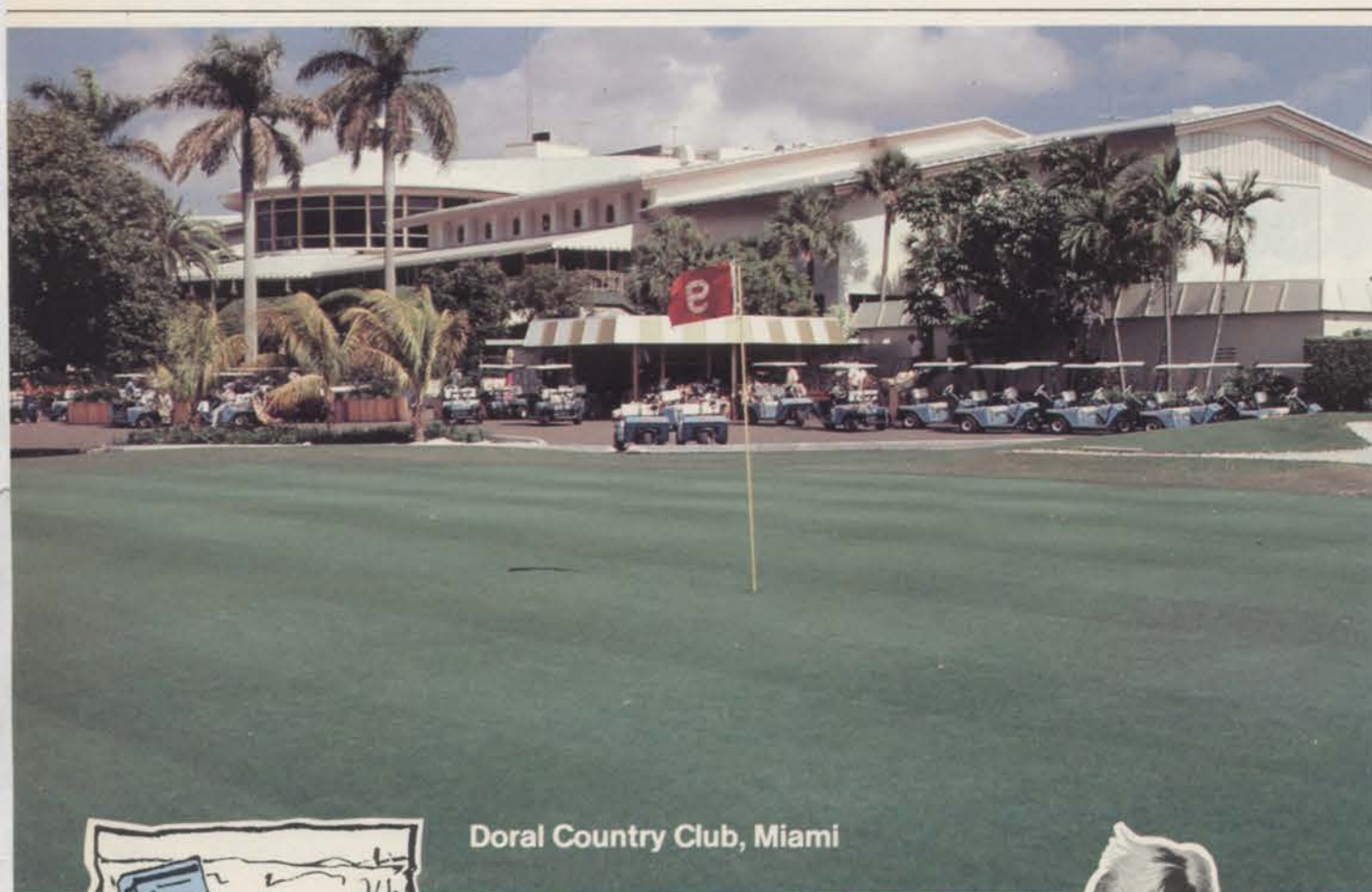
**Second National Irrigation Symposium**, Nebraska Center for Continuing Education, University of Nebraska, Lincoln, NE, Oct. 20-23. Contact: Dr. Dale Heermann or Dr. Del Fangmeier, Department of Soils, Water, and Engineering, University of Arizona, Tucson, AZ 85721, 602-626-1412.

**Franchise Management Workshop**, Continental Plaza, Chicago, Ill., Oct. 22-23. Contact: International Franchise Association, 1025 Connecticut Avenue, N.W., Suite 1005, Washington, D.C. 20036, 202-659-0790.

**Franchise Management Workshop**, Old Town Holiday Inn, Alexandria, Va., Nov. 5-6. Contact: International Franchise Association, 1025 Connecticut Avenue, N.W., Suite 1005, Washington, D.C. 20036, 202-659-0790.

**Missouri Lawn and Turf Conference**, University of Missouri, Columbia, MO, Nov. 5-7. Contact: Dr. John H. Dunn, professor of horticulture, 1-43 Agriculture Building, Columbia, MO 65211, 314-882-7838.

**Southern Turfgrass Conference**, Birmingham Hyatt House, Birmingham, AL, Nov. 9-12. Contact: Dr. Euel Coats, executive secretary, Southern Turfgrass Association, Drawer CP, Mississippi State, MS 39762, 601-325-3138.



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- Industry's Contribution to Turfgrass Entomology
- Turfgrass Entomology from the Golf Course Superintendent's View Point
- Turfgrass Entomology from the Commercial Lawn Care Industry Perspective
- The Turfgrass Industry and the Role of Entomology In It: Present and Future

Also included in the program will be a tour of the ChemLawn Field Research Center. Pre-registration is encouraged with the fee being \$25. For further details and a registration form contact: Dr. B.G. Joyner, Plant Diagnostic Labs, ChemLawn Corp., 6969 Worthington-Galena Rd., Suite L, Worthington, OH 43085.

## Jake launches campus turf equipment training

The first on-campus training program conducted by Jacobsen Division of Textron, Inc., Racine, Wis., will be held at Lake City Community College in Florida June 9-13 and again June 16-18.

The three two-and-one-half-day sessions, administered by Jacobsen product training instructors, will feature classroom instruction, hands-on operation, and repair of a variety of equipment, including F and HF series tractors.

Other subjects will include hydrostatic transmissions, grinding and reel sharpening, hydraulic systems and maintenance of various units.

According to Phillip A. Taylor, Jacobsen general manager, turf service, field and factory training has been a primary activity at Jacobsen.

"During the past 25 years, Jacobsen has trained over 10,000 distributor and customer personnel in our various programs," Taylor said, "and we are committed to providing factory training for turf equipment users."

## LAWN CARE INDUSTRY

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## MEMOS

**Social Security taxes:** Many lawn care businessmen have found that Social Security taxes do not have to be paid by either employer or employee on paid sick days. This might be something worth discussing with your accountant or tax advisor if your firm has a significant number of paid sick days annually, it was reported in the newsletter of the National Landscape Association.

**Catchy slogan:** Paul Kampe, president of Lawnrite Corp., Port Jefferson Station, N.Y., has a catchy new slogan he has had printed on his stationery and other materials. The slogan for his Long Island-based firm is "Winners in the Lawn Run."

**Housing starts:** Single-family housing starts in March dipped to a seasonally adjusted annual rate of 606,000 — the lowest level in 10 years.

"It's a major decline, but not the end of the drop," says Michael Sumichrast, chief economist of the National Association of Home Builders. Total starts for the month fell to a rate of 1,041,000, or 22 percent below February and 40 percent below the year-ago month. Permits also nosedived, falling 18 percent to 940,000 at an annual rate, the lowest since May, 1975.

**More heat on soil additives:** State agriculture officials have long fought a losing battle to curb sales of so-called miracle products that claim to increase crop yields on farms or work wonders on lawns and trees. Although government test results have indicated that many such products have little or no value, warnings have usually gone unheeded. Now the agronomists are planning a second assault. They will lobby state legislatures to adopt stiff controls that place the burden of proving product effectiveness on the producer.

According to a recent article in *Business Week*, the target of this lobbying is a group of products known variously as crop amendments, plant conditioners and biological additives. In Nebraska alone, state agriculture officials recently counted 300 "nontraditional" products being offered.

The Association of American Plant Food Control Officials, a group of state fertilizer officials that is pushing for the tighter controls, recently counted 164 companies selling such products, some costing as much as \$75 per gallon. "These people come in with a gallon of mostly water and say it will do great things," says Richard A. Wiese, a University of Nebraska soil scientist who has tested many ineffective products.

The agricultural scientists are convinced that sellers of these conditioners are bilking users out of millions of dollars each year. But sales are not monitored by any of the federal or state agencies that have authority over fertilizers and pesticides. Developing accurate estimates is hard, says Howard P. Moore, a fertilizer specialist at the Ohio Agriculture Department, "because users are afraid to admit they got taken."

Plant food control officials are now drafting tough model legislation that would require companies to submit "data to substantiate any claims made on the label," says J. Allen Stine, chief of the feed and fertilizer branch of Washington's Agriculture Department. Stine, who is also chairman of the plant food association's Soil and Plant Amendments Committee, believes an efficacy test will frustrate companies that "come and go and even change their names and addresses."

So far only two states — California and Oklahoma — require test data on soil and crop treatment products. Another 26 states have adopted an earlier legislative model written by the plant food association, but that version resulted only in manufacturers having to identify product ingredients on their labels.

**Old MacDonald had a . . . :** Farmer Old MacDonald is being offered a state university. At least that's what the student newspaper at Virginia Tech in Blacksburg would do if it had its choice for renaming the agriculturally and turf oriented university.

It all started when the Tech administration recently decided to have all university publications refer to the school as Virginia Tech instead of the awkward Virginia Polytechnic Institute and State University, its full name.

Not all faculty, alumni and students agreed with the change, and a minor controversy raged over what to call the school. To settle it, the student newspaper, the Collegiate Times, ran a contest for students to nominate what they thought would be an appropriate name.

The winner, chosen from 110 entries, was the Eastern Institute of Enlightenment and Intellectual Outgrowth — EIEIO for short.

## COST CUTTINGS

### Get tax credits for some workers

You have probably heard of the targeted jobs tax credit, but did you know that your company could chalk up as much as \$3,000 in credit for each employe during the first year of work, and \$1,500 per employe the second year? And the amount of required paperwork has been kept to a minimum.

Federal law allows a credit of 50 percent of each eligible employe's first-year wage, with a \$3,000 maximum, and 25 percent of the employe's second-year wage, with a \$1,500 maximum. It can add up.

To be eligible, an employe must have been hired after Sept. 26, 1978, and fit in one of the designated "target" groups. The groups include youths (18 to 24 years old), Viet Nam veterans (under 35), and convicts (out of jail less than five years) who are considered economically disadvantaged, those receiving Supplemental Security Incomes (SSI) or general assistance, those who have physical or mental disabilities that are employment handicaps, and 16-to-18-year-olds who did not graduate from high school or vocational school, but are in a qualified cooperative education program.

According to *Inc.* magazine, employes must obtain a voucher of eligibility from the local State Employment Security Agency (SESA) and give it to the employer who must sign and return it to the SESA office. With SESA certification, the employer simply fills out tax form 5884 and attaches it to his income tax return.

However there are limits on how much you can get, points out Price Waterhouse & Co., the national accounting firm. Wages that qualify for the first-year refund cannot exceed 30 percent of the wages eligible for unemployment tax for all employes during that calendar year. And the credit earned cannot exceed 100 percent of the employer's income tax liability for tax years beginning in 1978, and 90 percent for tax years beginning in 1979. But the excess may be carried back three years or forward seven years, though the credit cannot be applied against penalty taxes.

### MEETINGS

#### 1981 A.L.C.A. Trade Exhibit announced

The Associated Landscape Contractors of America have announced that the 1981 ALCA Trade Exhibit will be held Feb. 10, 1981 in the French Market Exhibit Hall of the Hyatt Regency New Orleans, in New Orleans, La.

The popular industry show, which will attract roughly 1,000

of the leading commercial landscape contracting firms will be held in conjunction with the ALCA annual meeting. Incorporated into the trade exhibit will be a buffet luncheon at noon, and a short reception, amidst the displays, at the end of the day.

Booth space is available on a "first come, first served" basis. For full information and space reservation material contact: ALCA Exhibit Manager, 1750 Old Meadow Rd., McLean, VA 22102

### BOOKS

## New turf manual is available from Harvest Publishing Co.

A new publication, designed to fit the niche between the highly technical turfgrass management books and the insufficiently technical ones is *Turfgrass Management*, by Dr. Al Turgeon.

Turgeon, formerly of the University of Illinois, now directs a Dallas research branch of Texas A & M. *Turfgrass Management* has nine chapters and depends heavily on illustrations by F. A. Giles, associate professor of horticulture at the University of Illinois, to make information directly applicable to field conditions. The book takes a holistic approach, in that it explains turfgrass growth and disease in terms of the plant's position in its environment.

The first chapters examine the basics of turfgrass growth. A chapter on taxonomy and climatic adaptation provides data on identification and cultural requirements of a wide variety of grasses. Middle chapters look at the components of the turfgrass environment; atmospheric, soil and biotic influences that effect growth, health and propagation. Other chapters cover cultural practices, pest control, propagation for maximum yield, and customized propagation and maintenance techniques for a variety of sites. Appendices contain relevant data on pesticide chemistry, calculations and conversion. The book includes a glossary.

Inquiries concerning purchase of the book can be sent to: Book Department, Harvest Business Publications, 9800 Detroit Ave., Cleveland, OH 44102.

### USDA STATISTICS

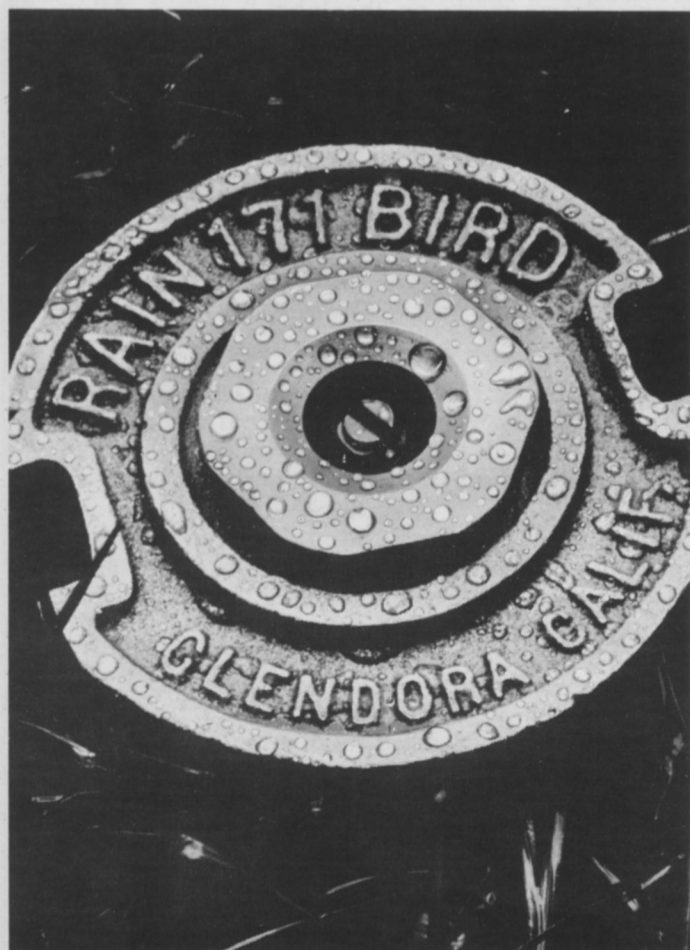
## Fertilizer use may decline by three to seven percent

U.S. fertilizer use may decline by three to seven percent during the fertilizer year ending this June 30. According to U.S. Department of Agriculture statistics, greater-than-expected increases in prices farmers pay for fertilizer, energy, and interest relative to crop prices, combined with tight farm credit, will discourage fertilizer use this spring. Most forecasts made in late 1979, including the USDA's, had called for a moderate increase in use this fertilizer year. Although less than four percent of all fertilizer used in the U.S. goes for non-farm use, the prices lawn care businessmen pay are affected by farm use statistics.

Net domestic supplies of fertilizers are expected to be about 14 percent higher this year. So, if the usual strong spring demand for fertilizer fails to materialize, prices could level off and possibly begin to decline, especially phosphates, before the planting season is finished.

The statistics show that use of phosphate fertilizer is expected to decline most severely, perhaps by seven to 13 percent. Potash consumption may fall by three to seven percent, while nitrogen use may equal last year's level or fall by as much as three percent. Current increases in farm prices for fertilizer are the largest since the 1974/75 fertilizer year, when use of the three primary nutrients declined about nine percent, with nitrogen down six percent and phosphate and potash each down 12 percent.

For copies of the USDA's fertilizer statistics contact: Richard Rortvedt or Paul Andrienas, 202-447-7340.



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# Turfgrass Research:

## Meeting the special needs of the lawn care industry

by Dr. James Wilkinson, director of research, ChemLawn Corp.

The lawn care industry today is expanding at a tremendous rate. Few people, even as recently as three to four years ago, would have anticipated the growth the industry is now experiencing. Most people would now agree that lawn care is becoming a vital part of the total turfgrass industry.

Lawn care services have been available to homeowners for many years, however, few professionally trained turfgrass managers have become involved in the lawn care industry until recently. Many operations in the past consisted of one man, a pickup truck and fertilizer spreader. The recent surge in the lawn care industry has been backed in most cases by professionally trained turfgrass personnel. The purpose of this article is to demonstrate that the lawn care industry has many research needs which have not been totally met or have been ignored

Although turfgrass research began as early as the 1880's, major strides were not made until the late 1940's with the introduction of new pesticides and improved cultivars.

by turfgrass research in the past.

Although turfgrass research began as early as the 1880's, major strides were not made until the late 1940's with the introduction of new pesticides and improved cultivars. Both university and industry research have contributed most heavily in the areas of turfgrass breeding, fertility, nutrition and management, whereas industry has made the major advances in the development of new pesticides for weed, insect and disease control.

Despite many major achievements in turfgrass science, numerous areas remain a concern to the turf industry as a whole: Breeding challenges remain in the development of disease-resistant cultivars and cultivars tolerant to low fertility and drought stress; fertility problems relating to more efficient use of nitrogen, phosphorus and potassium coupled with improved diagnostic methods (soil and tissue) to evaluate nutrient cycles, and control; new or recently recognized disease problems such as *Fusarium*, anthracnose and red leaf spot, and insect problems such as the *Ataenius* grub will require a continuing research effort; and finally, need for more thorough investigation of problems relating to management — mowing and thatch, establishment, renovation and cultivation.

**The lawn care industry has special research problems.** In addition to the research areas outlined above which are a concern to the total turfgrass industry, the lawn care industry has many unique research needs. These unique needs are the result of several factors:

- Most lawn care companies schedule visits to a lawn anywhere from a six- to 12-week basis. This situation creates the need to insure adequate material residual of both fertilizers and pesticides to last through this in-

terval. In addition, working on such a schedule often means a company representative is not on a lawn frequently enough to spot developing problems. As a result, a lawn care service most frequently gets called back to a lawn by the homeowner after a particular weed, insect or disease problem has gone beyond the point of easy control.

- Lawn care companies must maintain a multitude of home lawn situations. Many different microenvironments, soils, species and cultivars are encountered. Turfgrass management is made easier in many ways when the manager, for example a golf superintendent, has a limited number of species, soils, etc. to work with. Many lawn care companies are modifying programs to fit sun versus shade conditions, or species differences and utilizing soil tests to make supplemental applications of lime, phosphorus and potassium

when needed. However, there is a great need to improve programs to meet the special requirements of individual lawns.

- Because of several distinct operational advantages, many companies are successfully utilizing liquid systems to deliver soluble and insoluble fertilizers and pesticides. This is a relatively new practice in the realm of turf management, although liquid fertilizers are being used extensively throughout agriculture in general. Use of the liquid fertility technique has not been researched to the same extent as dry programs.

- Most companies today, whether utilizing liquid or dry programs, are applying a number of different fertilizers and pesticides in one pass over a lawn. This leads to two situations which can create problems. First, chemical incompatibility, where materials are not compatible

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within the same spray tank. Second, placement incompatibility, where different materials frequently are applied together whose targets are at different locations within the turf microenvironment. For example, the combined use of a broadleaf herbicide and an insecticide for grub control, whether applied liquid or dry, would present placement problems. The herbicide should remain on the foliage to achieve maximum control, whereas an insecticide should be watered into the thatch and soil.

**Specific challenges for lawn care research.** A very limited number of lawn care companies today support active research programs, and few if any university research programs are aimed directly at the problems unique to the lawn care industry. However, as many companies grow within the rapidly expanding lawn care market, more

*A very limited number of lawn care companies today support active research programs, and few if any university research programs are aimed directly at the problems unique to the lawn care industry. However, as many companies grow within the rapidly expanding lawn care market, more and more will recognize that the research needs of the industry must be met.*

and more will recognize the research needs of the industry must be met. If the industry is going to successfully reach its full potential, the following areas I believe will require research attention:

(1) How can we more closely adjust programs to meet the specific problems of different locations, soil types, microenvironments, species and

cultivars, present pest problems, etc? To do this, we will require a highly trained applicator who can adjust programs as the different situations from lawn to lawn dictate. Specialized application equipment must be developed to accomplish this. Delivery systems which would enable the applicator to adjust programs as he moves from one lawn to the next would be a boon

to the industry.

(2) Liquid fertility programs require a substantial research effort. Fertility research has traditionally been based on dry programs. Much research conducted utilizing dry fertilizers and pesticides is not completely valid and many established ideas must be reevaluated.

(3) Coupled with liquid fertility research, the mechanism of physiological burn and materials which produce burn will be a continuing problem. New materials and old materials in new combinations will have to be constantly evaluated for burn potential. One serious problem that exists in this area is that we often recognize the problems leading to burn, however, we are not always able to adjust our production schedule or materials rapidly enough to totally avoid burn.

(4) Understanding tank mix compatibility is an area which has been given little attention in the past. More and more lawn care companies are utilizing liquid programs, combining several different fertilizer and pesticide materials in one spray tank. Several articles have recently appeared in trade magazines regarding tank mixing, however, these have often contained old, erroneous information leading to confusion within the industry. Most lawn care companies up to now unfortunately have taken a try-it-and-see attitude. Especially as new products become available, much more knowledge needs to be gained regarding tank mixes and their chemical and physical compatibilities. In addition, companies utilizing dry programs often utilize fertilizer and pesticide combinations which have not been thoroughly evaluated with respect to pesticide efficiency.

(5) New and improved fertilizer materials need to be found. This is especially true in the utilization of fertilizer materials in liquid programs. A liquid slow-release nitrogen source would find wide acceptance in the lawn care industry. Another important area would be the development of slow-release nitrogen sources with improved release properties which would better fit into production schedules. Questions relating to efficient fertilizer utilization must also be answered.

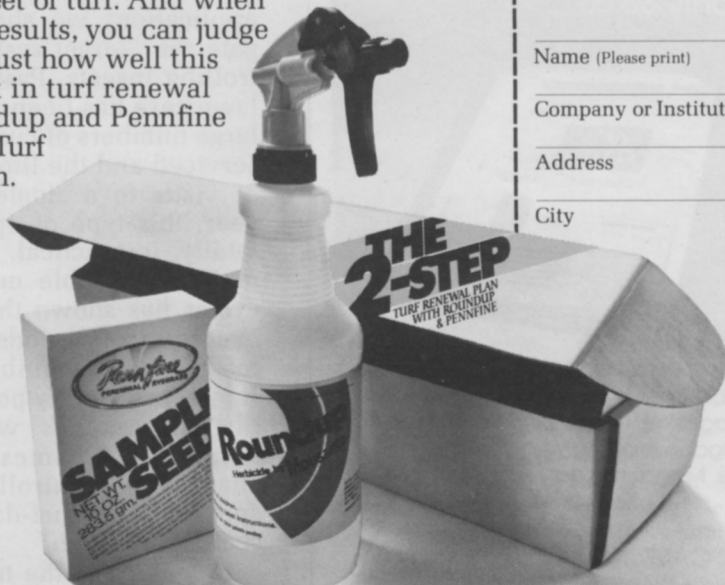
(6) Weed and insect control programs will need continual improvement. Many hard-to-kill weeds are special problems. In addition, applying herbicides and insecticides on a six- to 12-week production schedule presents several unique problems for the lawn care industry. For example, applying an insecticide which has a critical timing requirement becomes difficult. Other examples of problems include the application of a preemergent herbicide to every lawn in the spring prior to annual grass germination, short insecticide residual, and movement of insecticides through thatch for grub control where irrigation generally is not

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## Committee to develop landscape standards

A broad-based landscape industry group headed by the Standards and Specifications Subcommittee of the California Landscape Contractors Association recently met for the purpose of organizing and developing minimum acceptable standards for the industry.

The committee, under the direction of landscape contractor Roger D. Fiske of San Ramon, will develop standards covering site preparation, including grading, drainage and erosion control, as well as off-site utilities such as gas and electricity, sewage, telephone and water supply. Additional standards will cover irrigation; lighting; planting; interiorscaping; exterior and interior maintenance; and hardscapes including concrete, masonry and wood construction.

The standards developed by the group are expected to be used by all members of the industry, as well as by public agencies and educational institutions.

Other participants in the organizational meeting held April 16, in Oakland, besides CLCA were representatives of the American Institute of Landscape Architects, Associated Landscape Contractors of America, American Society of Golf Course Architects, American Society of Irrigation Consultants, California Association of Nurserymen, International Erosion Control Association, the Irrigation Association, Living Plant Growers Association, the Redwood Association, and the Southern California Turfgrass Council.

Fiske invites all segments of the industry to participate, including contractors, suppliers, manufacturers and designers. For information about the group and the next meeting, contact: Roger Fiske, 3 Cherry Hills Court, San Ramon, CA 94583.

## Scheduling chemical, fertilizer applications

by Doug Halterman, Leisure Lawn, Inc.

Everything we do in the lawn care business involves timing and schedules. There are schedules for production, advertising, equipment maintenance and for timing of preemergents and insecticides, as well as for herbicides and fertilizers.

First, we will explore timing, since we must acquire a feel for when the best time is to accomplish a series of tasks before we can arrive at a schedule for those tasks. We will look basically at the timing of chemical and fertilizer applications, but also take a brief look at aeration, dethatching and seeding.

If we look up the definition of timing, we find it is the moment of occurrence of something so as to produce the most effective results. Two common examples of timing are the timing of an engine and the timing of a golfer's swing.

In turf, we need to apply the correct materials at the proper time to obtain the desired results. We need to operate to favor turfgrass and to weaken its competitors. Often in the past we in the industry have operated for our own convenience — that is, taken the easy way out. We need to readjust our thinking in several key areas to start looking at things that are best for turf over the long run. We need to take time to stop and think of what long-range implications may follow actions that may have been thought of as basic to the lawn care industry.

Don't look at making any dramatic short-term moves, but look for systematic methods that develop programs and techniques to provide a healthy, long-term maintenance program.

**Chemical, fertilizer applications.** First, let's take a look at some considerations for timing of chemical and fertilizer applications.

With preemergent herbicides, look for an ideal starting date based on the chemical you decide to use, its longevity, its effectiveness, your local conditions and program goals. Obviously, cost is a major consideration which makes this decision progressively more difficult each year. The familiar chemicals which are available are:

- Betasan — Long-lasting, best used in those areas where heavy annual grass pressure exists.



Doug Halterman is an executive vice-president at Leisure Lawn, Inc., in West Carrollton, Ohio. The company grossed an estimated \$3 million in 1979.

- Dacthal — Has exhibited some postemergent control when applied as a liquid and therefore can prolong the preemergence application. Dacthal can also provide control of broadleaf speedwells.

- Benfen — Applied only as dry material; however, it is the most economical.

Consideration must be given to the time the preemergent application should end. Heavy pressure usually exists here to prolong the spring application to allow for more treatments to be applied to newly acquired accounts. However, if the preemergent application ending date is delayed, it risks customer dissatisfaction from the annual grass invasion. We have prob-

lems anyway because we extend preemergent applications beyond the published average crabgrass germination date when spring is cool and late results may be satisfactory.

**Future flexibility.** The future will bring more flexibility in preemergence usage. Most thought will be given to alternating chemicals from year to year to avoid excessive accumulations, and to take advantage of the different attributes of each chemical.

We should realize that those lawns which provide a dense turf may not require the use of preemergents every year.

In using broadleaf herbicide applications, we all know what conditions are most favorable for weed control. However, our customers seem to have different ideas about when herbicides should be applied. This has come about for two reasons:

(1) We have programmed the customer to expect an absolutely weed-free lawn by the literature we send him.

(2) Lawn care companies have reinforced these expectations by trying to provide these results.

Broadleaf weed killers have been applied three, four and even five times per year in attempts to satisfy and reinforce our customers' wants. We must make applications when the weeds are most susceptible. We need cool temperatures, adequate soil moisture and actively growing weeds. Let's begin to look more closely at species germination dates and chemical ineffectiveness during early spring and summer applications.

**Mid-summer applications.** We have to get away from mid-summer applications of herbicides when conditions are not favorable. However, it is going to take a uniform effort to educate the customer. Make him aware of why a weed is present and the complications involved in trying to treat for it in less than ideal conditions. We know what the effects of herbicide applications are on turf in stress conditions. Now it is time to put this knowledge to work and make some long overdue decisions on timing of herbicide applications.

When we look at insecticide applications we should investigate the "target system" of controlling insects. Past thinking in lawn care has been that with the large numbers of customers to be serviced and the limited number of visits to a single lawn each year, this type of approach was totally impractical. New information available on insect life cycles has shown that there are overlapping periods when turf insects are susceptible to control. It may be entirely possible to apply insecticides with limited residuals at times when the chances of controlling a large spectrum of turf-damaging insects is very high.

In looking at the target system usage on common insect problems we find:



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**Bluegrass billbug:** Control is best-achieved when the target is the adult. Insecticides should be applied before eggs are laid. The optimum time for this control would be mid- to late-spring. Larvae are difficult to control because they are located in the stem, crown or thatch where contact from chemicals is less than ideal. Also, in most cases, larvae damage has already occurred before detection is made. Timing also influences the choice of chemicals since insecticides best for adult control may not always be best for larvae.

**Chinch bug:** The chinch bug overwinters as an adult and begins feeding as soon as daytime temperatures reach 70 degrees F. At this point, control can be achieved by targeting applications to this active adult.

**Sod webworm:** The insect overwinters as a larvae. As soil temperatures increase, the larvae pupates in the soil to form an adult moth. Since we have no control over this winged form we must wait until eggs are laid and these eggs hatch to form small larvae. Therefore, control is targeted to young larvae that occur later in the season than chinch bugs or billbugs.

Knowing the life cycles of these three insects, can we expect a single, well-timed application of the proper amount of insecticide to provide control for all three? Recent research indicates this may be a solution in some areas. Other areas may not be plagued by all three insects; one or two may dominate. We have had a tendency to overreact to small infestations and assume an entire service area requires the same treatment. We should look for isolated areas of insect populations and if possible, time ap-

*We have been creating virtual deserts in the lawns we are servicing by the overuse of insecticides.*

plications targeted toward these areas.

With most insects we are concerned with early-season applications for control. The white grub (European chafer and Japanese beetle) poses a different problem with timing.

Spring is not a desirable time to control grubs. Fall applications tend to be more effective because the grub is more actively feeding. Also, since the target area for grubs is below the thatch layer, insecticides commonly used for spring insect control must be used at a higher rate, or an alternative material must be selected.

The best approach here may be a curative application when the grubs are found to be actively feeding. Control at this time is easily achieved without unnecessarily applying large amounts of insecticide targeted for early preventive control.

*Lawn care businessmen have a tendency to overreact to small infestations of bluegrass billbugs, chinch bugs and sod webworms, and incorrectly assume an entire service area requires the same insecticide treatment.*

**Insecticide overuse.** We have been creating virtual deserts in the lawns we are servicing by the overuse of insecticides. The natural insect populations have been destroyed leaving lawns open to invasion by insects with well-developed resistance to insecticides. Therefore, we have to begin placing more emphasis on insecticide timing.

An obvious side benefit of a properly timed application can be a reduction in material usage and therefore cost. We might be

well-advised then to put more effort into looking rather than applying.

Fertilizer applications offer another look at proper timing. Timing of nutrient applications involves much more than just programming an amount of fertilizer to be applied over a period of time. We need to look at when to apply the largest quantities, the seasonal effects of poorly timed amounts of fertilizer, how much water insoluble nitrogen to apply and when to apply it.

**Will customer return?** The source of water insoluble nitrogen influences the correct timing of its application. Some sources (ureaformaldehyde) require microbial activity, which is directly related to soil temperature for release. Others, like IBDU, require moisture for release. The fertilizer response desired should be related to the time of application and the conditions expected afterward. We have a unique situation in that we don't know if a customer will be returning the following year. What kind of timing considerations are we then faced with to produce a quality turf without building an expensive reserve of water insoluble nitrogen from which we may never gain benefit?

Rather than use large amounts of water insoluble nitrogen, we can use soluble fertilizers in our fertility programs if we are

to page 12

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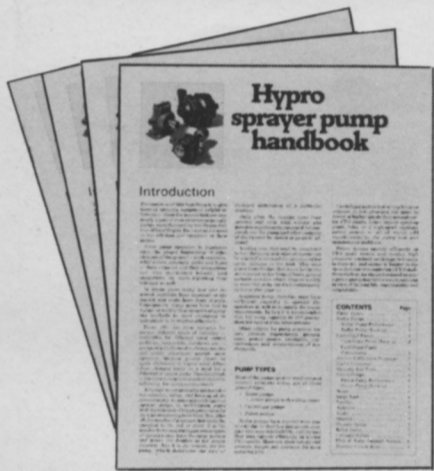
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careful in our timing not to create conditions favorable to disease in the spring or produce a stress-susceptible plant that will have used its energy reserves before summer. Maybe our best timed usage of larger amounts of water soluble nutrients can be applied as a late fall fertilization to optimize the relationship between photosynthesis, respiration and carbohydrate storage.

Improved varieties of grasses, plus a customer insistence on an emerald green lawn year round present a case for larger amounts of fertilizer in a lawn program. Larger amounts, however, may not be the best solution to this problem. Better timing of the current amounts of fertilizer, plus an educational program that encourages customers to recycle grass clippings may provide a more agronomically sound approach.

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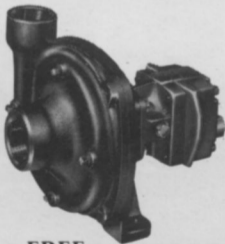


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**Disease control timing.** Most of the diseases we are routinely confronted with (leaf spot, dollar spot, *Fusarium*, stripe smut, *Pythium* and brown patch) require proper timing for acceptable control. We can provide control through the use of either preventive or curative measures. With the use of preventive measures a history of past infestations has provided a feeling that a recurring problem may exist. In cases where such a recurring problem exists, fungicides must be applied at a time when adequate concentrations of the chemical are present when environmental conditions favoring disease occur. In these cases, a systemic type fungicide may be best.

However, it may be a waste of time and energy to provide such controls. If the disease is so predictable that a preventive is advised, probably the *best long-range solution* may be to change varieties of grass in the lawn.

Curative applications of contact-type fungicides require precise timing when reapplications are required. Such timing is generally difficult with the demands of keeping up with day-to-day operations. Systemic fungicides may be used for curative purposes. These systemics may be a solution to the timing requirements needed with contacts. Granted, they are more expensive, work more slowly, and there may be a few instances of resistance, but consider the time required for reapplications.

**Aeration and dethatching.** When we look at aeration and dethatching, we also have timing considerations to evaluate. In the spring we have to contend with a preemergence barrier, but also we should consider the amount of weed invasion that is likely to occur from a thinned turf, especially after dethatching.

Soil moisture is very high in the spring and may make it difficult to maintain clean, properly adjusted equipment. Excessive moisture present during core aeration can cause glazing of the core walls resulting in poor water penetration. Therefore, fall aeration and dethatching are encouraged. Just be sure turf refills before winter dormancy.

As with aeration and dethatching, proper timing for seeding also must be considered. Spring seedings generally conflict with preemergence controls, except when Tupersan is used. Summers are usually too hot and dry for seeding. Weed invasion in properly cultivated seedbeds can present considerable problems during the summer.

**Fall best time to seed.** If seeding is to be done in conjunction with either aeration or dethatching, the fall presents an excellent opportunity. Flexibility to apply fertilizers is best achieved then, along with more favorable conditions of water and temperature. Weed invasion is less in the fall and conditions for turf recovery are excellent. If weeds are a problem, controls can be delayed in the fall until the grass has matured.

Put together all the considerations you feel important into a projected operation or procedure to follow. This schedule

*Any program you put together for a mass production approach to lawn care has to contain some compromises. However, the most profitable companies have come up with valid compromises to both timing and scheduling.*

involves a sequence of events timed not only to produce your desired results, but also to accommodate the manpower, equipment and growing season available. This schedule should provide a program to eliminate problems, not just deal with the symptoms of a problem.

Fertilization schedules should provide application dates that enhance timing considerations. Applications should be timed to reduce disease, increase stress tolerance, build carbohydrate reserves and enhance root and rhizome development over leaf growth.

Herbicide applications should be scheduled to be applied when control is most easily achieved, and at times when the least harm will be inflicted on desirable grasses.

Insecticides should be scheduled to target more effectively on a period when the greatest spectrum of control can be expected.

**Per truck quotas.** Schedules should be set day, week and round quotas for each truck. This allows each operator an opportunity to see at a glance where he stands. Well conceived and planned schedules tend to eliminate confusion, keep customer application sequences the same from application to application, and year to year, overlap application periods to accommodate new sales, allow the placement of newly acquired accounts into the same sequence as the neighbors, and dictates the production requirements required per truck.

Any program you put together for a mass production approach to lawn care has to contain some compromises. The most profitable, efficient companies have been able to come up with valid compromises to both timing and scheduling. They have also become deeply involved in fertilizer and pesticide management.

All lawn care companies should take a closer look at what they are trying to accomplish with their programs. In the long run it appears as though companies who educate and retain the lawn technicians and applicators, inform their customers what they are trying to accomplish and the problems involved, work for the year-round betterment of turf, and present a clean, efficient image will continue to grow and prosper.



"When a customer asks the price of a job, don't say 'It's much more expensive than it was last year!'"

## MARKETING IDEA FILE

### Transit advertising will grow in the 80's

With the nationwide trend towards greater utilization of public transportation, lawn care businessmen might want to look at transit advertising (buses, taxis, etc.) as a method of economically promoting their businesses.

Transit advertising has long been considered the "poor sister" of the advertising industry, far behind more glamorous media like television, newspapers and radio. Like Rodney Dangerfield, transit advertising has traditionally gotten "no respect."

However, that may all be changing now as commuters begin to view mass transit as a viable alternative to the automobile. In a recent article in *Advertising Age* magazine, Theodore J. Gage writes, "Transit advertising has never looked better. Vinyl cards have given a crisper look to advertising inside buses and taxis and in subway stations and bus shelters."

"More people are riding public transit and all studies show that as gas gets more expensive, more people will abandon their cars for public transportation. The cost per thousand for transit advertising is among the lowest of any in the advertising field and studies show the reach and frequency of transit advertising is very good."

Lawn care operators may want to seriously consider advertising's "poor sister" in the 1980's. After all, a large percentage of commuters are homeowners with good-sized lawns; just the type of people lawn care professionals want to reach.

available. Alternative pest control measures, such as controlled release of encapsulated pesticides may provide part of the answer.

(7) Few people within the lawn care industry have given sufficient attention to the long-term effects of fertilizer and pesticide programs. Although some recognition is now given to the possible detrimental effects of continual preemergent herbicide usage, more research is required. Alternative approaches to annual grass control may be needed. Other pesticides as well may be causing long-term detrimental effects. Also, continual use of improper fertility programs which initially appear suitable could also lead to the long-term degradation of a lawn.

(8) New products will continue to become available which will require evaluation. Despite the availability of many excellent pesticides, the pesticide industry recognizes the tremendous potential for sales within the lawn care industry. Alternative products, often economically attractive compared to older materials, will become available on a continuing basis. Also, newer type materials such as spray adjuvants, wetting agents and anti-drift agents will be introduced to the industry, all requiring substantial testing and evaluation.

In summary, it is true that the lawn care industry has a huge expansion potential, however, the industry as a whole must provide high quality services and programs to the homeowner. Only through research to answer some of the questions above can the lawn care industry be continuously evaluated and upgraded.

## MEETINGS

### PGMS plans annual conference

The 68th annual Grounds Management Conference and Trade Show, sponsored by the Professional Grounds Management Society will be held at the Plaza Hilton Inn in Kansas City, Mo., Nov. 2-6.

Distinguished speakers on various aspects of grounds management, as well as workshops will be included in the educational program. The trade show will run for two days, Nov. 3 and 4.

Tours of the area, a president's reception and dinner, and an awards banquet will round out the activities planned for this year's conference.

The Professional Grounds Management Society has recently moved to new and larger offices. For further information about the conference contact: Allan Shulder, Executive Director, Professional Grounds Management Society, 7 Church Lane, Pikesville, MD 21208.

## VARIETIES

### Banner chewings fescue gains Canadian license

A new chewings fescue turfgrass variety — Banner — has been awarded a Canadian license by Agriculture Canada, Plant Products Division, Ottawa, on an application by Oseco, Inc. of Brampton, Ontario.

Banner was developed by the New Jersey Agricultural Experiment Station, Rutgers University, and was released in 1975. It was awarded a U.S. Department of Agriculture Plant Variety Protection Certificate in 1977.

Certified seed of Banner is being multiplied and distributed in the U.S. by E.F. Burlingham & Sons, Forest Grove, Ore.

Banner is a 45 clone synthetic variety based on parental material collected from turf areas in the northeastern U.S.A.

## MONEYWISE

### Before/after photos help retain customers

Lawn maintenance professionals can increase customer retention by taking before and after photographs of their job sites, according to Melanie Reinhold, of William Reinhold Landscape Contractors & Engineering, Inc., Flat Rock, Mich.

Speaking at an Associated Landscape Contractors Association Maintenance Symposium, Reinhold described before and after photographs as a "key advertising tool" for her company.

"We have a professional photographer come in twice a year to take pictures of most of our job sites," she said. Photos are taken before any work is done and several months after work is underway. "We use the pictures with prospective clients, as well as clients that we've just captured to show them what we are giving them over and above what they had before," Reinhold added. "I think the photographs confirm in the customer's mind the type of work we do."



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# Inside the industry

## The top 50 lawn care markets

The New York Standard Metropolitan Statistical Area (SMSA) — even though it has one of the lowest percentages of owner-occupied housing units in the country at 36.8 percent — has the largest number of single-family homes of all SMSA's in the United States. This includes single-family homes in affluent Nassau and Suffolk counties on Long Island outside of New York City.

The New York SMSA had more than 1.4 million owner-occupied homes in 1970, the latest year for which comprehensive housing statistics are available for all of the SMSA's in the United States. Population for the same area, based on more up-to-date 1979 figures, is almost 12 million persons. Per household income, based on 1978 figures, is \$21,461. Household income includes all households, including rented homes, apartments, condominiums and co-operatives, but is a good indicator of general wealth of any given area in the United States.

Other SMSA's in the top 10 totals of number of single-family homes are: Los Angeles-Long Beach, Calif., 1.18 million homes; Chicago, 1.16 million homes; Philadelphia, Pa.-N.J., 993,156 homes; Detroit, 913,267 homes; San Francisco-Oakland, 560,749 homes; Boston-Lowell-Brockton-Lawrence-Haverhill, Mass., 532,254 homes; Pittsburgh, 514,503 homes; St. Louis, Mo.-Ill., 475,592 homes; and Dallas-Fort Worth, 455,884 homes.

Since 1970, some SMSA areas have been

changed by the federal government — most notably, Dallas and Fort Worth were merged as were San Francisco and Oakland, and Nassau and Suffolk counties were divided from New York — but for the purposes of this survey, all figures are consistent within areas as designated. SMSA areas are determined by the U.S. Bureau of the Census.

When 1980 U.S. Census figures are available for the entire country, perhaps early next year, it is expected a number of SMSA areas will move up in ranking order based on number of single-family homes because growth in population and construction.

A listing of cities expected to move up in number of single-family homes would probably include: St. Louis; Dallas-Fort Worth; Washington, D.C.-Md.-Va.; Houston; Minneapolis-St. Paul; Baltimore; Anaheim-Santa Ana-Garden Grove, Calif.; Milwaukee; Atlanta; Denver-Boulder, Colo.; San Diego; Phoenix; San Jose; Louisville, Ky.-Ind.; Columbus, Ohio; New Orleans; Hartford-New Britain-Bristol, Conn.; Sacramento, Calif.; San Antonio, Texas; Albany-Schenectady-Troy, N.Y.; Oklahoma City, Okla.; Salt Lake City, Utah; and Memphis, Tenn.-Ark.

Honolulu, Hawaii has the highest per household income for an SMSA in the United States at \$29,985. Rounding out the top 10 in this category are the SMSA areas of Washington; New Brunswick-Perth Amboy-Sayreville, N.J.; Anaheim-Santa

Ana-Garden Grove, Calif.; Bridgeport-Stamford-Norwalk-Danbury, Conn.; San Jose; Sacramento; Long Branch-Asbury Park, N.J.; Oxnard-Simi Valley-Ventura, Calif.; and Houston.

Another good indicator of residential lawn care potential is the percentage of households that are owner-occupied. Based on 1970 U.S. Census figures, there were 11 SMSA's that had more than 75 percent — that's three out of every four households — owner-occupied households. These SMSA's were:

Bay City, Mich., 81.3 percent; Jackson, Mich., 78.9 percent; Muskegon-Muskegon Heights, Mich., 78.7 percent; Saginaw, Mich., 77.8 percent; Flint, Mich., 77.8 percent; Grand Rapids, Mich., 77.3 percent; South Bend, Ind., 77.3 percent; Terre Haute, Ind., 75.9 percent; Youngstown-Warren, Ohio, 75.3 percent; Lima, Ohio, 75.1 percent; and Appleton, Wis., 75.0 percent. It is interesting to note that the first six SMSA's on this list are all located in the state of Michigan.

This listing of the top 50 residential lawn care markets takes into consideration only number of single-family homes in any given SMSA, not size of average lawns in the area, commercial/industrial potential for the mowing/maintenance businessman or number of competing lawn care companies already operating in any area. Most of all, it does not take into consideration the growing small-town lawn care markets that should continue to grow in the 1980's. — Bob Earley

Top 10 — Per Household Income

Rank	SMSA	Per Household Income
1	Honolulu, Hawaii	\$29,985
2	Washington, D.C.-Md.-Va.	28,872
3	New Brunswick-Perth Amboy-Sayreville, N.J.	26,971
4	Anaheim-Santa Ana-Garden Grove, Calif.	26,609
5	Bridgeport-Stamford-Norwalk-Danbury, Conn.	26,392
6	San Jose, Calif.	25,821
7	Sacramento, Calif.	25,801
8	Long Branch-Asbury Park, N.J.	25,332
9	Oxnard-Simi Valley-Ventura, Calif.	24,975
10	Houston, Texas	24,573

The Top 10 — Population

Rank	SMSA	Population
1	New York, N.Y.	11,963,600
2	Los Angeles-Long Beach, Calif.	7,197,600
3	Chicago, Ill.	6,989,900
4	Philadelphia, Pa.	4,741,100
5	Detroit, Mich.	4,359,300
6	Boston-Lowell-Brockton-Lawrence-Haverhill, Mass.	3,841,800
7	San Francisco-Oakland, Calif.	3,164,400
8	Washington, D.C.-Md.-Va.	2,998,100
9	Dallas-Fort Worth, Texas	2,676,300
10	Houston, Texas	2,626,600

Cities expected to move up in single-family home rankings when 1980 Census statistics become available include: St. Louis, Dallas/Fort Worth, Washington, Houston, Minneapolis/St. Paul, Baltimore, Anaheim/Santa Ana/Garden Grove, Milwaukee, Atlanta, Denver, San Diego, Phoenix, San Jose, Louisville, Columbus, New Orleans, Hartford, Sacramento, San Antonio, Albany, Oklahoma City, Salt Lake City and Memphis.

Rank	SMSA	Owner occupied homes	Population	per household income	Rank	SMSA	Owner occupied homes	Population	per household income
1	New York, N.Y.	1,427,338	11,963,600	\$21,461	26	San Diego, Calif.	238,887	1,724,700	18,084
2	Los Angeles-Long Beach, Calif.	1,179,943	7,197,600	17,310	27	Miami, Fla.	231,529	1,469,200	17,471
3	Chicago, Ill.	1,155,097	6,989,900	21,823	28	San Bernardino-Riverside-Ontario, Calif.	231,229	1,394,700	18,947
4	Philadelphia, Pa.-N.J.	993,156	4,741,100	20,378	29	Indianapolis, Ind.	226,909	1,146,900	20,374
5	Detroit, Mich.	913,267	4,359,300	22,251	30	Portland, Ore.-Wash.	221,860	1,149,800	18,978
6	San Francisco-Oakland, Calif.	560,749	3,164,400	20,867	31	Phoenix, Ariz.	200,716	1,307,600	18,153
7	Boston-Lowell-Brockton-Lawrence-Haverhill, Mass.	532,254	3,841,800	20,459	32	San Jose, Calif.	199,360	1,216,900	25,821
8	Pittsburgh, Pa.	514,503	2,278,000	19,443	33	Rochester, N.Y.	180,627	956,300	18,652
9	St. Louis, Mo.-Ill.	475,592	2,374,600	19,776	34	Dayton, Ohio	174,780	827,700	17,907
10	Dallas-Fort Worth, Texas	455,884	2,676,300	20,364	35	Louisville, Ky.-Ind.	170,024	880,300	18,446
11	Washington, D.C.-Va.-Md.	412,973	2,998,100	28,872	36	Providence-Pawtucket-Warwick, R.I.-Mass.	167,595	851,000	17,962
12	Cleveland, Ohio	405,710	1,923,100	20,016	37	Columbus, Ohio	167,104	1,079,900	20,413
13	Houston, Texas	366,762	2,626,600	24,573	38	New Orleans, La.	163,545	1,133,200	19,670
14	Minneapolis-St. Paul, Minn.	363,295	2,017,500	22,538	39	Fort Lauderdale-Hollywood, Fla.	161,899	904,100	18,397
15	Baltimore, Md.	363,136	2,158,000	14,965	40	Hartford-New Britain-Bristol, Conn.	161,779	1,055,000	21,006
16	Newark, N.J.	311,546	1,952,000	21,300	41	Sacramento, Calif.	157,700	955,000	25,801
17	Seattle-Everett, Wash.	306,930	1,447,500	19,705	42	Bridgeport-Stamford-Norwalk-Danbury, Conn.	156,855	808,800	26,392
18	Anaheim-Santa Ana-Garden Grove, Calif.	281,825	1,826,200	26,609	43	San Antonio, Texas	155,817	1,028,000	18,073
19	Tampa-St. Petersburg, Fla.	275,779	1,458,100	14,286	44	Birmingham, Ala.	154,305	825,100	16,779
20	Kansas City, Mo.-Kans.	269,014	1,286,100	20,614	45	Toledo, Ohio-Mich.	150,454	781,500	22,290
21	Buffalo, N.Y.	262,238	1,294,100	15,968	46	Akron, Ohio	147,612	656,400	18,345
22	Cincinnati, Ohio-Ky.-Ind.	262,709	1,378,200	22,895	47	Albany-Schenectady-Troy, N.Y.	146,681	791,800	16,362
23	Milwaukee, Wis.	258,827	1,412,300	20,981	48	Oklahoma City, Okla.	142,242	779,900	18,557
24	Atlanta, Ga.	246,876	1,848,000	18,687	49	Salt Lake City-Ogden, Utah	132,885	837,200	18,251
25	Denver-Boulder, Colo.	241,010	1,501,800	20,099	50	Memphis, Tenn.-Ark.	129,930	879,300	18,342

have to borrow money at 20 percent from a bank, you're coming out way ahead if you can get it for 10 percent from your customers," Brandt said. On the strength of Spray-A-Lawn's trial-run discount plan, Brandt plans to implement such a plan in all the company's locations next year.

Of course, saving the customer money is an added incentive for using such a plan because it promotes good customer relations. This year, Spray-A-Lawn was able to offset a 15 percent price increase to some extent, by offering their customers a 10 percent discount.

"We had thought about offering a five percent discount and thought they wouldn't be interested," Brandt said. "The way interest rates went this year, at 10 percent off we still didn't think they would be interested, but we were obviously proven wrong."

Companies such as Spray-A-Lawn and Village Green Lawn Spraying, West Chicago, Ill. offer their discount plans by way of a letter to each customer at the beginning of the season, explaining the service they're going to receive for the year, the cost, and introducing the idea of a discount rate if payment is received by a certain date, according to Rick White, president of Village Green Lawn Spraying.

Other companies such as Royal Lawns, Pine Brook, N.J. prefer to offer their discount on a

person-to-person basis when salesmen contact prospective customers, rather than offering a general discount to all customers. Royal Lawns also distributes promotional coupons entitling new customers to a five percent discount if they contact the company in this way.

A spokesperson for Royal Lawns said that although some new customers accept the discount when it is offered, they are a very small percentage of the total customers. "We are talking about a couple of hundred dollars. Most customers would rather make the payments than have the service at a reduction by putting down all the money at once."

Don Burton, president of Lawn Medic, Inc., Bergen N.Y., feels that his customers could get better use out of their money by taking advantage of a time payment type of plan, rather than paying the entire amount at one time simply to get a discount.

Some of the franchise company's individual dealers offer discounts when trying to attract new clients, but the company has not given the idea serious consideration as a general policy. "We have to settle in our own minds just what the gain is," Burton said. "If we give more than five percent, its cutting too much into our margin. We don't see much gain. Two percent is a possibility we've considered more likely."

Doug Baker, executive vice president of Leisure Lawn, West

Carrollton, Ohio, agrees that such discount plans are a very good way to build the revenues of cash-short firms, but questions the advantages of using such plans in all cases.

He maintains that the company that offers such a discount must develop two separate price schedules, one for those customers who pre-pay at a discount and one for those

customers who pay in installments.

This is especially a problem when it becomes necessary to refund money to those customers who cancel the company's services mid-year. "The internal procedures you have to follow to be fair to the customers are not excessive," Baker says. "But they're just one more thing that can go wrong."

— by Kathleen Milgate

## TOOLS, TIPS & TECHNIQUES

### Research you can use

Turfgrass researchers from across the U.S. met in Colorado last year at the annual meeting of the American Society of Agronomy to discuss their latest research. Dr. John R. Hall III of Virginia Tech recently outlined some of the papers delivered:

In a five-year study, R.E. Schmidt and J.M. Breuninger of Virginia Tech found that recovery of Kentucky bluegrass from drought was increased as annual phosphorus fertilization rates increased from zero to three pounds per 1,000 square feet in the presence of a high nitrogen fertilization program (six pounds of nitrogen per 1,000 square feet per year). Best summer drought recovery was obtained when the majority of nitrogen was fall-applied. Poorest recovery occurred when the nitrogen was spring-applied. Increasing phosphorus and potassium availability generally enhanced recovery.

Dr. Hall's comments: "Fall fertilization works. Maintain adequate phosphorus and potassium levels. Avoid excessive nitrogen stimulation of turf in the spring."

Texas A & M University's A. and J.B. Beard said experiments with tall fescue suggest that relationships between nitrogen and carbohydrate content (stored food) are generally similar to those that have been reported in Kentucky bluegrass. As nitrogen application rates increased from 1.4 pounds per 1,000 square feet a year to 5.9 pounds of nitrogen per 1,000 square feet per year, carbohydrate content decreased. Carbohydrate content was highest in February (17 percent) and lowest in April (five percent) during peak shoot growth. The density of tall fescue decreased 66 percent from February to September and climbed back to 49 percent of the February density by November.

Dr. Hall's comments: "Excessive nitrogen stimulation of tall fescue will result in reduced stored food reserves."

Experiments were conducted by J.H. Dunn and P.M. Halisky of the University of Missouri investigating the effect of fertilization and mechanical treatments on thatch accumulation and quality of Meyer zoysiagrass. The seven-year study developed an average thatch depth of 1.8 inches over all treatments. Plots mowed at 3/4-inch mowing height had 33 percent less thatch than those plots mowed at 1-1/2 inches. Increasing nitrogen levels from two pounds of nitrogen per 1,000 square feet per year to six pounds of nitrogen per 1,000 square feet per year resulted in small increases in thatch accumulation. There was no difference in rates of thatch build-up between the three nitrogen sources tested, urea-formaldehyde, IBDU and urea. Winter injury was most severe at the higher mowing height (1-1/2 inches).

Dr. Hall's comments: "In maintaining zoysiagrass, utilize low nitrogen levels and low mowing heights and couple these with annual thatch removal for best turf quality."

The fate of nitrogen applied to turfgrass was examined in a three-year study conducted by J.L. Starr and H.C. DeRoo at the Connecticut Agricultural Experiment Station. Radioactive nitrogen was applied in the third year of the study in the form of ammonium sulfate. During the first two years of the study, nitrogen was supplied from a 10-6-4 formulation containing 50 percent organic nitrogen. At the end of the third year it was observed that the nitrogen in the clippings was coming equally from soil organic nitrogen, applied fertilizer nitrogen and from the three years of clippings nitrogen returned to the soil. About one-third of the nitrogen being provided by the clippings came from the most recent years' fertilization.

Dr. Hall's comments: "Considerable nitrogen is made available from clippings. Lawn service companies may need to have separate fertilization programs for homeowners that collect the clippings."

## Finally, An Aid For Teaching Turfgrass

Superintendents, Contractors, Lawn Care Managers, New, On-the-Job Reference. The Turf Managers' Handbook is a comprehensive, organized approach to turfgrass science and care. It has been designed and written by leading turf specialists from Purdue, Dr. William Daniel and Dr. Ray Freeborg, for on-the-job reference and as a text for students. The book contains 150 illustrations and 96 color photographs. Data includes 240 tables and forms. Included are specifications for rootzones, employment, calculations for

chemical applications, and extensive metric-imperial conversion. Business and technical aspects of turfgrass management are covered in this 424-page book. Planning, purchasing, hiring, construction, and plant selection are put together for easy on-the-job reference. Markets covered include lawn care, sod production, golf course management, cemeteries, athletic fields, and low maintenance areas. If it concerns turf, it's in the Turf Managers' Handbook.

# TURF managers' HANDBOOK

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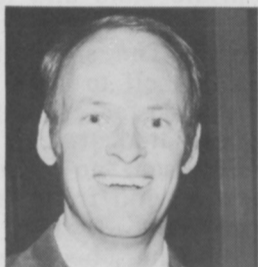


# Eight good reasons to join the Professional Lawn Care Association of America.

1.

**"An annual national lawn care convention for the professional exchange of new ideas and operating know-how, and a chance to meet with suppliers."**

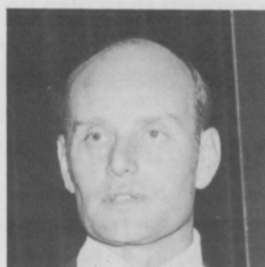
Rick White, Village Green Lawn Spraying, West Chicago, Ill.



2.

**"Consumer education . . . informing potential customers of the advantages of lawn care and the importance of putting the proper care of lawns into the hands of dedicated, trained, skilled professionals."**

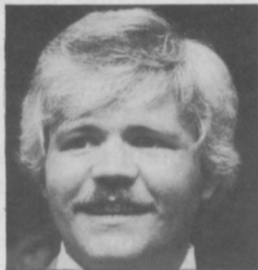
Tom Brune, Atwood Lawn Spray, Sterling Heights, Mich.



3.

**"Conferences, clinics and workshops aimed at continuing management education for today's business climate and conditions relating to the lawn care industry."**

Jim Kelly, Keystone Lawn Spray, Wayne, Pa.



4.

**"Government relations . . . PLCAA, as a spokesman for the entire industry, can present our interests with greater force and effectiveness than can an individual company. Government legislation is going to affect our industry more and more, and we have to make our needs known."**

Ronnie Zwiebel, Chem-Care Lawn Service, Birmingham, Ala.



5.

**"Specially designed training programs for sales, service and supervisory employes of member firms to teach the fundamentals of business, customer relations, lawn care technology and the importance of economics to business success."**

Gordon Ober, Davey Lawnscape Service, Kent, Ohio



6.

**"Establishment of acceptable technical, ethical and safety standards to guide existing lawn care businesses and newcomers to the industry."**

Dr. Paul Schnare, Atkins Lawn Care, Columbia, Mo.



7.

**"Association funding for the specific research and development we need for the lawn care industry."**

Frank Stevens, Pro-Lawn-Plus, Baltimore, Md.



8.

**"Surveys to enable each PLCAA member company to compare its performance against the average performance of all member companies and to compare business performance factors, such as sales volume, profit, investment and growth."**

Marty Erbaugh, Lawnmark Associates, Peninsula, Ohio



These are only some of the things the lawn care industry as a whole can accomplish through the Professional Lawn Care Association of America. Ours is a young industry, we need to be recognized as professionals and the experts we are. We need to get the word out about the lawn care industry to potential

customers, suppliers to the industry and to government at the local, state and federal level. We can't do it alone. We need the support of the entire lawn care industry if we are to realize our goals.



## Tell me more.

The Professional Lawn Care Association is off and running. Together we can make things happen. Grow with PLCAA. Complete this application for further information and mail it today.

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 Chicago, IL 60611

## What would you do in the event of a chemical spill?

One of your technicians is driving an 800-gallon spray rig through a busy residential neighborhood. As he approaches an intersection, a child suddenly bolts in front of the truck, forcing him to cut the wheel so sharply that the truck rolls over. The vehicle's polyethylene tank is pierced as it strikes the pavement and toxic chemicals begin to pour out onto the street.

What immediate action can be taken to reduce the seriousness of this potentially damaging environmental problem? Winand Hock, extension pesticide specialist with the Penn State University Department of Plant Pathology, has some suggestions.

Speaking at the recent Penn-

gallon spray tank.

Most damaged small containers (up to 55 gallons) can be placed in larger "overpack" receptacles and properly disposed of. However, overturned spray rigs and other serious chemical spills require more extensive measures.

The first step in dealing with a serious chemical spill is to contact the state or local police. "You've got to have some type of law enforcement," Hock said, "particularly if you're on a public highway." Further, if the material is an agricultural chemical, the regional office of the Department of Agriculture in your state should be contacted.

In extreme cases it may also be



Spills consisting of wettable powders or granular materials can be controlled by lightly misting the affected area with water. Misting inhibits drift and reduces the chances of the chemical further contaminating the environment.

Downstream users of the waterway should also be notified as soon as possible.

After contacting the appropriate state and local officials, the next step is to isolate the area. The spill site should be roped off to keep the public at least 30 feet away from the contaminated area. It may also be necessary to evacuate people downwind from the site of the accident.

Further, because many pesticides are petroleum-based, flares should never be used to isolate an area. "If you stick a flare out there, you'll liable to have the whole place go up in flames," Hock said.

**Containing the spill.** "Liquid spills can be contained by spreading absorbent material such as fine sand, vermiculite, or sawdust," Hock said. Every day kitty litter is also an effective absorbing agent.

However, Hock warned that sawdust and other types of sweeping compounds can be dangerous if not used properly. "That type of combination: a strong oxidizing agent and sweeping compounds, present a possible combustible situation," he said.

Other forms of chemical spills (wetable powders, granular materials, etc.) can be controlled by lightly misting the affected area. Misting inhibits drift and reduces the chances of the chemical further contaminating the environment.

**Clean up.** After applying, removing, and disposing of the absorbent material, the next step is to clean up the affected area. Hock suggests working a combination of hydrated lime and straight bleach into the area with a coarse broom. "Remember, the cleaning solution becomes contaminated by the scrubbing so it should also be swept up, placed in a bag, and disposed of," he said.

"It may be necessary to repeat this particular procedure three, four, or maybe half a dozen times until you are satisfied that the area is cleaned," Hock added.

Ideally, the top two to three inches of soil should also be stripped and replaced with fresh topsoil. "That's about the only thing that will affectively remove the spill," he said.

Regarding misapplications or less serious spills, Hock said ac-

tivated charcoal will affectively decontaminate an area. "The charcoal may actually absorb or tie up enough chemical to avoid significant injury and longterm contamination," he said. "But you must do this immediately after the spill or misapplication has occurred. You can't wait."

The final step in the overall clean-up operation concerns decontaminating vehicles and equipment used in cleaning up the spill. Hock suggests using a liquid bleach or alkaline detergent.

"During the clean-up process if you have any type of porous material such as brooms, dis-

*Because many chemicals are petroleum-based, flares should never be used to isolate a spill site. "If you stick a flare out there, you'll liable to have the whole place go up in flames," Winand Hock, extension pesticide specialist with the Penn State University Department of Plant Pathology, said.*

sylvania Turfgrass Conference in Hershey, Pa., Hock said, "The correct or suggested guidelines to follow in the event of a hazardous chemical spill are included under the so-called three C's. You must contain the spill, you must contain it, and you must clean it up."

**Controlling the spill.** Immediately after an accident has occurred, steps should be taken to contain the flow of toxic chemicals, regardless of whether it is coming from a 25-gallon can of insecticide or an 800-

necessary to contact your local fire department. However, Hock warns against washing down the contaminated area with water from fire hoses. "One of the worst things that can happen is to wash that hazardous material into a waterway (streams, sewers, etc.)," he said.

If a chemical should contaminate a waterway, three agencies should immediately be contacted: the state Department of Environmental Resources, state Department of Agriculture, and the State Fish Commission.



Liquid spills can be contained by spreading absorbent materials like fine sand and vermiculite on the site, according to Winand Hock, extension pesticide specialist with Penn State University.

posable garments, hats, or leather boots... the suggestion is to get rid of them," he added. "You cannot affectively decontaminate a porous item."

**Industry cooperation.** The chemical industry has developed an emergency response system to protect the public and to assist public agencies in handling serious chemical spills. "The Pesticide Safety Team Network (PSTM) of the National Agricultural Chemicals Association represents a joint effort of technically qualified manufacturers who respond to emergency situations where the accidental release of a pesticide or some other hazardous material has occurred," Hock said. Their 24-hour, toll free phone number is 800-424-9300. It's a phone number every lawn care businessman should have prominently displayed somewhere in their shop.

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### Virginia Tech's Dr. Shoulders retires

John F. Shoulders, professor of agronomy and extension turf specialist at Virginia Tech, has retired from the university after 28 years of service.

Shoulders became Virginia Tech's first employee in the specialized Extension endeavor of pastures and forages in 1952, after serving for six years as a county agent in West Virginia.

While employed as a forage specialist, Shoulders began to develop educational programs in turfgrass management. His strong turf program resulted in the creation of a full-time Extension turf position, which he filled in 1966.

Shoulders holds a B.S. degree in agriculture from West Virginia State, as well as a master's degree in agronomy from Penn-



John F. Shoulders (left), extension turf specialist at Virginia Tech, recently announced his retirement after 28 years of service to the university. Here he is seen with former Virginia Turfgrass Council president Gus C. Constantino (center) and Virginia Tech professor of agronomy Roy E. Blaser.

sylvania State University.

A charter member of the International Turfgrass Society, he is also a member of the Council for Agricultural Science and Technology, Virginia Soil Fertility Association and the Virginia Extension Service Asso-

ciation. His highest honor came in 1977, when he was named a fellow in the American Society of Agronomy.

The turfgrass authority plans to remain in Blacksburg and maintain an interest in turf programs.

properties to be serviced in an orderly manner, since the company already has a fairly firm idea of who its customers are.

"The challenge from our industry's standpoint is to support the use of the negative option approach, but to go through a set of procedures that best inform the consumer of our intention to keep coming back." Erbaugh's recommended procedures are as follows:

- All promotional materials should contain bold-faced reference to the intended use of the procedure.

- At the time of sale, the customer should again be notified of the use of the procedure.

- At the time of the fall treatment, written notice should be given to the consumer of the company's intention to return and exact price information.

- Prior to the spring treatment a letter should be sent to all customers notifying them of the intent to return and exact price information.

- All customer materials should notify the customer of his right to cancel at any time.

- The company should have a policy of resolving any disputes over this in the favor of the customer.

"If all these things are done, it's difficult to make the case for consumer abuse," says Erbaugh. Indeed, he feels that he has convinced the Better Business Bureau of the need for such a negative option plan in the lawn care industry.

Establishing and promoting ethical business standards in the lawn care industry was one of the main ideas behind the formation of the Professional Lawn Care Association of America (PLCAA), of which Erbaugh is a founding member. His hope is that the principles set forth in the PLCAA Code of Ethics will encourage individual lawn care businessmen to adopt policies like those mentioned earlier, making them industry standards.

At this point in time, Erbaugh doesn't see the negative option issue as becoming a legal one, both because of the small amount of money involved, and because the lawn care companies are operating on the basis of an oral contract rather than a written one.

"It's a valid oral contract," Erbaugh explains, "but the issue would be whether both parties of the contract were aware of the terms. And if the company follows the procedures which I've outlined, the consumer would have a hard time making the case that he was not made aware of the contract."

Still, this is not to suggest that there is no chance of the negative option issue ever reaching the courts. If there was enough momentum, the state legislature could propose to ban negative option sales altogether, Erbaugh stated. "But they would have to make it apply to a lot of companies other than lawn care companies, because we're not the only ones involved with negative option selling." -Kathleen Milgate

# books

#### DISEASES OF SHADE TREES

by Terry Tattar

Because shade trees require specialized maintenance rarely used in the forest, this text seeks to aid the arborist in providing necessary care to maintain vigor and prevent shade tree diseases. An indepth look at infectious and non-infectious tree diseases. Plant pathology not necessary. \$22.00



#### HOME LANDSCAPE

by Garrett Eckbo

Provides designs, examples and current innovations and refinements to older traditional designs. Covers all aspects of residential landscape planning. \$16.00



#### TURF IRRIGATION MANUAL

by James Watkins

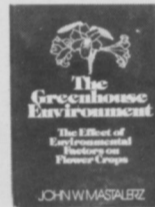
A guidebook for engineers, architects, designers and contractors. Keeps pace with the latest developments in turf and landscape irrigation. Specific chapters devoted to rotary sprinkler design systems, golf course design systems and expanded engineering and reference material. \$19.50



#### THE GREENHOUSE ENVIRONMENT

by John W. Mastalerz

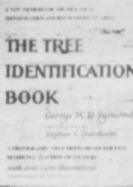
Covers principles and practices of greenhouse flower crop production, emphasizing response of flower crops to greenhouse environmental factors. General coverage of factors determining these conditions with illustrations. \$20.00



#### TREE IDENTIFICATION

by George Symonds

Pictorial reference to identifying trees by checking leaves, buds, branches, fruit and bark. Like its sister publication, Shrub Identification, popular and botanical names are listed with index tabs for easy reference. \$8.00 paperback



#### FUNDAMENTALS OF SOIL SCIENCE

by Henry D. Foth

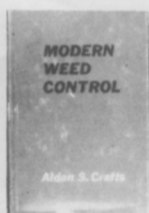
Sixth edition. Contains the most useful knowledge about soil science. Covers important national and international issues such as soil resource conservation, land use, environmental quality and food production. \$20.00



#### MODERN WEED CONTROL

by Alden S. Crafts

Deals exhaustively with the botany, chemistry, plant physiology and ecology involved in modern weed control technology. Contains lists and classifications of herbicides and an abundance of illustrative material that will help the reader visualize the varied aspects and forms of weed control. \$16.00



#### HORTICULTURAL SCIENCE

by Jules Janick

Third edition. 15 chapters covering the biology and technology of horticulture. Includes illustrations and graphs. \$20.00



#### SOIL & SOIL MANAGEMENT

by Charles D. Sopher and Jack V. Baird

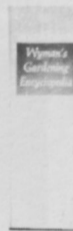
An introductory text presents a comprehensive coverage of major soil concepts. Highlights include exercises in calculating crop needs under varying soils and temperature conditions, case histories and appendices and bibliographies for readers interested in additional information. \$14.00



#### WYMAN'S GARDENING ENCYCLOPEDIA

by Donald Wyman

A classic reference on all aspects of gardening. Offers advice on planting and maintenance, information on new plants, cultivation, insecticides, herbicides and fungicides. Contains 10,000 articles, 206 drawings, 170 photographs and a color hardiness zone map. \$25.00



#### DISEASES & PESTS OF ORNAMENTAL PLANTS

by Pascal Pirone

This standard reference discusses diagnosis and treatment of diseases and organisms affecting nearly 500 varieties of ornamental plants grown outdoors, under glass or in the home. Easy to understand explanations of when and how to use the most effective fungicides, insecticides and other control methods. \$20.00



#### TREE MAINTENANCE

Pascal Pirone

The fourth edition of this guide for anyone involved in the care and treatment of trees. Special sections on tree abnormalities, diagnosing tree troubles, non-parasitic injuries and assessing the suitability of different trees to throughout the country. \$25.00



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### 16-horsepower tractor with hydrostatic drive

Speedex Tractor Company's Model 1622 hydrostatic tractor features a 16-horsepower Briggs & Stratton cast iron, electric start engine, dual range (hi-low) transmission, accelerator-like pedal, foot brake, full hydraulics and head lights. The tractor also accommodates a 48-inch mower deck that adjusts to cutting height hydraulically.

Write 702 on reader service card

### Turf seeds featured in 20-page catalog

A free product guide featuring quality turf seeds is available from Seaboard Seed Company. Seeds described in the 20-page brochure include six varieties of fine fescues, 15 varieties of Kentucky bluegrasses, four varieties of bentgrasses and six varieties of fine textured perennial ryegrasses. A number of miscellaneous items are also featured including red top, poa trivialis, white clover and crownvetch.

Write 700 on reader service card

### Edger attachment for Excel Hustler mowers

A new side-mounted edger which easily attaches to Excel Hustler mowers saves hours of trimming time in maintaining



turf and grounds. The edger consists of a single concave coulters with depth-stop hub, mounted on parallel arms. The cutting edge hugs sidewalk or curb, making a narrow, clean cut. The disc can move a full four inches side to side, to remain parallel for cutting. It works at any of four

angles by repositioning a pair of clevis pins.

The cutting blade runs alongside the tractor's left drive wheel, at ideal viewing position for the operator. Thus, an experienced operator can often mow and edge at the same time, and if the mower is equipped with a grass catcher/compactor, run it back over the trimmed edge to pick up clippings.

Hydraulics lower the edger into working position where it becomes ground-driven without auxiliary power as the tractor moves. Constant abrasion against concrete self sharpens the disc. Further, a fingertip touch activates the hydraulics that control the depth of cut.

Write 703 on reader service card

### New Rotary mower

Gravelly offers a new 60-inch cut commercial quality mower attachment for its 16 to 19 h.p. grounds maintenance tractors.

The new mower, which is quickly attached to the tractor using no special tools, provides a clean, even five-foot cut over most terrain, because it is equipped with adjustable anti-scalp caster wheels in front and



anti-scalp rollers in the center of both front and rear, plus gauge wheels in the rear. All-gear-drive from tractor to mower gear box gives efficient transmission of power.

The manufacturer claims easy belt adjustment on the heavy-duty drive belts from gear box to the three, one-inch diameter spindles and easy height adjustment from one and five-eighths to four and five-eighths inches. The drive shaft, wheels and spindles are readily accessible for easy lubrication, with no disassembly or removal of parts required.

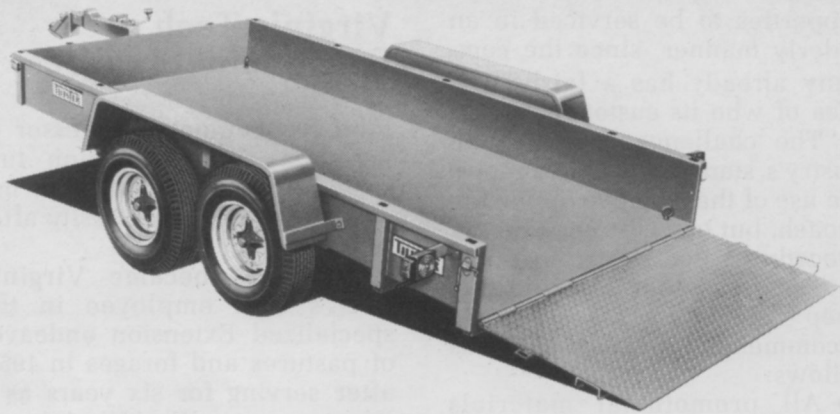
Write 904 on reader service card

### Wetting agent produces deep-rooted turfgrass

Dew Down Xtra, a biodegradable organic wetting agent, allows water to penetrate the soil faster and deeper, thus encouraging greater grass root depth and healthier turf. With deeper water penetration, water evaporates at a slower rate and the soil stays moist for a longer period of time.

This same feature is valuable when applying fungicides. Generally, Dew Down Xtra is added to the fungicide spray, providing more even distribution of the turf plants. This allows the application of a lighter spray, covering more acres without reducing the effectiveness of the fungicide.

Write 210 on free information card



### Trailer tilts for easy loading and unloading

Riding mowers and other lawn care equipment can be easily transported from site to site with a heavy-duty, low bed trailer from Magline Inc. The trailer mechanically tilts to ground level for easy loading and unloading.

An easy-to-operate screwjack at the hitch end of the trailer mechanically lowers the rear of the trailer bed to loading position, and then returns the trailer body to towing position when the load is aboard. Further, a self-adjusting tailgate ramp provides a smooth, gradual incline for easy access and fast "roll-on" loading.

Four basic models are available, ranging in load capacity from 3,000 pounds to 7,000 pounds. Two bed sizes are also offered: 70 inches wide by 10 feet long and 70 inches wide by 12 feet long. Optional equipment includes electric brakes (surge hydraulic brakes are standard), cargo restraint systems, steel rack slides, lunette eye coupler, and winch and stand.

Write 705 on reader service card

### Chelated nitrogen-iron liquid fertilizer

The Agricultural Group of Allied Chemical Corp. introduces NFE, a new chelated nitrogen-iron liquid fertilizer, to join its growing line of liquid micronutrient products which includes NZN nitrogen-zinc and NMG nitrogen-magnesium fertilizers.

According to product manager John Magliocco, NFE has definite application in addressing deficiency problems

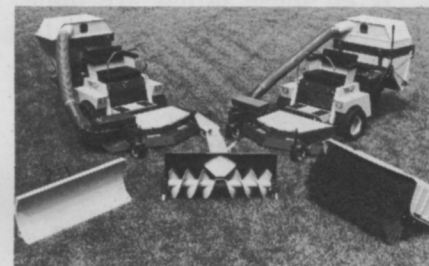


in the lawn care market, in addition to its significant cost advantages over existing iron products.

The manufacturer claims that NFE, which has an analysis of 16 percent nitrogen and four percent iron, is more effective than iron sulfate, yet less expensive than other chelated iron products which are applied directly to the soil.

The new fertilizer is available nationwide in bulk and five-gallon plastic pails to Allied distributors and dealers.

Write 905 on reader service card



### Attachment items for riding mower

A quick disconnect of the mower decks of these riding mowers manufactured by the Grasshopper Co., enables easy attachment of items such as a 48-inch dozer blade, adjustable to bi-directional angles; a snowthrower with 12-inch auger and rotating discharge chute; and a rotary broom with protective cover. The attachments fit both the 12 and 16 h.p. models having either 44-inch, 52-inch or 61-inch mower decks.

The mowers feature a vacuum grasscatcher which conveys clippings to a self-contained rear mounted collection hopper by way of a fan assembly powered by the mower deck, rather than by an additional engine. Dual hydrostatic drives power each wheel independently, providing maneuverability that saves both labor and fuel.

Write 902 on reader service card

### Bluegrass retains rich year-round color

A bluegrass for all seasons is Ram I, Lofts Pedigreed Seed's newest Kentucky bluegrass variety, which combines shade tolerance with outstanding year-round dark green color, and has consistently shown good turf performance in trials conducted at various universities.

Ram I did particularly well in

a shade trial where it scored above Glade and Nugget which are both standards for shade tolerance. It offers excellent resistance to powdery mildew, a disease which affects plants in shade situations, and has displayed good resistance to stripe smut, leaf spot, stem and leaf rust. The bluegrass retains its rich green color well into the winter, is among the first to exhibit green up in the spring, and holds its color even during summer drought stress.

Write 906 on reader service card

### Tree wrap protects new trees

General Bandages, Inc. offers Guard-Tex Tree Wrap, an easy-to-use, self-adhering tape to protect newly planted trees from freezing temperatures, sun scald



and windburn, as well as gnawing animals and insects. The wrap weathers well, becoming stiff as buckram, but it allows the tree to breathe, leaves no gummy residue and has a distinctive odor which repels rodents and gnawing animals.

Also useful in grafting operations as well as for training climbing roses, vining plants and espaliered trees and shrubs, the wrap is available in packages 30 yards long and 12 inches wide, cut into three-inch widths for tree wrapping and smaller widths for other nursery uses.

Write 901 on reader service card

### Soil meter shows soluble salts level

Advanced Marketing, Inc. introduces a meter that, in a five-second test tells the user if the soluble salts in the soil exist at a "SAFE" or "DANGER" level.

Salt build-up, if not detected, will kill any plant. The soil salts



meter is permanently calibrated and requires no batteries. Simple directions tell how to correct imbalance.

Write 900 on reader service card

### New grass seed mixture builds turf

From O. M. Scott & Sons comes ProTurf Utility Mixture, a new grass seed product designed for areas that need quick establishment, wear tolerance and grass coverage throughout the year.

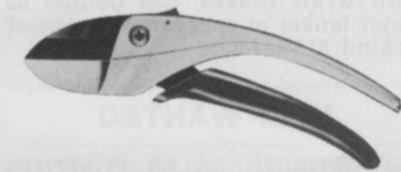
A combination of Scotts performance-proven Victa Kentucky bluegrass, their exclusive perennial ryegrass, creeping red fescue and two other perennial ryegrasses, ProTurf Utility Mixture is especially suited for general landscape and utility areas, and places where the soil must be stabilized against erosion.

All grasses are perennial and persist well under various conditions and soil types where establishing turf is normally difficult. The mixture is said to have good season-long color, with early spring green-up and late fall color retention. It is particularly well adapted to areas where cool season grasses are grown.

Write 903 on free information card

### New pruner is compact, lightweight

The Model P7T pruner from Wallace Mfg. Corp. is seven inches long and weighs only 7-1/2



ounces. It offers the cutting power of larger, heavier pruners yet is easy and far less tiresome to use. Blade is precision, hollow-ground and coated with Teflon-S for self-lubricating, smoother operation. Handles are contoured; one is chrome-plated and the other is fitted with a cushioned grip. Suggested price is \$4.99.

Write 800 on free information card

### New Gravely brochure

A new, free, four-color brochure showing a new 40-inch rotary mower attachment for Gravely two-wheel tractors is available from the manufacturer. The



**WHAT'S RED, MOWS 40" AND TRIMS ON BOTH SIDES?**

Gravely's new 40-inch rotary mower attachment for two-wheel tractors is a real time-saver. It's the only mower attachment that mows and trims on both sides of the tractor. The 40-inch rotary mower attachment is available in two models: the 40-inch rotary mower attachment with 16 1/4-inch notched rollers, and the 40-inch rotary mower attachment with 16 1/2-inch crowfoot rollers. The 40-inch rotary mower attachment with 16 1/4-inch notched rollers is available for \$1,299. The 40-inch rotary mower attachment with 16 1/2-inch crowfoot rollers is available for \$1,499. For more information, write to Gravely, P.O. Box 100, Troy, Ohio 45326.

mower attachment has two staggered blades to he-p prevent streaking on sharp turns and trims on both sides □a024

Write 801 on free information card

### Liquid N fertilizer offers 83.3% slow-, 16.7% fast-release

Nitro-26 from C.P. Chemical Co., Inc. is a specially formulated short-chain ureaformaldehyde. It is composed of methylene ureas which provide precise release of nitrogen for turf growth; 16.7 percent fast-release which provides immediate results in turf growth and color. It is available in both a concentrated form and diluted form for immediate use. It is totally miscible in water when in concentrated form so that completed mixing can be achieved and adjusted according to soil and seasonal requirements. There is approximately three pounds of available nitrogen per gallon, the company said.

The analysis is as follows: 26 percent total nitrogen, 83.3 percent slow-release nitrogen, 16.7 percent fast-release nitrogen.

Specially compounded products can be made upon request so that a balanced formulation of N-P-K can be provided. Materials are available in both bulk and drummed quantities. This is to assist the lawn care businessman in providing convenient quantities of materials depending upon needs.

Clare H. Reinbergen of C.P. Chemical Co., Inc. told LAWN CARE INDUSTRY: "It has taken us a little longer than anticipated to complete the research and development on our liquid fertilizer. We have had excellent results and have now arrived at a stable material with the necessary characteristics needed for a slow-release liquid fertilizer.

"The liquid fertilizer market is new to us, however, our technology for resin manufacturing extends over a period of eight years and is geared specifically to the field of ureaformaldehyde resins.

"We are extremely excited in entering into this market and feel that our prior experience with resin materials shall provide good quality control and consistent material for the lawn care industry. We do expect in the near future to also provide pumps and spray equipment especially designed for the application of Nitro-26.

Write 802 on free information card

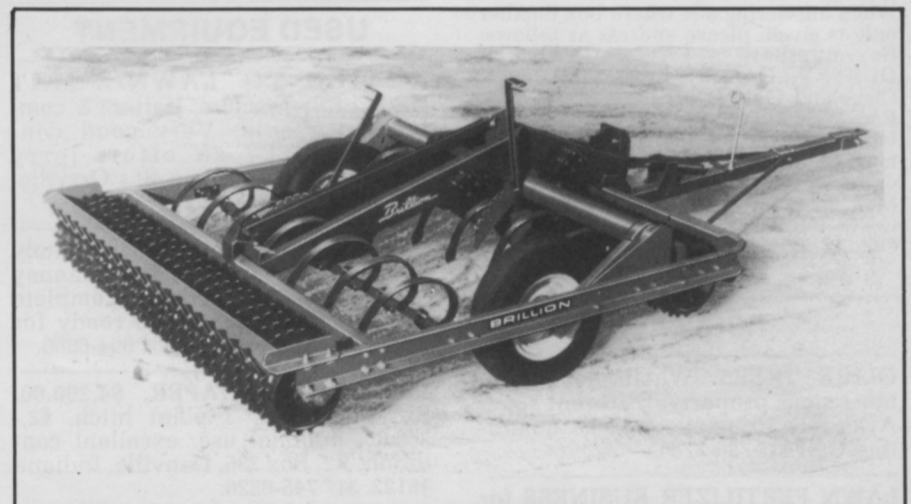
### High-limb chain saw

Easily cut down branches and limbs up to 30 feet and higher while standing safely on the ground. Chain blade with two-way cutting action is attached to two 25-foot control lines. Simply



throw the safety weight over the tree branch. The blade automatically flips right side up and is ready to begin cutting. Pull alternately on each control line; the saw will undercut bark to avoid "peel-back." Introduced by Green Mountain Products, Inc.

Write 803 on free information card



### Mulcher crushes, harrows and conditions soil

"Pulva-Mulcher," from Brillion Iron Works, crushes, harrows and conditions soil in one pass, producing a clodfree seedbed which is firm, but not compacted. Ideal for grounds maintenance personnel, the 88-inch unit is available with 16 1/4-inch notched rollers (shown above) that form pockets to trap moisture, or 16 1/2-inch crowfoot rollers that leave a slightly more open seedbed.

Features include rugged roller axles made of four-inch pipe, separate depth lever controls for each of the two rows of spring teeth, single transport wheels with 15-inch rims (tires not included) and an exclusive truss frame which adds extra strength.

A number of options are also available including land levelers to knock down large clods and level off rough spots, replaceable tooth points for spring teeth, a front scraper kit and hydraulic tooth control that converts manually operated spring teeth to hydraulic control.

Write 701 on free information card

# BEHIND THIS ISSUE



Earley, Milgate and Moreland

As the lawn care industry as a whole grows, so does the staff of **LAWN CARE INDUSTRY**.

Our newest addition is Kathy Milgate (she's the one in the middle in the picture above, in case you didn't already figure that out). She comes to us from Ohio University, where she majored in magazine journalism. You'll note her byline on two

news stories in this issue, both beginning on the front page.

First, she took a look at the potential problems the lawn care industry could face in the future if groups like the Better Business Bureau and state regulatory agencies decide to get involved in the "negative option" method lawn care businessmen employ to retain customers.

Second, she interviewed a number of lawn care businessmen across the country on how they utilized early-season prepayment customer discounts to get their cash flow going and perhaps save a trip to the bank for money for spring advertising programs and needed equipment purchases.

Next month she'll be handling a story for our monthly "Inside the Industry" feature with a working title at this point of "What To Do When Slow Pay Becomes No Pay."

She joins assistant editor Dan Moreland on the staff of **LAWN CARE INDUSTRY**. Dan has spoken at numerous industry events, including the Virginia Turfgrass Conference and the Pennsylvania Turfgrass Conference, both held earlier this year. In addition, he has also become our in-house expert on mowing/maintenance, lawn care franchising and lawn care advertising. He also handles most of the layouts for the magazine each month.

With the addition of Kathy to the editorial staff, my duties have changed a bit too. I still will be handling chief editor duties, but I'm also now in charge of marketing and sales for the magazine for the entire country, with the exception of the Northwest, where Bob Mierow will

continue to service accounts out of his Seattle office.

I'll be working even more closely with marketing staffs of most major manufacturers and suppliers of equipment, chemicals and other materials to the lawn care industry.

Speaking of equipment and chemicals, our annual "Profile of the Lawn Care Industry" — which charts annual purchasing decisions of lawn care businessmen along with other information — is having the finishing touches put on it by our market research manager Clarence Arnold, and should be ready by the time you have this magazine in your hands.

One last thing I have to mention. Mark your calendars now to participate in the first annual conference and trade show sponsored by the Professional Lawn Care Association of America Nov. 12-14 in Louisville, Ky.

Dan, Kathy and I will be there, and we look forward to meeting you.

## CLASSIFIED

**CLASSIFIED CLOSING DATES:**  
August issue closes July 10  
September issue closes August 14  
October issue closes September 15  
November issue closes October 13  
December issue closes November 6

When answering ads where box number only is given, please address as follows: Box number, % **LAWN CARE INDUSTRY**, Dorothy Lowe, Box 6951, Cleveland, Ohio 44101.  
Rates: 35¢ a word for line ads. Box numbers add \$1 for mailing. All classified ads must be accompanied by cash or money order covering full payment.  
Mail ad copy to Dorothy Lowe, **LAWN CARE INDUSTRY**, Box 6951, Cleveland, Ohio 44101.

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## ADVERTISERS INDEX

Ashland Chemical .....	7
Dow Chemical .....	2,3
Hypro .....	12
Lawn Care Industry .....	6,10, 16,18,19,20
Lofts Pedigreed Seed, Inc. ....	24
Pickseed .....	11
PLCAA .....	17
Rainbird .....	16
S.P.I.C. ....	8,9
Tuco .....	23
Tuflex .....	10
Turf Seed .....	4
Velsicol .....	13

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