#### ChemLawn, ABC settle out of court

The national television network ABC has settled out of court in the '20/20' lawsuit brought against it last summer by Chem-Lawn Corp., Columbus, Ohio.

In the suit, ChemLawn claimed a misrepresentation occurred during an early August airing of the network's "20/20" newsmagazine format television show, when a company truck was shown early in the telecast as a lead-in to a report on 2,4,5-T. ChemLawn protested the "inference" that the herbicide was being sprayed on lawns by the company.

The federal Environmental Protection Agency has said that 2,4,5-T has the potential to cause birth defects in humans. The herbicide has been banned from home lawn use since the early 1970's, and ChemLawn does not use the chemical in its lawn care

ChemLawn's suit did not specify a sum, but ABC has agreed to give \$20,000 to the Pharmacology College of Ohio State University to study the effect of pesticides on humans.

"Just the fact that ABC was willing to settle is significant, and a moral victory for the lawn care industry," a ChemLawn spokesman told LAWN CARE INDUSTRY.

LCI SURVEY

## Industry association is formed

The lawn care industry got a shot in the arm last month when 42 persons representing 25 lawn care companies across the country met at a Holiday Inn in Fort Mitchell, Kentucky and took the first steps towards organizing a national lawn care association.

The companies in attendance collectively kicked in a total of \$15,000 seed money to get the association off the ground.

Jerry Faulring, of Hydro Lawn, Gaithersburg, Md., was unanimously elected president by those lawn care businessmen in attendance. Doug Baker, of Leisure Lawn, Inc., West Carrollton, Ohio was elected vice president. John Latting, of Lawn Groomer, Normal, Ill. was elected secretary-treasurer.

Elected to the board of directors were: Don Burton, Lawn Medic, Inc., Bergen, N.Y.: Larry Brandt, Spray-A-Lawn, Cincinnati, Ohio; Rick Eldred, A-Permo-Green Lawns, Inc., Austin, Texas; Dave Murphy, Green Valley Co., Shawnee Mission, Kan.; Dr. Paul Schnare, Atkins Lawn Pros, Columbia, Mo.; Rick White, Village Green Lawn Spraying, West Chicago, Ill. Also: Ron Zwiebel, Chem-

Care Lawn Service of Alabama,

Inc., Birmingham, Ala.; Gordon Ober, Davey Lawnscape Service, Kent, Ohio; J. Martin Erbaugh, Lawnmark Associates, Peninsula, Ohio; and Steve Derrick, Lawn Groomer, Normal, Ill.

All officers and directors will serve on a temporary basis and act as a steering committee to lead the association through its formative stages.

Others in attendance at the meeting held in the Cincinnati metropolitan area included: Paul Hairston, Vitalawn, Inc., Jeffersontown, Ky.; Pat Lore and Stan Weber, Lawn-A-Mat Chemical & Equipment Corp., Westbury, N.Y.; Jerry Amstutz, Spray-A-Lawn, Inc., Orrville, Ohio; Ronald Baker, Doug Halterman and Harry Sloan, all of Leisure Lawn, West Carrollton, Ohio; Bob Kautzman, Lawnco, Inc., Brooklyn Heights,

Also: Howard Evers and John Hayes, Tru-Green Corp., East Lansing, Mich.; Ronald Collins and Joe O'Donnell, R.W. Collins, Inc., Satellite Beach, Fla.; Tom Brune, Atwood Lawn Spray, Inc., Sterling Heights, Mich.; Fred Rowley, Rollins Lawn Care, Atlanta, Ga.; John L. Cruse, Jr., Easy Lawn Co., Kettering, Ohio; Jim Duncan, A-Perm-o-Green

Serving lawn maintenance and chemical lawn care professionals.

## Four of five firms fertilize dry, two of five liquid, many do both

Almost 80 percent of lawn care firms use dry application fertilization in their lawn care programs, and 44 percent use liquid application fertilization, according to a recent survey conducted by LAWN CARE INDUSTRY.

In an earlier survey conducted by the magazine, 35.9 percent of the respondents said that they used both dry and liquid application fertilizing in their pro-

Also in the survey, conducted late last year, 72 percent of the respondents said they offered disease control as part of their lawn care program. In a 1977 survey conducted by the magazine, 65.5 percent of the respondents said they offered disease control.

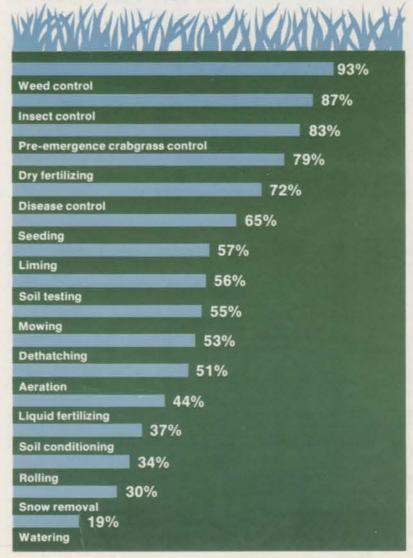
In last year's survey, 56 percent of the respondents said they offered soil testing as part of their program. In the yearearlier survey, 48.3 percent of the respondents said they offered soil testing.

Other lawn care services and percentages of survey respondents who offer them include: aeration, 51 percent; seeding 65 percent; dethatching, 53 percent; rolling, 34 percent; mowing, 55 percent; watering, 19 percent; liming, 57 percent; snow

removal, 30 percent; weed control, 93 percent; insect control, 87 percent; pre-emergence crabgrass control, 83 percent; soil conditioning, 37 percent.

According to LAWN CARE INDUSTRY market research manager, Clarence Arnold, the survey is based upon a 24.4 percent response to 952 questionnaires mailed last year.

Which services do you perform?



## **QUICK STARTS** Pulse reports chart March buying .....page 2 Turf disease symposium draws 150 ......page 6 Chipco 26019 registered for lawns ......page 6 McDonough's Malizia elected OPEI president ......page 9 The ins and outs of irrigation ......page 18 Roundup, Pennfine team up ...... page 22 NEWSMAKERS ..... MEETING DATES MONEYWISE ......19

EVST LANSING NOT SCORE SUB PLOS SOUL SCI BLDG NICHIGAN STATE UNIV KIEP2633222-NS-

42884

H0-

industry in Pittsburgh, continuing series of inhe lawn care business ty, potential lawn care there and how they go

### LCI survey charts March purchases

Respondents to a recent survey conducted by LAWN CARE INDUSTRY said they purchased \$3,674 worth of turf fertilizer in the month of March.

Results for this second LCI "pulse report" series are based upon figures submitted anonymously by 71 respondents. This represents a 29 percent response for the 245 questionnaires mailed to readers of LAWN CARE INDUSTRY, according to LCI market research manager Clarence Arnold.

For the survey, 61 respondents said they purchased \$224,-147 worth of turf fertilizer, which produced the \$3,674 average purchase figure.

Twenty-three respondents said they purchased \$7,526 worth of tree fertilizer, for an average purchase of \$327. For preemergence herbicides, 42 respondents said they purchased \$74,905 worth, for an average purchase of \$1,783. For post-emergence herbicides, 31 respondents said they purchased \$17,963 worth, for an average of

For fungicides, 21 respondents said they purchased \$9,017 worth, for an average purchase of \$429. For turf insecticides, 29 respondents said they purchased \$42,813 worth, for an average purchase of \$1,476. For tree insecticides, 31 respondents said they purchased \$16,827 worth, for an average purchase

For turf seed, 38 respondents said they purchased \$161,809 worth, for an average purchase of \$4,258 (however, one respondent said he purchased \$100,000 worth himself). For sod, 22 respondents said they purchased \$39,760 worth, for an average purchase of \$1,807. For trees, 28 respondents said they purchased \$163,158 worth, for an average purchase of \$5,827. For ornamentals, 34 respondents said they purchased \$267,173 worth, for an average purchase of \$7,-858. For soil amendments, 20 respondents said they purchased \$25,489 worth, for an average purchase of \$1,274.

For irrigation pumps, six respondents said they purchased \$20,235 worth, for an average purchase of \$3,373. For sprinklers, 11 respondents said they purchased \$7,739 worth, for an average purchase of \$704. For irrigation pipe, eight respondents said they purchased \$10,-437 worth, for an average purchase of \$1,305. For irrigation controls, seven respondents said they purchased \$4,828 worth, for an average purchase of \$690.

## LAWN CARE INDUSTRY

Editor: ROBERT EARLEY Associate Editor: BRUCE SHANK
Technical Editor: RON MORRIS
Assistant Editor: DAN MORELAND
Graphic Director: RAYMOND GIBSON
Publishing Director: RICHARD J. W. FOSTER
Executive Editor: DAVID J. SLAYBAUGH
Research Services: CLARENCE ARNOLD
Advertising Production: CHRIS SIMKO Advertising Production: CHRIS SIMKO

MARKETING/SALES
Circulation & List Rental: TERRI HUTSENPILLER (216) 651-5500
Marketing & Merchandising Services: FRAN FRANZAK (216) 651-5500
New York Office: BRIAN HARRIS (212) 421-1350
757 Third Avenue, New York, N.Y. 10017
Midwest Office: JOE GUARISE, JEFF DREAZEN (312) 236-9425
333 N. Michigan Ave., Chicago, Illinois 60601
Southern Office: DICK GORE (404) 233-1817
3091 Maple Dr., Atlanta, Ga. 30305
Northwest Office: BOB MIEROW (206) 363-2864
1333 N.W. Norcross, Seattle, WA 98177
Classified: DOROTHY LOWE (216) 651-5500
9800 Detroit Ave., Cleveland, Ohio 44102 MARKETING/SALES 9800 Detroit Ave., Cleveland, Ohio 44102

CORPORATE OFFICERS
Chairman: JAMES MILHOLLAND JR.
President: HUGH CHRONISTER
Senior Vice President: BERNIE KRZYS
Senior Vice President: DAYTON MATLICK
Vice President: CHARLES QUINDLEN



LAWN CARE INDUSTRY is published every month by The Harvest Publishing Company, a subsidiary of Harcourt Brace Jovanovich, Inc. at 9800 Detroit Ave., Cleveland, Ohio 44102 (216) 651-5500. Copyright 1979 by The Harvest Publishing Company. All rights reserved. The contents of this publication may not be reproduced either in whole or in part without consent of copyright owner. Controlled circulation postage paid at Cleveland, Ohio.

SUBSCRIPTIONS: to Lawn Care Industry are solicited only from owners, managers, operators, buyers, merchandisers, agronomists, technicians, dealers, distributors and manufacturers of products associated with the lawn care and maintenance business. Position and company connection must be indicated on subscription orders. Publisher reserves the right to approve all subscription requests. Single copy cost \$1.00 for current issue. All back issues \$1.25 each. Foreign \$1.25. Subscription rates: \$10.00 one year, \$18.00 two years, \$23.00 three years. Group and foreign air mail rates available on request.

SUBSCRIBERS: Send change-of-address notices, correspondence regarding subscription service to Fulfillment Manager, Lawn Care Industry, 9800 Detroit Ave., Cleveland, Ohio 44102. Change of Address notices should be sent promptly, provide old as well as new address, attach address label from recent issue. Please allow one month for change of address to become effective.

POSTMASTER: Please send form 3579 to Fulfillment Manager, Lawn Care Industry, 9800 Detroit Ave., Cleveland, Ohio 44102.

The Harvest Publishing Company, a subsidiary of Harcourt Brace Jovanovich, Inc., publishers of WEEDS TREES & TURF, PEST CONTROL, NPCA Extra, GOLF BUSINESS.

## MEMOS

What is the lawn care "saturation point?" When many lawn care businessmen operating in major metropolitan areas look over the single-family home statistics in their area, they probably tend to drool over all of the potential business just sitting there waiting there to be picked up. For example, an area with a population of one million might have 250,000 single-family homes. With some quick figuring, a lawn care businessman might determine that between 15,000 and 25,000 homes are already receiving a lawn care service, so that means well over 200,000 homes are still available for his new business. Right? Probably not.

Stastics for the industry show that perhaps 10 percent of all single-family homes are now receiving some kind of lawn care. In very mature markets, such as Cleveland and Cincinnati, lawn care businessmen estimate that perhaps 25 to 30 percent of the homes are on lawn care company customer

But at what point will there be very little more potential for new customers in any given area? Will it be 30 percent, as seems to be the case in some areas? Or 40 percent? Or 60 percent? Just what is the "saturation point" for lawn care?

The answer to that question has kept many lawn care

businessmen working overtime in planning meetings for their companies, and has kept others arguing into the night over a

One marketing manager for a major lawn care company hoping to expand heavily into the Chicago lawn care market recently said that he feels that what he calls the "cut-off" point for new potential customers will come when between 20 and 40 percent of single-family homeowners in any area are receiving lawn care, probably closer to the 40 percent figure, but depending on the area itself. He says that the top cut-off point might be 50 percent, but doubts "that it will go that high, unless something we can't foresee happens to the industry.'

Single-family home starts down: Starts of single-family homes declined six percent in May, to a 1,195,000-unit annual rate from April's revised 1,273,000-unit rate. The federal Commerce Department said work was begun on privately owned housing in May (including apartments and condominiums) at a seasonably adjusted annual rate of 1,827,000 units, up five percent from April's 1,273,000-unit rate, largely due to a substantial jump in apartment building starts. The total May rate was 10 percent below the year-earlier pace of 2,037,000 units.

Sears still looking: As was mentioned in a front-page article in LAWN CARE INDUSTRY last month, although Sears had an aborted entry into the lawn care business in Chicago, the company's concessions department is still looking to expand its lawn care concessions to other cities. They already have moved into the Cleveland market, and have others in mind, although nothing is definite as of yet. Industry insiders say a move into the Oklahoma City market has been mentioned.

The 2,4,5-T/silvex ban: The ban by the federal Environmental Protection Agency (EPA) of 2,4,5-T/silvex remains in effect. The display, use or sale of any product containing 2,4,5-T or silvex is illegal. The potential fine that can be imposed for violation of the ban ranges from \$5,000 to \$25,000. Six garden supply outlets in the Kansas City area, including two nurseries, were fined \$7,800 for violation of the ban.

A federal district court denied a request by Dow Chemical Co., Midland, Mich. and other pesticide producers to lift the EPA's emergency suspension of the herbicides. It is interesting to note that the judge who ruled in favor of the emergency suspensions did so very reluctantly, saying:

"... The court will frankly concede that it arrives at this decision with great reluctance and would not in its judgment have ordered the emergency suspension on the basis of the information before the EPA. Nevertheless, EPA, has been vested by Congress with broad powers in this area, and the Court is not empowered to substitute its judgment for that of

The final battle on this situation will probably take place during the cancellation hearings with a final decision at least two years away.

Missouri lawn care industry: Dr. John H. Dunn, professor of horticulture at the University of Missouri, is gathering background information for a complete survey of the turf industry in that state. His initial estimates peg lawn care industry revenues in his state somewhere between \$20 million and \$75 million annually.



## Short story of great beauty.

This little bluegrass came to market from Sweden and became a best seller. Fylking Kentucky bluegrass forms a luxurious, low-growing, fine-textured thick turf. It establishes fast, develops a greater density of rhizomes and roots. Fylking is tough, with improved resistance to many diseases, and better tolerates drought, heat, cold, smog and foot traffic. Greens up early, stays green through summer and late into fall. Great as the backbone bargain for lawn turf seed mixes.

Fylking performs well when cut low (even low as one-half inch).

Fylking Kentucky bluegrass costs less than most other elite blues. In short, insist that this best seller be included in every lawn seed mix. Fylking Kentucky bluegrass.



Another fine, quality-controlled product of Jacklin Seed Company.

## **NEWSMAKERS**

John Williams is president of Dura-Green Corp., Greenwood, Ind., a suburb of Indianapolis. He has been in business six years, expanding from 100 customers the first year, to the point where the company now has six 1,000-gallon spray trucks on the road.

Neil Dunkle is president of Dad's Landscaping, Jersey Shore, Pa. The company is basically doing commercial mowing at present, but will be expanding into full-service lawn care next season.

Robert Kobe is owner of **Kobe Lawn and Tree Care**, Joliet, Ill., a mowing maintenance lawn care firm that also applies fertilizers and pesticides through granular application.

Edward Suttor is sales manager for Desco Chemical, Inc., Nappanee, Ind., a supplier to the lawn care industry. The company also has branches in Hartford, Mich., Indianapolis, and Findlay, Ohio.

Harvey Hamill is owner of H & S Lawn Service, Billings, Mont. The company is an independent mowing/maintenance company, and applies fertilizers and pesticides in both liquid and granular form

San Diego Toro in California has been named a full-line distributor for Echo, Inc. Company principals are president Paul Hunter; general manager Rich Dunn; and office manager Hector Meza.

Jim Carso, who runs an agricultural fertilizer supply outlet in Camargo, Illinois, last has started **Super Lawns**, also based in Camargo. His company services the Champaign, Ill. market with a liquid application program.

Bill Cragen is co-owner of Cragen Lawn Care, Greenwood, Ind.

R. H. Davies is agronomist for Livonia Lawn Spraying, Livonia, Mich.

Eddie Anderson is owner/manager of Lawn Care & Co., San Pablo, Calif.

Gary C. Beierling is president of G. B. Landscape Maintenance Co., Farmingdale, N.Y.

Anthony Gaglione is president of Anthony Gaglione Landscaping, Farmingdale, N.Y., a landscape company involved in mowing/maintenance operations.

Buford Bryant, of B & B Turfgrass Farms, Oxford, Miss., recently started a lawn care business in that city.

Calvin H. Gibbs is owner of Pro Chem, Clyde, Ohio.

Robert P. Ryan is regional director of Lawn Doctor, Inc., based in Mount Sinai, N.Y. The parent company is based in Matawan, N.J.

D. Jerald Nielsen is landscape architect for Nielsen, Nielsen & Associates, Kaysville, Utah.

Al Weidenfeiler is president of **Phoenix Landscape**, Inc., Jupiter, Fla.

Lowell R. Wiley is owner of P & W Landscaping and Maintenance, Biloxi, Miss. The company tripled its business this year.

Dixie Berg has joined The Toro Co., Minneapolis, as manager of employe communications, a new position.

Anthony R. Quatrone is owner of Antone Landscape Co., Union, N.J.

R. M. Finocchiaro is owner of Finocchio Landscape Co., Newark, Del.

Nan Wild and Sharon Dewey are owners of Nan's Landscaping Service, Paradise Valley, Ariz.

William A. Massey is owner of Lawn Care Co., Birmingham, Ala., a complete maintenance firm. The company offers chemical lawn and shrubbery service, cutting, edging, trimming, annual contracts, pruning, weeding, fertilizing, sodding, seeding and sprinkler installation and maintenance.

Carl Clifton is owner of

Lawnscape Systems Pomona, Calif. The business was expanded from Clifton Pool Service.

Jim Woodcock is owner of North Suburban Lawn, Arlington Heights, Ill. He serves 52 individual cities in the northwest suburbs of Chicago, and has nine trucks on the road.

Adam Yakubowski is owner of Yakubowski Construction in McAdoo, Pa. The company offers sodding and seeding.

George J. Esty is director of commercial sales for **Tech-Turf**, **Inc.**, Mahwah, N.J.

Vince Morrison is owner of Morrison Landscaping & Nursery, Warrenton, Ore.

Bill Bergstrom is president of Seattle Garden Service, Seattle, Wash

W. H. Burnett is owner of Burnett's Lawn Service, Columbus, Ohio.

Kenneth Dodge is owner of L & K Lawn Care Service, Richmond, Ill.

David L. Smith, Jr. is owner of Dave Smith Lawn Care & Landscaping, McHenry, Ill. The company offers both liquid and granular chemical lawn care and also mowing and maintenance.

James D. Mello is manager/turf specialist for Nice & Green, Downers Grove, Ill., a division of Keller-Heartt Co., Inc. He is a graduate of Purdue University.

William Murphy is owner of Murphy Lawn Care, Lafayette, Ind., a new division of Murphy Oil Co.

Roy Good is assistant manager of the ChemLawn Corp. branch in Gaithersburg, Md. Bill Rosser is assistant manager of the company's branch is Upper Marlboro, Md. Mike Tucker is assistant manager of the company's Alexandria, Va. branch. All three branches are located in the Washington, D.C. market area. ChemLawn is based in Columbus, Ohio.

## The 2-Step Turf Renewal Plan with Roundup and Pennfine.

## One. Two.



## Spray Roundup® on the turf area to be renewed.

With just one application of Roundup® herbicide by Monsanto, you can control or destroy most unwanted vegetation. Including stubborn intruders like annual bluegrass, bermudagrass, quackgrass, johnsongrass, tall fescue, and kikuyu grass.

In a matter of days, Roundup circulates throughout these weeds. Even into the below-ground roots, destroying the entire plant. Yet Roundup has no residual soil activity. That means there is no injury to new seedings planted after application.



#### Spread Pennfine Perennial Ryegrass seed over the area treated with Roundup.

After applying Roundup, seed with fast-growing, fine-leafed Pennfine Perennial Ryegrass. Pennfine was developed by Dr. Joe Duich at Pennsylvania State University. Pennfine has been proven to germinate quicker, grow denser, and resist disease better than traditional ryegrasses. And it penetrates compact soil, sending its roots to depths of 12 to 18 inches. These qualities make Pennfine an excellent choice for turf renewal and help to explain why it's used by turf professionals from coast to coast. In a short time, you'll see the proof for yourself.

ALWAYS READ AND FOLLOW THE LABEL FOR ROUNDUP.\*
ROUNDUP\*IS A REGISTERED TRADEMARK OF MONSANTO CO.,
ST. LOUIS, MO.
MONSANTO COMPANY 1979

PENNFINE PERENNIAL RYEGRASS HAS BEEN ACCORDED U.S. PLANT VARIETY PROTECTION CERTIFICATE NO. 7200019.

Rick Sennet and Craig Sills are technicians for the Tru-Green Corp. branch in Rockville, Md., according to company regional manager Mike Blust. Tru-Green is based in East Lansing, Mich.

The Outdoor Power Equipment Division of FMC Corp., Port Washington, Wis. has named Foote Cone and Belding, Chicago, as its new advertising agency, according to division manager Robert E. Bergen.

Cecil U. Moore III has been named assistant branch manager for **Hydro Lawn Spray** in Salem, Va., according to company president Peter H. Connelly, Also, Jeff Conner has been named lawn technician.

John M. Rademacher, a former senior official of the federal Environmental Protection Agency, has been named vice president of environmental, health and regulatory affairs for Velsicol Chemical Corp., Chicago, according to William

Howard Beasley III, vice chairman of the board.

Patrick C. Elliot and C. Ravmond Ragan have been named district sales managers for Echo, Inc., Northbrook, Ill., in an announcement made by John B. Kelly, distribution sales manager. Elliot has been named district sales manager for the central part of the country and Ragan has been named the new district sales manager for the East. Elliot had previously worked for Homelite Industries and also with O. M. Scott & Sons, Marysville, Ohio. Ragan was most recently with Roper Corp.

Earl R. Sorensen, vice president of H. D. Hudson Mfg. Co., Chicago, has assumed additional operational responsibilities as a company director and public affairs manager.

Barbara L. Eckert has been appointed director of human resources for the Jacobsen Div. Division of Textron, Inc., Racine, Wis.



Davey's Joy, Moir, Marshall and Ober (left to right).

Sales of \$1 million were recorded by the Akron/Canton/Hudson, Ohio district of Davey Lawnscape Service, it was announced by John W. Joy, president of Davey Tree Expert Co., Kent, Ohio. The Akron/Canton/Hudson district, which serves 8,000 customers, is one of

10 district offices maintained by the firm. With a work force of 30, it is the company's largest district. The district's sales are expected to reach \$1.2 million this year. Among those receiving achievement awards were district manager Alex Moir and sales and service manager Steven A. Marshall. Sales volume for the entire Davey Lawnscape division, which employs 135, totaled more than \$3 million last year and anticipated sales are \$5 million for 1979. The company maintains two offices in Cleveland and Detroit, as well as offices in Milwaukee, Buffalo, Rochester, Pittsburgh and Philadelphia.

Porter Brothers, Inc., Shelby, NC. N.C.-based distributor of turf care products and supplies, has announced the 1979 winners of the annual W. Robert Porter scholarship awards. The awards were presented by Joseph M. Porter, president of the company. Deborah Jean Lackey received a \$500 scholarship to the University of North Carolina. Hubert Scott Black received a \$500 scholarship to Wake Forest University.

Philip Gamble is owner of River Oaks Lawn Service, Houston.

Johns-Manville's Buckner Irrigation Systems has named John J. Ramirez sales representative for the southern California area, where he will sell the company's KCS computerized controller and its full line of brass and plastic sprinklers and accessories.

Bob Cline is district manager and Jim Able is sales and service respresentative for the East Cleveland district office of Davey Lawnscape Service, based in Kent, Ohio. Staff members are Paul Prospal, Cindy Perla, Joe Terry, Paul Hecky, Ron Talley, Martha Nicolls, Gwen Gressard and Ron Wadian.

Bill McDonnell, marketing manager for Root-Lowell Corp., Lowell, Mich., recently received an award from Discount Store News magazine for his company's excellence in dealer merchandising ads. The company markets sprayers for professional applications.

Joseph L. Nelson has been named marketing manager of Jacobsen Division of Textron, Inc., Racine, Wis., according to vice president of marketing Richard J. Dittoe.

Thomas V. Bruns has been appointed president of Jacobsen Divison of Textron, Inc., Racine, Wis., according to Egil G. Rudd, Textron Group vice president.

## Free\*



\*It will have cost you nothing to see how dramatically the 2-Step Turf Renewal Plan can improve your turf.

Our free kit contains enough
Roundup and Pennfine to renew about
200 square feet of turf. And when
you see the results, you can judge
for yourself just how well this
new concept in turf renewal
works. Roundup and Pennfine
—the 2-Step Turf
Renewal Plan.

#### Put Our Free Kit to the Test.

Find out for yourself how effectively these two superior products work together in a simple turf renewal program. All it will cost you is the price of a stamp.

State

Name (Please print)

Company or Institution

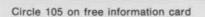
Address

City

Send this coupon to: Turf Renewal Plan, Box 923, Minneapolis, MN 55440

Zip

Note: this offer is restricted to turf professionals—those whose livelihood depends on the maintenance of quality turf., Limit one per company or course. Offer void where prohibited by law.



Speakers at the recent sym-posium on turfgrass diseases held in posium on turfgrass diseases held in Columbus, Ohio. Pictured from left to right: P.O. Larsen, Ohio State University; J.L. Saladini, DuPont Co.; Noel Jackson, University of Rhode Island; T.E. Freeman, University of Florida; Bobby G. Joyner, Plant Diagnostic Labs, ChemLawn Corp., Columbus, Ohio; L.L. Burpee, Bermuda, Dept. of Agriculture and Bermuda Dept. of Agriculture and Fisheries; J.M. Fenstermacher, ChemLawn Corp.; A.K. Hagan, Ohio State University; Richard W. Smiley, Cornell University; J.D. Smith,

Canada Dept. of Agriculture; Houston B. Couch, Virginia Poly-Houston B. Couch, Virginia Polytechnic Institute and State University; Joseph M. Vargas, Michigan State University. Speakers not pictured include: A.F. Schmitthenner, Ohio Agriculturaal Research and Development Center; R.M. Riedel, Ohio State University; Philip F. Colbaugh, Texas A & M University; G.F. Hodges, Iowa State University; R.M. Morrison, Northrup, King & Co.; K. Kmetz, DuPont Co.; and Herbert Cole, Pennsylvania State University.

#### ChemLawn/OSU symposium draws 150

More than 150 persons attended the Symposium on Turfgrass Diseases May 15-17 in Columbus, Ohio. The event was sponsored by ChemLawn Corp., Columbus, Ohio, Ohio State University and the Ohio Agricultural Research and Development Center.

Those in attendance represented turfgrass pathologists and agronomists from universities. lawn care companies, chemical companies and other segments of the turfgrass industry.

Major disease problems of turfgrasses were discussed by 20 leading experts. Time was devoted to discussion periods in which an exchange of ideas between those attending freely took place. Organizers said that these ideas should prove invaluable in developing new research areas

in managing turfgrass disease problems.

The morning of the last day was devoted to a contributed paper session. That afternoon was spent touring turfgrass research facilities at ChemLawn and Ohio State University.

The Symposium proceedings will be published and should be a valuable update on turfgrass disease problems. Anyone interested in purchasing the proceedings should contact the Symposium organizers: Dr. Phillip O. Larsen, Ohio State University, at 614-422-6987; or Dr. Bobby G. Joyner, ChemLawn Corp., at 614-

The organizers are planning a Turfgrass Insect Symposium to be held Oct. 14-16, 1980. Those seeking additional information or wishing to contribute ideas for this Symposium should contact Dr. Joyner.

**FUNGICIDES** 

#### Chipco 26019 now registered for lawns

Rhone-Poulenc Inc.'s Agricultural Division, Monmouth, Junction, N.J. has announced that its Chipco 26019 turf fungicide is now registered for disease control on home lawns.

"The lawn care industry should find this new registration extremely helpful for increasing business," a company spokes-man said, "because the long 14-21 day spray interval makes it profitable to offer a fungicide program for home lawn care.'

The fungicide can be applied in a preventive program or curative spray to control these spring and summer diseases: dollar spot, including benomylresistant strains; Helminthosporium leaf spot and melting out and brown patch. It has also just been registered for these winter diseases: pink snow mold control in the Pacific Northwest (west of the Cascade Mountains); gray snow mold and pink snow mold suppression in areas outside the Pacific Northwest.

Application rates of formulated material are  $1\frac{1}{2}$  to 2 ounces for spring and summer diseases and 2 to 4 ounces for winter diseases.

In addition to home lawns, the fungicide is registered for use on golf courses, sod farms and institutional lawns.

It was originally thought that EPA registration would not come until next year, Rhone-Poulenc officials said when the product was introduced in February. At that time, Jack Davies, general manager of the company's Agricultural Division, said that spraying every seven days has become the practice with currently available fungicides. The longer spray interval should make the fungicide more attractive to lawn care companies, Davies said.

For further information, contact: Rhone-Poulenc, Inc., Agricultural Division, P.O. Box 125. Monmouth Junction, N.J.

## Five new compact diesels!

## It's a new kind of Ford! 13 to 30-hp. Big-tractor features include optional 4-wheel drive

Take a look at something new and different from Ford. Five compact new diesel tractors, each offered with optional 4-wheel drive. They're built like the big ones, but sized from 13 to 30-horsepower.

Look at the big-tractor features! The efficiency and stamina of a liquidcooled diesel engine . . . an all-gear power train with 10 to 12 forward

speeds to let you choose the right speed for most any job . . . built-in and lower implements at a finger's touch . . . 540 rpm PTO . . . and diff-lock. Optional front-wheel drive gives you four-wheel traction.

There's a full line of implements and attachments to match the power of the model you choose.

The 1000 Series Fords . . . five small and versatile tractors with a combihydraulics and three-point hitch to lift nation of size, strength and power that makes them the "just right" choice for a wide variety of jobs.

Come in and see the compact Ford diesels . . . a new kind of Ford, at a compact price.

It's a new kind of Ford! FORD TRACTORS



## New Controlled-Release, Non-Burning Liquid Nitrogen for Lawn Applications.



## LIQUID FERTILIZER

If you'd like to find a liquid nitrogen source that offers convenience in handling and blending, as well as improved performance over dry products, the new SLO-RELEASE products from Ashland Chemical could be your answer.

SloRejease

25 is a clear liquid 26% organic nitrogen solution with excellent nonburning characteristics.

**SloRejease** 

25 lets you: Apply any time during the growing season and be assured of non-burning, controlled-release feeding.\* Expect complete nitrogen utilization during one growing season.\*

Slo Release 25 blends easily with insecticides, herbicides, and P and K.

There are more good reasons why you should test SLO-RELEASE 25 and our other SLO-RELEASE products this spring.

\*When applied at normally acceptable nitrogen rates

Yes, I'm interested in your SLO-RELEASE products.

Send Technical Literature. Have your salesman call.

Name

Title

Company

Address

Ashland

City

State

Zip

Phone Number (\_\_\_\_\_)

Just fill in the coupon and mail it to Chemical Systems Division, P.O. Box 2219, Columbus, OH 43216.



## **MEETING DATES**

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

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

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

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

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

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

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

USDA Turfgrass Field Day, Beltsville Agricultural Research Center-West, Beltsville, Md., Aug. 22. Contact: Jack Murray, Beltsville Agricultural Research Center, Beltsville, MD 20705.

Rhode Island Turfgrass Field Day, University of Rhode Island, Kingston, August 22. Contact: Dr. C. R. Skogley, Department of Plant & Soil Science, University of Rhode Island, Kingston, R.I. 022881. The Fertilizer Institute Trade Fair, Stouffer's Riverfront Towers, Sheraton St. Louis and Mayfair Hotel, St. Louis, Mo., Aug. 22-23. Contact: Doug Culkin, TFI, 1015 18th St., N.W., Washington, D.C. 20036, 202-466-2700.

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

Farwest Show, Memorial Coliseum, Portland, Ore., Aug. 24-26. Contact: Dan O. Barnhart, 0224 S.W. Hamilton St., Portland, Ore. 97201, 503-221-1182. Sponsored by Oregon Association of Nurserymen.

National Lawn & Garden Distributors Association Annual Convention, Fairmont Hotel, New Orleans, La., Sept. 9-12. Contact: Nancy S. Irving, National Lawn & Garden Distributors Association, 1900 Arch St., Philadelphia, Pa. 19103, 215-564-3484

Garden Industries of America Conference and Trade Show, Convention and Exposition Center, Cincinnati, Ohio, Sept. 14-16. Contact: Paul Anderson, Box 1092, Minneapolis, Minn. 55440, 612-374-5200 Virginia Tech Turfgrass Field Days and Trade Show, Virginia Polytechnic Institute and State University, Blacksburg, Va., Sept. 19-20. Contact: John F. Shoulders, Dept. of Agronomy, VPI & SU, Blacksburg, Va. 24061, 703-951-5797.

Budget and Planning Seminar, sponsored by California Landscape Contractors Association and Associated Landscape Contractors of America, Hyatt House, Los Angeles, Sept. 20-21. Contact: CLCA, 1419 21st St., Sacramento, Calif. 95814, 916-448-

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

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

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

Kentucky Turfgrass Conference, Executive Inn, Owensboro, Ky., Oct. 9-10. Contact: Dr. A. J. Powell, Jr., University of Kentucky, N-222G Agricultural Science North, Lexington, KY 40506, 606-258-5606.

Central Plains Turf Foundation/Kansas State University Turf Conference, K-State Union, KSU, Manhattan, Kan., Oct. 10-12. Contact: Dr. Robert Carrow, Dept. of Horticulture, Waters Hall, Kansas State University, Manhattan, Kan. 66506, 913-532-6170.

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

19th Annual Southern California Turfgrass/Landscape Materials and Equipment Educational Exposition, Orange County Fairgrounds, Costa Mesa, Calif., Oct. 17-18. Contact: Ed McNeill, SCTC, 1000 Concha St., Altadena, Calif. 91001, 213-798-1715.

Southwest Turfgrass Conference, New Mexico State University, Las Cruces, Oct. 18-19. Contact: Dr. Arden Baltensperger, Department of Agronomy, Box 30, NMSU, Las Cruces, N.M. 88003.

Turf Irrigation Short Course, sponsored by Sprinkler Irrigation Association, San Diego, Oct. 16-18. Contact: IA, 13975 Connecticut Ave., Silver Spring, Md. 20906, 301-871-1200.

Professional Grounds Maintenance Society Annual Meeting, Baltimore Hilton, Oct. 21-24. Contact: Allan Shulder, 19 Hawthorne Ave., Pikesville, Md. 21208, 301-653-2742.

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

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

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

Maintenance Symposium, sponsored by Associated Landscape Contractors of America, Red Carpet Inn, Milwaukee, Nov. 6-9. Contact: John Shaw, ALCA, 1750 Old Meadow Rd., McLean, VA 22102, 703-821-8611.

Missouri Lawn & Turf Conference, Ramada Inn, Columbia, Mo., Nov. 7-9. Contact: Dr. John H. Dunn, Horticulture Department, University of Missouri, Columbia, MO 65211, 314-882-7838.

California Landscape Contractors Association Annual Convention, Hilton Riviera Hotel, Palm Springs, Calif., Nov. 8-11. Contact: CLCA, 1419 21st St., Sacramento, Calif. 95814, 916-448-2252.

South Carolina Turf Conference, Clemson University, Nov. 13-14. Contact:

# If you want to feed your trees for 2 years, step on it.



The Agriform fertilizer probe makes tree feeding fast and economical. It's simple. Take the probe and step on it. Just punch holes around the drip line of the tree.



You can fertilize a 4" diameter tree for two years for less than \$1.00. And the money-off coupon that comes with each probe saves you \$3 to start with. Agriform Tablets—nothing could be faster, easier, safer, or more economical.



Drop the Agriform Tablets down into the root zone and walk away, for two years. No fertilizer bags to mess with. No spikes to hammer (and break). And, they won't burn or leach away.

Street	State	Zip
Firm		
Name		
+	Milpitas, California Please send me_ have enclosed a ch each. Don't forget worth \$3.00 towar of a case of Agrifo each probe I ordere June 1, 1980.	probe(s). I seck for \$6.99 the coupon d my purchase rm Tablets for
0.0	Order your Agrifo probe for \$6.99 and \$3.00 coupon for A Sierra Chemical Co 1001 Yosemite Driv Milvitas California	l we'll give you a griform Tablets ompany ve



**AGRIFORM**<sup>®</sup>

Agriform (T) is used as a trademark of Sierra Chemical Company for its brand of controlled release fertilizers. @1979 Sierra Chemical Company. Dr. Landon Miller, Department of Horti-culture, Clemson University, Clemson, S.C. 29631.

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

Planning and Budgeting Seminar, sponsored by Associated Landscape Con-tractors of America, Ramada O'Hare Inn, Chicago, Nov. 15-16. Contact: ALCA, 1750 Old Meadow Rd., McLean, Va. 22102, 703-821-8611.

Southern Turfgrass Conference, Camelot Inn, Little Rock, Ark., Nov. 18-20. Contact: Dr. G. Euel Coats, Drawer CP, Mississippi State, MS 39762, 601-325-3138.

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

Delaware Turfgrass Association Annual Meeting, Hercules Country Club, De. 4. Contact: Dr. William Mitchell, Agricul-ture Hall, University of Delaware, Newark, Del. 19711.

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

Planning and Budgeting Seminar, sponsored by Associated Landscape Con-tractors of America, Marriott Inn North, Dallas, Dec. 4-5. Contact: ALCA, 1750 Old Meadow Rd., McLean, Va. 22102, 703-821-

Planning and Budgeting Seminar, sponsored by Associated Landscape Con-tractors of America, Airport Hilton, Den-ver, Dec. 6-7. Contact: ALCA, 1750 Old Meadow Rd., McLean, Va. 22102, 703-821-

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

Illinois Turfgrass Conference, Ramada Inn Convention Center, Champaign, Ill., Dec. 18-20. Contact: Dr. John R. Street, 106D Horticulture Field Lab, University of Illinois, Champaign, Ill. 61801, 217-333-

Associated Landscape Contractors of America Annual Meeting and Trade Exhibit, Town & Country Hotel, San Diego, Calif., Feb. 3-8. Contact: ALCA, 1750 Old Meadow Rd., McLean, Va. 22102, 703-821-8611.

Massachusetts Turf Conference and Industrial Show, Springfield Civic Center, Springfield, Mass., March 4-6. Contact: Dr. Joseph Troll, University of Massachusetts, Stockbridge Hall, Amherst, Mass. 01003, 413-545-2353.

MEETINGS

#### **Turf irrigation** short course set

The Irrigation Association has announced that it will hold a Turf Irrigation Short Course Oct. 16-18 in San Diego, Calif. The course will deal with principles and practices of turf irrigation as they relate to large multicontroller systems.

Registration fees are set at \$160 for members and \$185 for non-members. The fee entitles applicant to full participation in all course sessions, luncheon on each day and a proceedings notebook of presentations by the in-

An informative brochure is available through IA members or through the IA headquarters, 13975 Connecticut Ave., Silver Spring, Md. 20906, 301-871-1200. Individual course registration brochures will be available two months prior to the course.

EQUIPMENT

#### Malizia, Hawkins, Byers elected by OPEI

A.A. "Tony" Malizia has been elected president of the Outdoor Power Equipment Institute. Malizia is president of and chief executive officer of McDonough Power Equipment, Inc., McDonough, Ga. He will serve through the 1979-80 term.

Stanley J. Byers, president of Bunton Co., Louisville, Ky., has been elected vice president.

Robert F. Hawkins, vice chairman and treasurer of Wheel Horse Products, Inc., South Bend, Ind. has been elected secretary-treasurer.

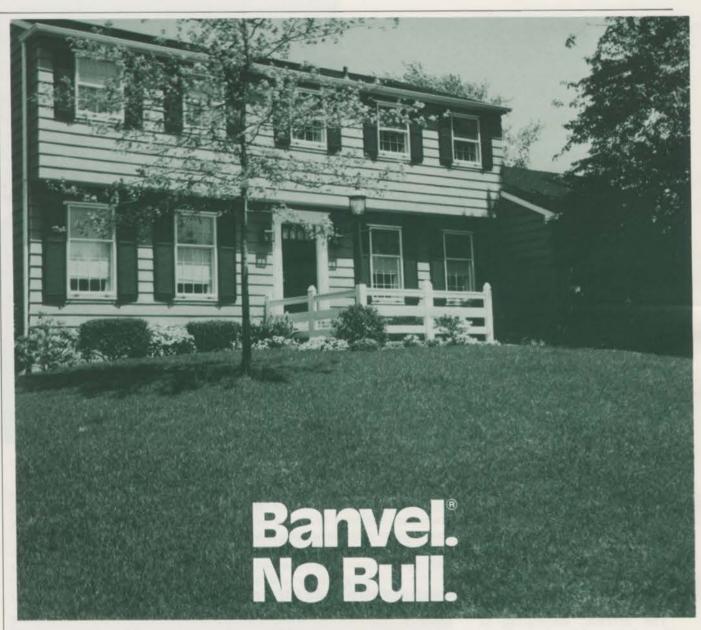
Malizia joined what is now McDonough Power Equipment, Inc. in 1950 as a field salesman. After having served as sales manager, vice president and vice chairman, he was named president and chief executive officer

A member of the board of directors of the National Association of Manufacturers, Malizia has been active in OPEI since the late 1950's when he served as a director for two terms. More recently he has been OPEI vice president and prior to that, secretary-trea-

career in 1966 as a cost accounting clerk with Peerless Mfg. Division of Dover Corp. In 1968 he joined the General Electric Co. in an accounting capacity and then returned to Peerless in 1970 as cost accounting manager. He was named controller at Peerless in 1974 and resigned later that year to become president of Bun-

Byers is active in Kentucky state affairs, serving as advisor to the Governor's Commission on Economic Development, as a member of the Kentucky International Trade and Tourism Advisory Council, and past president of the Kentucky World Commerce Council. He is on the board of the Louisville Chamber of Commerce and is past president of that organization's product liability task force. He is a graduate of the University of Louisville with a B.S. in accounting and business adminis-

Hawkins began his employment with Wheel Horse in 1962 as controller. He became executive vice president in 1968 and was promoted to president and treasurer in 1971. He assumed his present position in 1976. A graduate of Indiana University, he received a B.S. degree in business and attended graduate school at the University of Wisconsin.



Forget all the claims. Banvel® Herbicides give you what you really needexceptional weed control, without turf damage, at a more than competitive cost per acre. Banvel 4S gives you broad control of tough weeds, while Banvel® + 2,4-D provides an even wider spectrum of control, but see the label for certain grasses susceptible to 2,4-D. Both mix readily, and are stable in storage. And,

Banvel Herbicides— Tough on Weeds, Easy on Turf.

Use Banvel Herbicides on your next broadleaf weed application. For more information:



Velsicol Chemical Corporation 341 East Ohio Street Chicago, Illinois 60611

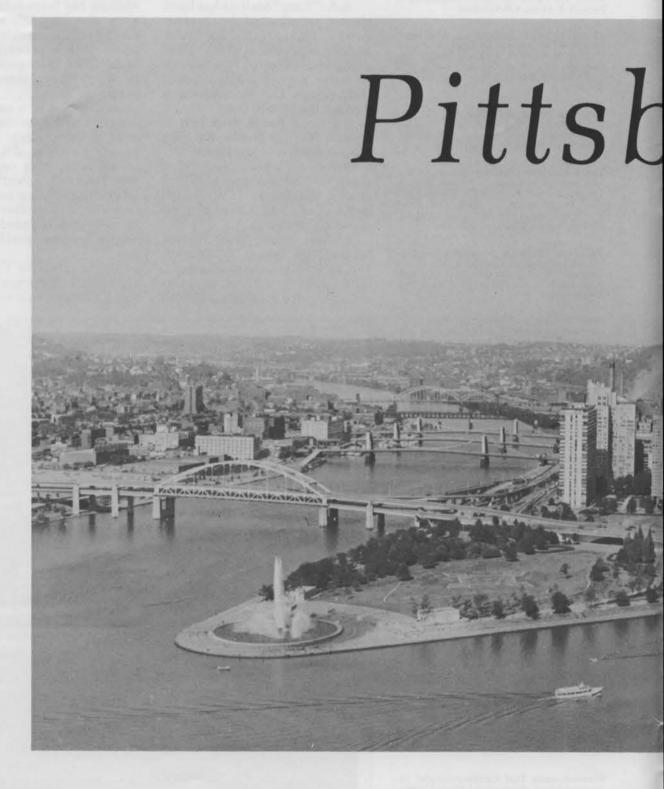
Banvel Herbicides offer special translocation properties. This means they attack the entire weed both from the roots up and the leaves down.

Effective, yet economical weed controlthat's what Banvel Herbicides can add to your turf care program. When all is said and done, isn't that just what you need?



Before using any pesticide read the label.

## LAWN CARE INDUSTRY Marketplace



Pittsburgh is located at the intersection of the Ohio, Allegheny, and Monongahela Rivers, in the foothills of the Appalachian Mountains. Its rugged, undulating topography is attractive to the homeowner, but is nothing but headaches for the lawn care professional.

The terrain, consisting of valleys followed by steep slopes and hilltops, increases maintenance costs, gas consumption, and travel time. Those contacted by LAWN CARE INDUSTRY estimated that maintenance costs are two to three times higher in the Pittsburgh area than in most areas of the country serviced by lawn care operators.

Road conditions also pose problems for Steeltown's lawn care professionals. The newer highways are in good condition, but many of the older highways and secondary roads are chockfull of potentially damaging chuckholes.

Further, lawn care operators are often forced to take alternate routes because load limits are imposed on many of the bridges throughout the Pittsburgh metropolitan area. Many are also in a constant state of disrepair.

Although Pittsburgh's topog-

raphy and highways pose cumbersome problems for the lawn care industry the area continues to be popular among lawn care professionals. The number and type of lawn care operations in the Pittsburgh metropolitan area is as diverse as the city's im-

service from someone in their own neighborhood rather than from a company in an adjoining

"We're more groups of little ethnic burroughs than one large city," one lawn care operator said. "People seem to prefer the

mers are generally drought-free, and temperatures average 53°. The temperature extremes for 1978 were -13° and 103°. Occasionally lawn care operators are forced to adjust their spring schedules because of excessive snowfall or rainfall, but that is not unique to the Pittsburgh market.

The Pittsburgh resident's high standard of living is the key to the lawn care industry's modest success in the nation's 27th largest city. The Pittsburgh metropolitan area boasts 2.5 million residents, but more importantly the city ranks second only to New York in invested

Pittsburgh's business district, aptly called the "Golden Triangle," is home for 23 of the world's 500 largest corporations. Further, the steel mills, along with a host of other manufacturing firms and businesses makes Pittsburgh a profitable place to live as indicated by a 10 percent increase in housing starts between 1976 and 1977. More importantly, in terms of the lawn care industry, this high

standard of living insures that

the homeowner has disposable

income to warrant purchasing a

"Getting exposure is a lot more difficult here (Pittsburgh) because hills and trees block the customer's view of our trucks."

Steve Ellis, ChemLawn Corp., Pittsburgh

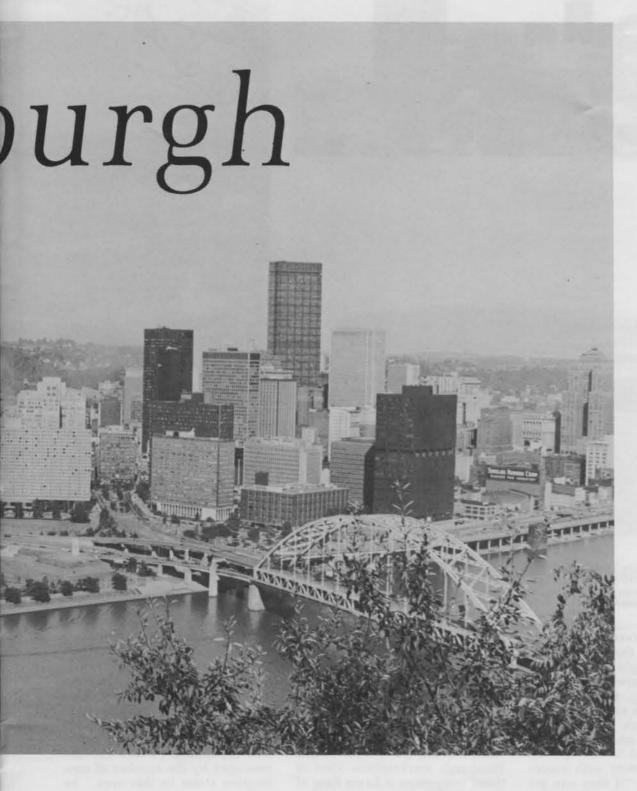
migrant heritage. The three largest companies - Chem-Lawn Corp., Davey Lawnscape, and Spray-A-Lawn - dominate the market, but there is ample room for small to moderate sized operations. Most companies in the area have had little difficulty securing new clients.

The parochial nature of neighborhoods is yet another characteristic of the Pittsburgh marketplace. Most of those contacted by LAWN CARE IN-DUSTRY said customers are more likely to purchase a lawn

companies that are in their neighborhoods."

Sprawling suburban housing developments, like those prevalent throughout much of the Midwest, are virtually nonexistent in Pittsburgh. Therefore, lawn care specialists are forced to spend a great deal more time on the road travelling between the small pockets of neighborhoods spread throughout Pittsburgh's plateaus and

Weather is not a serious problem. Rainfall is moderate, sum-



lawn service.

According to Steve Ellis, manager of ChemLawn Corp., Bridgeville, Pa., spray operations are better suited to Pittsburgh's hilly terrain. "From a safety standpoint the terrain lends itself better to a liquid application," he said. "Spreaders are more difficult to handle and more likely to tip over, although they do just as good a job on the lawn."

The hilly terrain also causes problems in terms of advertising, according to Ellis. "Getting exposure is a lot more difficult here because hills and trees block the customer's view of our trucks."

Ellis, 28, added that the high concentration of woods also causes problems in identifying potential customers. "You can be in an area where there appears to be no homes at all," Ellis said, "and go over a rise and instantly be in the middle of a whole subdivision."

"We had been here three or four years and missed total subdivisions of 300 homes," he added. "I think that time has passed now, but we're still finding little nooks and crannies of homes." The hilly terrain also causes turf-related problems, according to Ellis. "The fine fescues on the hillsides...don't take kindly to a lot of heat," he said. "But even though they stress and go off color in the hot summer months it's usually not permanent."

operate three branches in the Pittsburgh area. "Pittsburgh is not the fastest growing city for ChemLawn," Ellis said, "but it has exhibited steady growth." ChemLawn currently employs about 40 persons and operates about 30 trucks out of its three of-

"This is a highly industrialized area and it's difficult to compete with Westinghouse and the steel companies for labor."

David Hoffacre, Spray-A-Lawn, Pittsburgh

Increased maintenance costs is the biggest problem caused by the undulating terrain. Ellis estimated that his branch spent about \$20,000 in maintenance expenses in 1978. "Repair costs are far higher in Pittsburgh than in Columbus, Buffalo, or Cleveland," he said, "because those cities are relatively flat so their maintenance costs are much lower for the same amount of use."

ChemLawn entered the market in 1975 against little or no competition and they currently fices.

Ellis said his office utilizes ChemLawn's shade program. "Treating the mixture is important," he said. "The specialists really have to identify the different turf mixtures in a lawn before they take care of it. When they identify the grass they either have to make an adjustment in their rate of application or go back another day with a different mix."

He added that just about any type of turf pest can be found in the Pittsburgh area, but grubs have been the most troublesome problem in recent years. In fact last year Ellis' branch provided 900 to 1,000 supplemental applications for grub control at no additional charge to the customers. "Other insects are also very active in the Pittsburgh area," he said, "but our regular program usually takes care of them."

"Our main disease problem is helminthosporium simply because there is so much common bluegrass in Pittsburgh," Ellis added. "We've had lawns where helminthosporium has gone through and totally wiped out the bluegrass and fine fescues have moved in."

In short, Ellis said Pittsburgh is a good training city to familiarize new personnel with various turf diseases and insects.

Mark Morgan, manager of Davey Lawnscape, Coraopolis, said Pittsburgh's topography has also impeded Davey's operation, but in a different way. "The topography makes it a challenge for our people to find their way around," he said. "Putting together efficient routes really

Davey opened its Pittsburgh branch in late 1976 and started servicing lawns in March of 1977. The company currently services about 5,000 accounts, employs 11 technicians, and grosses about \$750,000 annually. Like the majority of lawn care companies in the Pittsburgh area Davey focuses on the residential market. About 80 percent of its total sales volume is residentially based while the remaining 20 percent is commercially based.

Morgan agrees with Ellis of ChemLawn that the only way to effectively service Pittsburgh's lawns is with a liquid application. "There are certainly flat lawns in the area," he said, "but I would have to say that the vast majority of lawns have some degree of slope ranging from the ridiculous . . . to the more subtle."





Ellis

Morgan

Morgan also cited leaf spot as the primary turf disease in the Pittsburgh area, but he said stripe smut is also a problem. "As far as surface insects, chinchbugs are the most prevalent, but they don't pose much of a problem," he added.

Morgan described the Pittsburgh marketplace as relatively "non-competitive. I think our biggest competition is still the guy who does the lawn himself," he said. "I'm convinced there is still a lot of work in Pittsburgh." Look for Davey to seriously consider establishing a second branch in the Pittsburgh area next year.

David Hoffacre, owner of Spray-A-Lawn, Monroeville, estimates that general maintenance costs are three times higher in Pittsburgh than in other areas of the country. "We haven't had a lot of mechanical failures because the company is only two years old," he said, "but within the next two or three years we'll see an increase in our maintenance costs."

"To give you an idea of how rough the terrain is here a set of truck tires lasts 25,000 miles in Ohio as opposed to 6,000 miles here," he added.

Hoffacre, a former Chem-Lawn employe, established the Pittsburgh Spray-A-Lawn office in 1976. The company currently operates two offices in the Pittsburgh area and services about 7,-000 accounts.

Hoffacre said finding and retaining quality employes is one of the primary problems posed by the Pittsburgh market. "This is a highly industrialized area and it's difficult to compete with Westinghouse and the steel companies for labor," he said. "The average wage in most factories starts at around \$5 an hour,





FAR TOP: Pittsburgh's business district boasts 23 of the world's 500 largest corporations. ABOVE: Three Rivers Stadium is the home of the Pittsburgh Pirates baseball team. RIGHT: An "incline" slowly travels up the side of one of Pittsburgh's sheer hills.

whereas our starting salary is much less than that. So it's hard to get good people."

Hoffacre, a graduate of Ohio State University, said each employe is payed a salary based on a 55-hour work week. They receive time-and-a-half for anything over 55 hours. "We set up a quota system with incentives," he said. "If they can get the work done in 49 or 50 hours they still get payed for 55 hours work." The average quota is \$650 of business per man/per day.

amount of comparing they've had to do has been relatively small."

Thus far the three largest companies have been highlighted, but there are also a number of moderately sized companies doing quite well in the Pittsburgh marketplace. One of those companies is Lawn King of North Hills.

Dennis Buckley, owner of Lawn King, said he doesn't try to compete with the large spray

worker, purchased Lawn King in 1979. The company currently provides granular lawn service to about 500 accounts and grosses about \$110,000 annually. Buckley numsaid he entered the lawn care field because the market was

field because the market was still expanding. "I was also encouraged by the number of new housing starts in this area," he said. "There are new houses going up all the time."

Buckley, a long-time nursery

Emil Ledderer, owner of Lawn Man, North Hills, thinks he has the best of both worlds. His company offers a choice of two granular or two liquid application services. The "Economy Spray Service Program" includes:

 SPRING: Timed release fertilizer and iron, pre-emergence crabgrass control and dandelion control.

• EARLY SUMMER: Timed slow release fertilizer, weed control, and insect control.

 SUMMER: Timed slow release fertilizer and iron, weed control, and insect control.

• FALL: Timed release fertilizer and weed control.

The "Sod Lawn Special" li-

quid application service provides:
• SPRING: Timed release fertil-

izer, pre-emergence crabgrass control and dandelion control.

 EARLY SUMMER: Timed slow release fertilizer, spot weed control, insect control, and fungus control.

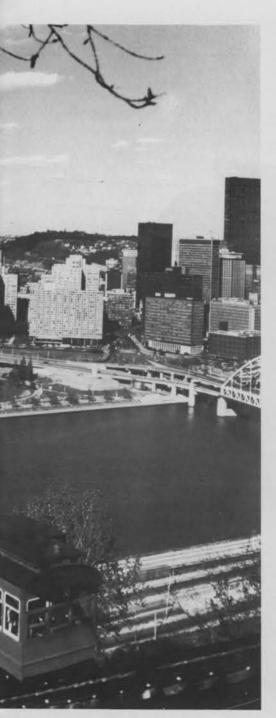
• SUMMER: Timed slow release fertilizer, spot weed control, insect control, and fungus control.



Dennis Buckley, co-owner of Lawn King, doesn't try to compete with the large spray companies.

Regarding the Pittsburgh client, Hoffacre said, "I feel the people in Pittsburgh are eager to have good lawns, but they're different from the Akron or Cleveland client because they haven't had the bombardment of brochures on their doors. They're comparison shoppers," he added, "but to date the

operations. "The spray companies are going to have their 1,-000 customers, but I can offer the customer something that the large spray operations cannot — personalized service," he said. "I try to treat each lawn individually and sell our customers on the basis that whatever comes up will be taken care of."



## Gas shortage: What me worry?

Virtually every American has been affected by the increased cost of gasoline. However, for those businessmen whose livelihoods are based on the ready availability of gasoline the concern goes much deeper. Then why isn't Roy Field, owner of Liqui-Green Lawn Care of North Alle-



gheny, worried? It's really very simple. He is also owner of Roy Field's Gulf Service Center, in Pittsburgh. If Field can't get gas it's unlikely that any of his competition will be able to either.

"The gas station business isn't what it used to be," he said, "and that's one of the reasons I got into the lawn care business. In fact, my long range plans are to get out of the gas station business and stay in the lawn care field.

Field, 45, has been in the service station business for 20 years. However, in the past year he has been forced to cut his station's hours because of reductions in gas allocations.

Field purchased the franchise in 1974 after the first gas crisis and he currently services about 600 accounts. "I bought it from a friend I knew through the gas station," he said. "He was doing my lawn so I knew it was a good service."

He added that there are a number of advantages to running the lawn care business out of his gas station. "I've gotten some gas customers from my spray service and some of my lawn customers are now regulars at the station," he said.

Field also has an advantage over his competition when it comes to maintenance. You see, his lawn care specialists are also mechanics at the gas station.

 FALL: Timed release fertilizer and spot weed control.

 LATE FALL: Winter survival fertilizer and iron and fungus

Ledderer's "Greenskeeper" granular program includes:

SPRING: Pre-emergence crabgrass control, reseeding, fertilization, grub control, weed control, power aeration, and power rolling.

EARLY SUMMER: Weed control, chinch bug control, sod web-worm control, fungus control, and fertilization.

SUMMER: Crabgrass control, weed control, fungus control, chinchbug control, sod webworm control, and fertilization.

FALL: Reseeding, fertilization, weed control, power aeration, and power rolling.

The "Bea Keeper" granular program consists of:

SPRING: Pre-emergence crabgrass control, reseeding, fertilization, grub control, weed control, power aeration, and power rolling.

SUMMER: Grabgrass control, weed control, fungus control, chinchbug control, sod webworm control, and fertilization.

FALL: Reseeding, fertilization, weed control, power aeration, and power rolling.

Ledderer purchased the company in 1966 as a franchise from Lawn-A-Mat, but left the company when they entered chapter 11 bankruptcy. He currently services about 1500 accounts (600 spray & 900 granular) and grosses about \$120,000 annually.

Unlike many lawn care businessmen, Ledderer is not eager to expand his business. "I want my business to be a size I'm comfortable with," he said. "There is no use being rich if you have to work all the time.'

Ledderer said he enjoys the lawn care business because it's one of the few businesses he can own and still have some time off. "It's difficult to get time off if you have your own business," added, "but I get time off in the winter with the lawn care business."

One of the newest additions

operation is Deborah Crawford, 25, a former golf course superintendent with a degree in turf management from Penn State University (Thus the name Pennturf) and Bill Ehrlich, 27, a former golf course maintenance employe. They met while working together at Marada Golf Course, Clinton, Pa. The third member of the triumverate is Susan Lewis, 21, a graduate of Penn State University specializing in ornamental horticulture. She joined the company in 1979.

Pennturf's program includes:



Deborah Crawford, 25, Bill Ehrlich, 27, and Susan Lewis, 21, of Pennturf Lawn

to the Pittsburgh lawn care marketplace is Pennturf Lawn Care Co., Clinton, Pa. Pennturf is a three-person operation which opened in March of 1978. It currently services about 160 accounts and offers a granular service with liquid insecticide and herbicide applications.

The braintrust behind the

EARLY SPRING: Complete fertilization based on soil test results and pre-emergence crabgrass control.

LATE SPRING: Soluble and slow release fertilizer, broadleaf weed control, and insecticide if surface insects are active.

SUMMER: Soluble and slow release fertilizer, spot treatment for broadleaf weeds plus insect control where needed.

FALL: Complete fertilization. Crawford said the hallmark of their operation is personal service. Ehrlich added, "We are dealing with very poor soil here ... so we try to set up a program for each customer. This way each customer gets what their particu-lar lawn needs." Pennturf offers seven different formulations of fertilizers to meet virtually any lawn care need.

"Our granular service is more work for us," Ehrlich said, "and I can see the advantages of a spray service, but we like the results we get with a granular program."

Although the future of the lawn care industry looks bright Crawford is wary. "The lawn care market is going to grow,



Ledderer

Dagnal

she said, "but what worries me is that we're a luxury industry and people are going to buy their kids shoes before they start worrying about their lawns. I'm afraid lawn care will be one of the first luxuries to go."

So what is Pennturf doing about the future? "We're plan-ning to get into some related fields," Crawford said. Pennturf is currently looking into the possibility of doing some golf course maintenance, landscaping, and irrigation installation. "A lot of small courses can't afford a fulltime superintendent so our services would tie-in very well with that," Crawford said. "We also put in two irrigation systems and three lawns last year.

Ed Dagnal, manager of Tru-Green Corp., said his company stresses service rather than price. "We try to get back to all of our service calls within 48 hours and 90 percent of the time we do," he said.

Like the majority of lawn care companies contacted by LAWN CARE INDUSTRY, Tru-Green's business is primarily based in the residential market. Tru-Green currently services about 2,500 out of two offices in the Pittsburgh metropolitan area.

Overall, the Pittsburgh marketplace has exhibited steady growth in recent years and if housing starts are any indication that trend should continue in the future. The market is not yet saturated and there are still many virtually untapped residential areas throughout the Pittsburgh area.

However, success is not automatic and anyone thinking about entering the market should prepare himself for a "rocky ride" both financially and while in the field.



## When they bag more,

## When there's no compromise in performance, they're worth even more.

Introducing Toro Front Runner rotaries.

They're self-contained vacuum grass collecting systems designed specifically to bag and carry heavy loads without penalizing performance.

Result? They stop, start, steer and maneuver as well loaded as many mowers with add-on bag systems do empty.

Since they're designed for big grass loads, strain on engines, transmissions and other components is cut way down. Which cuts way down on repairs and down time.

What's more, Front Runners offer the largest grass collection capacities available. The GMT (left) handles up to 20 bushels and mows 48" or 60" wide.

The Turf Truck, with hydraulic dump system, handles up to 50 bushels and mows 60" wide. Benefit: More mowing between grass dumpings.

Or, for wide mowing without bagging, choose the giant 80" batwing deck on either unit. Outer wings follow contour of ground to eliminate scalping. To make your GMT worth even more, choose a snow plow, snow blower or sprayer.

Increase the worth of your Turf Truck with all season cab.

Toro Red Wagon Service is one more reason your Toro is worth more. Every Red Wagon mobile van comes with a trained pro and the equipment and parts he needs to perform most maintenance on the spot.

Call 800-328-2858 toll-free for the name of your nearest Toro distributor and a demonstration. GS-078-03677



## they're worth more.



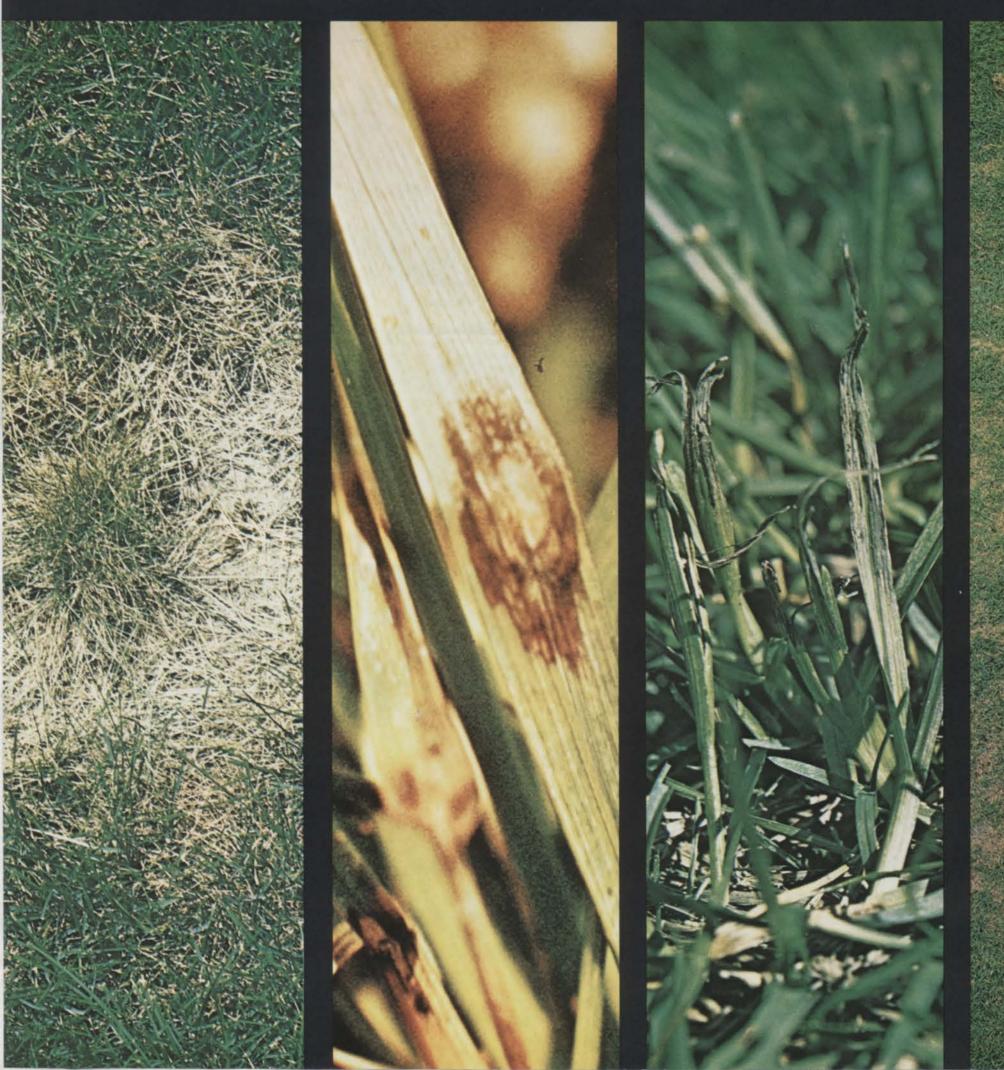
Even fully loaded, Front Runners maneuver as well as most riding mowers, thanks to "bend in the middle" articulated steering.



Wide track design, long wheel base and flotation tires provide excellent stability, even when capacity loads are carried. TORO<sub>®</sub>
Worth more

Circle 118 on free information card

# Your best sales opportunitie and ugly, but very profitable



## s are rotten . Cash in with



## TERSAN.

When you know and show these lawn diseases to your customers, you sell a new service and make new profit with the TERSAN disease control program.

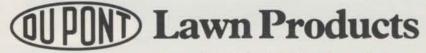
Learn to recognize these five sales tools (from left to right): fusarium blight, leaf spot, stripe smut, dollar spot, pythium blight. Every time one of these shows up on a customer's lawn, you've got a great opportunity to sell an additional service, right on top of your basic lawn-care programs.

To cash in on this high-margin opportunity, you've got to spot the disease early and identify it correctly—then tell your customer what it can do to his lawn, and how you can prevent it.

And the Tersan program is the key, with four different Tersan fungicides, each one a proven, effective control for each disease that's likely to show up.

For more profits, put these five sales tools to work for you. Start by mailing in the coupon for more facts on identifying and controlling lawn diseases.

Wilmington, Delaware 19898	
Please send me your literature	on lawn disease control.
Name	Title
Company	
Address	
City	
State	Zip
Services Offered	
No. of present accounts:	No. of employees:



Circle 115 on free information card

#### Irrigation Association publishes proceedings, plans for conference

Publication of the proceedings of the 1979 Irrigation Technical Conference and their availability on cassette tapes for the first time has been announced by The Irrigation Association, sponsor of the conference. The conference was held earlier this year in San Francisco.

The association has also announced a major expansion of the exhibit area for the 1st Agri-Turf Irrigation Exposition and Technical Conference, set for Feb. 24-27 at the Galleria Plaza and Houston Oaks Hotel in Houston, Texas.

The proceedings is a 191-page illustrated volume containing presentations focusing on the conference theme of "Water, Water Everywhere — But Can We Use It?" Special emphasis is given in the presentations to the use of waste effluent in turf and landscape applications, and other turf/landscape irrigation topics. Separate cassette albums are available on the turf segment of the conference. The proceedings are available from the association at a cost of \$21 per copy.

The expansion of the 1980 conference was announced as a result of an unexpectedly heavy and early demand for space in the show.

Original plans for the show, announced in January, called for 82 eight-foot by 10-foot exhibit booths to be housed in the Galleria Plaza. All of this space had been contracted for by late April. The enlarged exhibit area will permit the addition of 25 more booths. The new space is

located on a second level, connected to the first level exhibits by escalators and in close proximity to the conference meetings rooms.

The conference, working under the theme of "Total Irrigation — Show and Tell" is expected to attract hundreds of registrants from across the country to the first national exposition of equipment for turf and agricultural irrigation markets.

Conference sessions, running for three days, will include presentations by more than three dozen industry leaders, with a special section on turf irrigation.

Further information about the proceedings from the 1979 conference and plans for the 1980 conference is available from: The Irrigation Association, 13975 Connecticut Ave., Silver Spring, MD 20906, 301-871-8188

IRRIGATION

### Johns-Manville offers irrigation catalog

The new irrigation catalog published by Johns-Manville Sales Corp. includes a section outlining a typical sprinkler systems layout and sprinkler spacing techniques, according to market manager Vince Nolletti.

Three key products which Nolletti said. "This controller interest to the lawn care businessman are the new Keyboard Controller Series, a new plastic, automatic valve and a family of pop-up spray sprinklers.

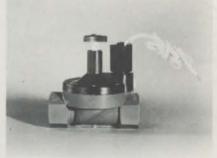
"The controller series has been on the market for almost two years with outstanding



J-M KCS controller

reception and reliability," Nollett said. "This controller uses the latest micro-electronics technology to provide numerous timing and scheduling features. It can perform virtually any function required for irrigation applications and in addition it can be used to control outdoor landscape lighting, pool filter, pool sweep, and indoor lighting."

Nolletti said that the 901 Series plastic valves feature a



J-M 901 valve

very low pressure drop through it. This allows the user to control more sprinklers with each valve, which reduces the number of valves, the sizes of the automatic controller and the total system cost.

The catalog also features a family of pop-up spray sprinklers available with brass or plastic body and either a one- or two-inch pop-up mechanism for various grass heights, he said.

"The nozzles have balanced flow — half-circle uses half as much water as a full-circle — to allow mixing of nozzles on the same valve while maintaining a uniform application of water," he said. "These nozzles also have a reduced usage of water to allow more sprinklers per valve, which can reduce system costs."

For further information, or to obtain a copy of the new catalog, contact: Johns-Manville Sales Corp., 909 W. Nielsen Ave., Fresno, CA 97308, 209-442-8511.

Basagran. Yellow nutsedge control your customers never had before.



Circle 113 on Iree information card

## Safe-T-Lawn publishes installation guide

Safe-T-Lawn, Inc. has published a step-by-step installation guide for automatic underground sprinkling systems.

The guide, along with a 36-page catalog of irrigation equipment, is available by writing: Safe-T-Lawn, Inc., 5350 N.W. 165th St., Hialeah, FL 33014, 305-625-7000.

IRRIGATION

### Pipe fitting needs no tools or glue

Microdot Products is marketing a pipe fitting — Turnseal which simplifies the steps needed to join polyethelene pipe and vinyl tubing.

The fittings connect in seconds without the necessity of using tools or glue. Simply, by pushing the pipe into the fitting and twisting by hand, a leak-proof connection is made.

For complete information, contact: Microdot Products, 2530 Crescent Dr., Broadview, IL 60153, 312-343-9820.

IRRIGATION

#### 'Hi-Pop' sprinklers available from Rain Jet

To water taller, thicker grass more effectively, Rain Jet Corp. has developed a complete new line of 2½-inch sprinklers.

Water pressure causes the center portion of the new sprinkler to pop up 2½ inches above the turf line. A heavy duty stainless steel spring returns the allbrass sprinkler unit back into its housing when the water is shut off.

For further information, contact: Rain Jet Corp., 301 S. Flower St., Burbank, CA 91503, 213-849-2251.

IRRIGATION

#### 'Evergreen' covers blend into turf

Irrigation box covers from Ametek feature a molded-in green color that blends in visually with turf.

Both box and cover are made of a thermoplastic material developed specifically for underground use. The new 10-inch diameter box provides plenty of working area and features a twist-lock cover. Other models are available, including rectangular boxes with snap or pentagon locking mechanisms.

For further information, contact: Ametek, Plymouth Products Div., 502 Indiana Ave., Sheboygan, WI 53081, 414-457-9435.

## Rain Bird announces training, manuals

Because there is more to an irrigation system than just installation, the Rain Bird Sprinkler Mfg. Corp. has announced the availability of several comprehensive maintenance and troubleshooting seminars and four new component maintenance manuals.

There are three types of seminars available: one-day, two-day, and an advanced twoday workshop on controller troubleshooting.

For more information about any of the maintenance seminars or manuals, contact: Rain Bird Sprinkler Mfg. Corp., 7045 N. Grand Ave., Glendora, CA 91740, 213-963-9311.

## **MONEYWISE**

### Why banks care about market share

Many banks, in making loan decisions, look for a fourth "C" beyond the usual character, capacity and capital.

That fourth C, described in Financial Marketing magazine, is "competition in the marketplace." It measures the ability of a company's service to penetrate a market at a profit level high enough to sustain growth while repaying its bank debt.

To evaluate that fourth C, banks may do their own market research on your proposal. The bank could find, for example that your firm lacks the marketing know-how already held by others in a very competitive area. Pre-loan market research by the bank may nix your original proposal, but turn up an alternative that offers better potential. And banks may continue to monitor your market even after granting the loan so they can pull back if prices or demand move against you.

Loan decisions are easy when money is tight: A banker will say no to just about any marginal loan application. But when lending funds are available, banks rely more heavily on competitive analysis to help avoid lending erros. If you provide comprehensive marketing information, your chances of getting a loan are improved significantly.

## THE LITTLE TRACTOR THAT DOES BIG TRACTOR JOBS.



A lot of landscaping and construction jobs are too big for a lawn and garden tractor, yet too small for a large industrial tractor.

And that's where our John Deere "little-big" tractors come in.

At 22 and 27-PTO-hp, they have the power you need for loading, digging, grading, posthole digging, transporting, trenching, tilling and just about any other job you do.

Yet they're still small enough so they're not too expensive to buy or

operate.

Both the 22-PTO-hp 850 and the 27-PTO-hp 950 are equipped with liquid-cooled diesel engines that give you excellent fuel economy.

And both offer a versatile 8-speed transmission plus a 3-point hitch (Category 1) that accommodates a family of more than 20 tractor-matched implements.

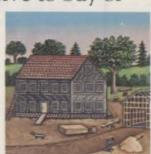
We also offer a choice of tire sizes and styles to fit your needs. And your John Deere dealer is a man you can count on for parts, service and good advice.

So if you're looking for a real workhorse that's just right for the jobs you do, see the 850 or 950 at your nearby John Deere dealer. Or, for a free brochure, write: John Deere, Dept. 63, Moline, Illinois 61265.

## THE JOHN DEERE "LITTLE-BIG" TRACTORS.

Nothing runs like a Deere."

Circle 120 on free information card







OHN DEERE

## No-trench installation

A new pamphlet that explains how to install an underground lawn sprinkler system without digging trenches is available free from Charles Machine Works.

The brochure includes information on how to plan the project and instructions for trenchless installation with a vibratory plow. For a free brochure, write: Charles Machine Works, Inc., P.O. Box 66, Perry, OK 73077.

## on on how to plan the and instructions for turf irrigation manual

IRRIGATION

The third edition of Turf Irrigation Manual, published by Weather-matic Div. of Telsco Industries, provides 350 pages of reference material for contractors involved with installing sprinkler systems.

It contains 60 pages of reference tables, including: technical symbols and abbreviations; piping pressure losses and velocities; equivalents for pressure, precipitation, wind velocity, flow, length; pumps and strainer data; and electrical wire data

For further information, contact: H. Gene Johnson, Weathermatic Div.. Telsco Industries Box 18205, Dallas TX 75218.

## **MARKETING IDEA FILE**

### Letter from Los Angeles

Lawn care marketing is definitely different in southern California than in the rest of the country. Bob Cohen, owner of The Green Scene, Los Angeles, wrote recently pointing out some of the differences:

"From reading stories in your magazine, I get the feeling that most of the services in the East are sold on the basis of a basic service with lots of extra tacked on — extras like special fertilizer, pesticides, liming, etc. Or some 'super' service at a premium price.

"Customers in our area would not accept this nickel-anddime attitude by a lawn care businessman. The homeowner in Los Angeles expects a service to take care of his needs and does not want to be bothered with any additional decisions. Our basic service is complete with all necessary fertilizers, pest controls, conditioners and weed controls.

"It is interesting that we have many customers with separate lawn areas — dichondra, bluegrass, bermudagrass, St. Augustinegrass — each of which has different needs for fertilization, weed control and definite seasonal characteristics as well.

"We do charge extra for options. But our options are for treatment to other forms of landscape — such as rose care, including systemic pest control (using MSR) . . . tree root feeding . . . ornamental foliar sprays (mostly for bugs, using Orthene and foliar feeding) . . . as good examples.

Orthene and foliar feeding) . . . as good examples.

"The landscaping in Los Angeles is more complex than those in typical eastern areas, making our industry considerably a more difficult technical and economic challenge out here."

Cohen also notes that for the last three years he has been sending out an informational newspaper to his customers six times a year, although he publishes only three separate editions each year (spring, summer and fall). In addition he leaves instructions at each service which includes news notes about lawn care, six editions a year

about lawn care, six editions a year.

"It has been our experience that consumers do not read," he says, "therefore putting out a lot of information to them at one time is apt to be lost by the majority. Repetition and information in small doses gets the bigger audience. And adding some cartoon humor probably helps get it all read."

IRRIGATION

## How to maintain an irrigation system

At the time a landscape maintenance contract is signed, it is important to check for proper sprinkler function, equipment breakage and control system malfunction, according to Dr. Ronald C. Smith of Texas Tech University.

He outlined a number of irrigation troubleshooting techniques at the Maintenance Symposium sponsored by the Associated Landscape Contractors of America in San Jose, Calif. earlier this year.

Sprinkler heads. If the heads are stuck in the "up" position, it could be sand or gravel clogged under the tail-piece of the head. Or the tailpiece could be hanging up on side of the nipple due to excessive wear of or poor construction. Clean or replace as necessary.

For a "walk-through" head operation for each zone or section, Dr. Smith advises to look for obstructions to sprinkler patterns, such as shrubs, mail boxes or grass. Move or add heads to correct.

If there are problems with inadequate coverage, but there are no obstructions, check static and flow pressures. Remedy by rezoning and resizing pipe, or add more heads to the line, spacing closer or adding a booster pump.

If there are problems with "fogging" of water at spray heads, check static and flow pressure readings. If it is beyond the operating range of sprinkler heads, install a pressure reducing value, or adjust flow control on automatic valves.

Equipment breakage. If there is a broken pipe, there will be a saturated sunken spot in the lawn area or reduced pattern coverage by sprinkler heads downsteam from the break. He said when repairing breaks, it is best to use compression couplers when possible. The parts cost more, but savings is returned in labor. Next best is flexible PVC on laterals where line pressure does not exceed 80 psi. Again, it is more expensive, but cheaper in terms of labor.

He says to attempt to determine the cause of the break. It could be stones, shifting soil, improper installation, freeze damage, excessive compaction. He recommends to correct the problem, and communicate the cause and correction to your client. Do not try to fix blame.

Control system malfunctions. Check the clock for power supply, then: for power to valves, check all stations with circuit or voltage tester, or a new valve. If all checks out, then go to the valves. Activate stations and check solenoid operation. If the solenoid is non-operational, replace with a new one. If the new one is not operational, then a break exists in the wire. Either repair or replace wire to valve.

If the solenoid works, but the valve doesn't, shut off main line and drain. Disassemble valve, check for dirt in bleed mechanism at solenoid. Clean it, and the valve should work. If the valve fails to close, check for dirt in the bleed plug and between seal and the seat of the valve. Clean it, and the valve should operate.

Winter preparation. Shut off the main line, close the S & W valve. Open all manual drain valves. Open all petcocks on anti-siphon or backflow device. Manually run through all stations to relieve pressure on automatic valves. Blow out of the system with compressed air may also be necessary. Keep clock on all winter, but with no station times.

Spring check-up. Make a visual walk-through and check for damaged or covered heads. Doing so will prevent damage from washouts. Make sure head spray is still properly oriented. Clean debris and grass from heads and make height adjustments.

For automatic systems, check for power to the clock; set stations for proper watering schedule. For manual systems, close valves, then back up one-quarter turn

Close all manual drain

## WATER PENETRATION

## **AQUA-GRO**

THE KEY
TO MORE SUCCESSFUL
GROUNDS MAINTENANCE

REDUCED WATERING • FASTER RESPONSE TO FERTILIZATION AND PESTICIDE CONTROL • REDUCED LABOR COSTS • ELIMINATE PUDDLES AND DRY SPOTS • REDUCED PROBLEMS WITH THATCH • HEALTHIER AND HEARTIER TURF.



Shallow rooted turf, poor moisture distribution from area not treated with Aqua-Gro amended water.



Deep rooted turf, good moisture distribution from area treated with Agua-Gro amended water.

Aqua-Gro is available in liquid concentrate or spreadable granular. For additional information write to:

## **AQUATROLS CORPORATION OF AMERICA**

1432 Union Ave. Pennsauken, New Jersey 08110 (609) 665-1130

#### What level cary businessmen think

CPSC sells represent to

CARE INDUSTRY

Lewn care businessman predict industry grewth of 10% next year

Enter a trial subscription by returning this card:

#### Read LAWN CARE IN-DUSTRY for:

 Timely reports on how other lawn care and maintenance companies handle their business problems.

 Useful tips on the tools of your profession: Direct mail, selling, customer service, equipment care, business management, service techniques.

 Ideas, facts and figures to maximize your business development and profits.

Edited to help you do a more effective job.

## LAWN CARE INDUSTRY

9800 Detroit Ave. Cleveland, Ohio 44102



#### BUSINESS REPLY MAIL

First Class

Permit No. 2675

Cleveland, O.

Postage will be paid by addressee

## LAWN CARE INDUSTRY

Attn: Circulation Department 9800 Detroit Ave. Cleveland, Ohio 44102 NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

## LAWN CARE INDUSTRY

The news monthly serving chemical lawn care and maintenance professionals. Please enter my introductory subscription to LAWN CARE INDUSTRY for just \$10 (12 monthly issues). I understand that if LAWN CARE INDUSTRY doesn't meet my expectations I can cancel and receive prompt refund. ☐ Bill company ☐ Bill me ☐ Payment enclosed Name \_\_\_\_\_ Title\_\_\_\_ Firm Business Address \_\_\_\_\_ City\_\_\_\_\_\_State\_\_\_\_Zip\_\_\_\_ Signature \_\_\_\_ Type of Business (check one) ☐ Chemical lawn care & mow-☐ Lawn mowing and other maintenance services ing/maintenance services ☐ Chemical lawn care only ☐ Other (specify)

valves. Petcocks on anti-siphon should be closed. Open water main valve slowly. Avoid damaging water hammer to system. When sound of flowing water ceases, open the valve fully.

For automatic systems, run through each station with manual override. Check to be sure all heads are adequately covering and that valves are closing. For manual systems, open each section to check for full coverage. Make sure manual valves close up completely and that there are no leaks.

#### IRRIGATION

## Irrigation equipment manufacturers listed

If you are a lawn care businessman already involved in irrigation system installation or maintenance, or thinking about going into that end of the business, this partial listing of companies that manufacture irrigation equipment may be useful:

Ametek Plymouth Products Division 502 Indiana Ave. Sheboygan, WI 53081

Rain King 1101 Burlington N. Kansas City, MO 64116 816-471-1133

Champion Brass Mfg. Co. 1460 N. Naud St. Los Angeles, CA 90012

Imperial Underground Sprinkler Co. 13555 W. 107 St. Lenexa, KS 66215 913-492-4920

Rain Bird Sprinkler Mfg. Corp. 7045 N. Grand Ave. Glendora, CA 91740 213-963-9311

Johns-Manville 909 W. Nielson Ave Fresno, CA 93708 209-442-8511

Toro Irrigation Div. 5825 Jasmine Riverside, CA 92504 714-688-9221

Lumenite Electronic Co. 2331 N. 17th Ave. Franklin Park, IL 60131 312-455-1450

Moody Sprinkler Co., Inc. P.O. Box 15167 Santa Ana, CA 92705 714-556-8730

L.R. Nelson Corp. 7719 N. Pioneer Lane Peoria, IL 61614

Rain Jet Corp. 301 S. Flower St. Burbank, CA 91503

Royal Coach Sprinklers, Inc. 4381 N. Brawley Ave. Fresno, CA 93711 209-442-0330

Turf Sprinkler Corp. 1324 Motor Parkway Hauppauge, NY 11787 516-582-9400

Weather-matic Div. Telsco Industries P.O. Box 18205 Dallas, TX 75218 214-278-6131

Rain-O-Mat Sprinklers, Inc. 12414 E. Whittier Blvd. Whittier, CA 90602

Safe-T-Lawn, Inc. 5350 N.W. 165th St. Hialeah, FL 33014 305-625-7000 **Richdel, Inc.** 1851 Oregon St. Carson City, NV 89701 702-882-6786

Microdot Products 2530 Crescent Dr. Broadview, IL 60153 312-343-9820

Greenlawn Sprinkler Co. 2200 S. Lipan Denver, CO 80223 303-936-4813



Well, I used to do all my business with Acme Lawn Care — until I got sick and tired of them hassling me about the lousy \$954.23 I owe them.

## **COST CUTTINGS**

## Rebuilding a truck? Get details first

If you are considering having a company vehicle rebuilt, Fleet Owner magazine suggests you or your maintenance supervisor get answers to the following questions before signing a purchase order with a rebuilder:

• Is there a reciprocal warranty that will pay, for example, for a rebuilt clutch that was installed in Chicago but failed in Cleveland?

• Is each component marked with the rebuilder's name, brand and date?

Does the rebuilt part have the same performance characteristics as a new one?

Are the components rebuilt to factory specifications using only genuine original equipment manufacturer parts?
 Can the rebuilder provide information on why the

original part failed?

• What is the coverage and duration of the new warranty?

Are all the labor and material costs included in the quoted price for rebuilding?



## SummerTime ST-100 is non-corrosive - non-clogging - non-toxic

The Lawn Care Market now has a Fertilizer Solution and Program which will provide healthier, better looking lawns for the customer at a much more reasonable cost to the applicator.

Our program aims to significantly reduce investment in material and equipment costs.

Our PROGRAM and MATERIAL when used as directed have these advantages:

- Less material cost per square foot of lawn
- Non-corrosive to application equipment
- Non-toxic to seed, plant roots, and foliage
- Non-poisonous to people and animals
- Non-corrosive to metal lawn furniture, fences, gates
- No agitation necessary fertilizer is a true
   solution and will not "settle out"

solution and will not "settle out"

Let SUMMERTIME ST-100 help you get your

next 100 customers.

Phone Number

State Zip

Phone Number

LAWNGARE PRODUCTS

P.O. Box 306, Columbus, Ohio 43216 (614) 294-4556

Yes, I'm interested in your SummerTime

Liquid Fertilizer.

Title

Company

Send technical literature.

☐ Have your salesman call.

Circle 128 on free information card

### EPA grants Chevron expanded Orthene label

Orthene insecticide has been granted an expanded tree and ornamental spray label by the federal Environmental Protection Agency (EPA) reports the manufacturer, Chevron Chemical Co., San Francisco.

Adding significantly to the number of pests on its new label, Orthene Tree and Ornamental Spray is now one of the most versatile and effective insecticides to serve the tree care and ornamental horticulture market, said R.H. Foell, Ortho product manager for insecticides.

Additional Orthene Tree and Ornamental Spray registrations include: on trees and shrubs Orthene controls aphids, tent caterpillar, leafrollers, adult root weevils and the Nantucket pine tip moth larvae. It will also control lace bugs, webworms, scales (crawlers), Birch leafminer and Douglas fir tussock moth larvae. Orthene still is labeled for control of gypsy moth larvae under the older label.

Orthene is also now labeled to control lygus bugs on daisies, statice and yarrow. Under the expanded greenhouse label it can be used to control aphids, mealybugs, whiteflies, thrips and scales (crawlers) on all foliage plants, plus orchids, anthuriums, cacti and poinsettia. It also is labeled for thrips on roses, carnations and chrysanthemums where the previous registration covered only aphid control.

Orthene works to control insects in two ways. First, it kills insects on contact. But it also penetrates plant tissue providing continuous local systemic control for later invaders. Rates vary but are often as low as ½ pound per 100 gallons spray; thus minimizing both cost and the amount of chemical released in the environment. The toxicity level of Orthene to mammals and birds is low when compared to many other agricultural chemi-

cals, Chevron said. Orthene is especially low in toxicity to fish.

For more information, contact: Ortho Agricultural Chemicals Division, Chevron Chemical Co., 575 Market St., San Francisco, Calif. 94105.

RENOVATION

#### Roundup, Pennfine team up in new turf renewal plan

Two major turf products — one a herbicide and one an improved turfgrass variety — have joined forces to provide lawn care businessmen with a new, effective program for renewing or renovating existing lawn areas.

Roundup herbicide, manufactured by Monsanto Agricultural Products Co., St. Louis, and Pennfine perennial ryegrass have been teamed up in what marketers for the two products call a "2-Step Turf Renewal Plan." Details of the plan are available in a new test kit that includes enough Roundup and Pennfine to renew approximately 200 square feet of turf.

The one application of Roundup called for in the plan will destroy a variety of annual and perennial grasses and broadleaf weeds. Roundup is a foliant-applied herbicide that utilizes the biological process of translocation to spread its killing properties to all parts of treated plants. Translocation is the means by which sugars and other materials are circulated through living plants.

Roundup requires several days to be absorbed into the foliage and translocated through the entire plant and its network of below-ground roots and rhizomes. Because Roundup leaves no residual soil activity, Pennfine can be spread over the treated area about seven days after the herbicide application.

Pennfine's agronomic



Free test kit for "2-Step Turf Renewal Plan."

characteristics make it a good variety for the turf renewal plan. Developed by Dr. Joseph M. Duich at Pennsylvania State University, it germinates quickly and grows into a dense, full stand of grass

A free test kit containing usage instructions and enough Roundup and Pennfine to renew approximately 200 square feet of turf is available to lawn care businessmen by writing: Turf Renewal Plan, P.O. Box 923, Minneapolis, Minn. 55440.

WHO'S WHO

## Landscaper directory published by ALCA

The Associated Landscape Contractors of America (ALCA) has released its new 1979/1980 membership directory, Who's Who in Landscape Contracting. The new 80-page directory contains listings for more than 500 commercial landscape contractors throughout the country, with index for specializations of each

The ALCA directory is crossindexed by geographic location,
as well as by individuals' names.
The regular directory listings include company name, address
and phone of all listed contractors, along with the names of
principles, a primary area listing
of either (or both) exterior or interior landscaping and the areas
of specialization done — resi-

dential, commercial, industrial, government, maintenance, irrigation, design/build, erosion control or lawn care.

The directory has been distributed to all ALCA members, and to professional practice landscape architects and other user groups for landscape contracting services.

ALČA president Bill Thornton, Thornton Landscape, Inc., Cincinnati, said of the new directory:

tory:

"I am very pleased to note that this edition of Who's Who is substantially larger than past directories, representing a full spectrum of landscape contractors to all buyers/users, and



including the largest membership ALCA has ever had. The industry is continuing to grow, and this new directory attests to the growth of ALCA."

While not generally available to landscape contractors who are not ALCA members, the new directory is available to interested landscape architects, designers, general contractors, building managers and other users of landscape contracting. Full information is available from: ALCA Publications, 1750 Old Meadow Rd., McLean, Va. 22102.

CENTRAL PLAINS

#### Kansas conference will have lawn care session

The 30th annual Central Plains Turfgrass Foundation/Kansas State University Turf Conference set for October 10-12 will feature a special lawn care session on the second day of the meeting.

The conference will be held at the K-State Union, Kansas State University, Manhattan, Kan. For further information, contact: Dr. Robert N. Carrow, Horticulture Department, KSU, Manhattan, Kan. 66506, 913-532-6170





## To improve your lawn care business, just add water.



You've got a growing business, we've got a growing business. Why not combine them? Installing underground automatic

sprinkler systems is easy and profitable.

And with quality controllers, heads and valves from Rain Bird, rainmakers to the world since 1933, your customer is assured the best system available. His lawn stays healthier and so do you.

For more information on this moneymaking opportunity, contact your nearest Rain Bird distributor. Or write to us at the address below.

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

RAIN BIRD
Bringing new ideas to life.

7045 N. Grand Avenue, Glendora, CA 91740

23

## Toro sets earnings record in 3rd quarter

The Toro Co., Minneapolis, recently reported record sales and earnings for the third quarter and nine months ended April

Quarterly sales exceeded \$100 million for the first time in company history. And, at the end of the first nine months, the company has surpassed full-year sales and earnings records set in the last fiscal year ended July 31,

David Chairman McLaughlin said he expects sales in the fourth quarter to again exceed \$100 million, putting fiscal 1979 sales over the \$350 million level. He said he looks for a record earnings performance in the final quarter with margins improving over the third quarter.

For the third quarter, sales rose 43 percent to \$100.1 million from \$70.0 million in the third quarter the year before. Net earnings improved 14 percent to \$4.38 million from \$3.86 million, and fully diluted earnings per share were up seven percent at 77 cents versus 72 cents.

For the nine months sales climbed 63 percent to \$251.3 million, from \$154.6 million. Net earnings rose 72 percent to \$13.61 million from \$7.92 million, and earnings per share, fully diluted, rose 65 percent to \$2.43 from \$1.47

In the last fiscal year ended July 31, 1978, Toro had record sales of \$223.9 million, net earnings of \$11.0 million and fully diluted earnings per share of \$2.02.

All product lines contributed to the strong sales gains, McLaughlin said, with major improvements coming from its professional turf areas.

The fast-growing irrigation product line showed a 43 percent sales gain in the quarter and for the first nine months is 43 percent ahead of last year. Toro recently announced a \$3.4 million expansion of its irrigation facilities.

VARIETIES

#### **Bristol Kentucky blue** licensed in Canada

The Bristol variety of Kentucky bluegrass has just been approved for turfgrass use in Canada, according to Eugene Mayer, turfgrass research agronomist at O. M. Scott & Sons, Marysville, Ohio.

Bristol was developed cooperatively by Scotts and the New Jersey Agricultural Station and will be marketed through Scott's ProTurf technical representatives for use throughout Canada.

The variety is characterized as a moderately low-growing, close-knit, dense, leafy and medium-textured turf-type bluegrass variety. It is distinguished by its dark green color, along with its capacity to green up earlier in the spring than many varieties and generally maintain its color later into the fall and winter than many other grasses.

Bristol is also noteworthy for its high level of disease resistance, the company said. In testing, Bristol was found equal to or better than other turfgrass varieties in resistance to leaf spot, stripe smut, Fusarium blight and powdery mildew.

Regarding performance in the sun, a five-year study at the University of Rhode Island placed Bristol in the upper third among 55 bluegrass selections tested. Additional tests at Rutgers University placed Bristol in the upper 10 percent of 50 bluegrass varieties evaluated. While it is usually difficult to maintain Kentucky bluegrass in the shade, Bristol demonstrates excellent adaptability, especially with its resistance to diseases commonly found in shade, such as leaf spot and powdery mildew, the company said.

VARIETIES

### Sabre granted plant variety certificate

Sabre Poa trivialis has been granted a certificate under the Plant Variety Protection Act by the Plant Variety Protection Office of the federal Department of Agriculture, according to J. L. Carnes, president, International Seeds, Inc., Halsey, Ore.

Sabre was developed cooperatively by International and the New Jersey Agricultural Experiment Station at Rutgers University and is the first domestic variety of Poa trivialis to be granted such a certificate.

Known for its ability to endure shade, Sabre is the only Poa trivialis available to fine turf managers other than common, unpedigreed seed imported from northern Europe. Sabre seed is now being produced in Oregon. A rapid germinating variety, it mixes well with the various finebladed ryegrasses, fine fescue and bluegrass. With more than two million seeds per pound, a relatively small amount of the seed adds an exceptional number of potential grass seed plants per pound to any grass seed mixture.

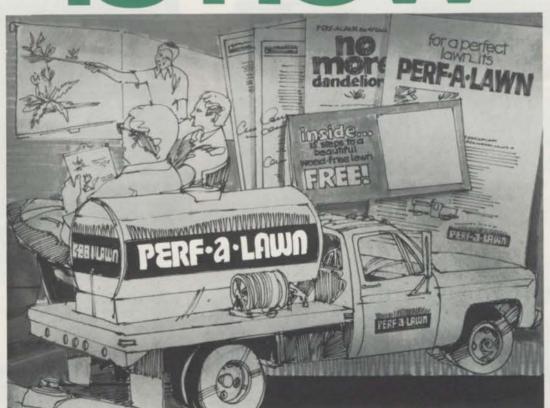
LAWN SESSIONS

#### Southern conference set for Nov. 18-20

The annual Southern Turfgrass Conference will be held Nov. 18-20 at the Camelot Inn in Little Rock, Ark.

For further information, contact: Dr. G. Euel Coats, Drawer CP, Mississippi State, Miss. 39762, 601-325-3138.

# e future



## ith PERF·A·LAWN

Professional lawn care is one of today's fastest growing industries. And PERF-A-LAWN is one of the largest, most successful companies in the industry.

Why? Because we offer the most liberal and most productive franchise program in lawn care.

Our franchise fee is one of the lowest, giving you the opportunity of a lifetime to start your own successful lawn care business with a minimum investment.

We provide thorough training in every step of the lawn care process at no extra cost to you.

We supply free continuing technological assistance covering new product advances, new equipment, along with innovations in application techniques.

We provide you with virtually everything you need to begin

And PERF-A-LAWN is widely recognized . . . with corporate branches and franchisees in eight states and 22 major marketing areas.

Read what two of PERF-A-LAWN's many successful franchisees have to say: "We could not have chosen a better company. They helped and supported us through the first years." - Steve Juntgen,

Ft. Wayne. "The extensive training is excellent. They are truly experts." - Virgil Huffman, Toledo.

If you're looking for a money-making franchise opportunity, look to PERF-A-LAWN. The profits are now. The growth is now. The future is now. Mail coupon today for free franchise kit.

Wwwwwm	WWW.WWW.		WWWWW
PEI	<b>RF-a-</b>	LAU	M.

85 Quick Road, New Carlisle, Ohio 45344 Gentlemen: Hurry ... send full details on your high-profit, low-investment PERF-A-LAWN franchise. I understand there is no obligation.

Market in which I will operate.....

Circle 110 on free information card

Lawns, Inc., Austin, Texas.

Also: Bill Fischer, Spring-Green Lawn Care Corp., Naperville, Ill.; Ritch Skelton, Duncan Landscape Associates, Vienna, Ohio, and also vice president of the Associated Landscape Contractors of America (ALCA); Kent Potts, Brazos Valley Nursery, Bryan, Texas, also representing ALCA; Ronald Ahlman, Lawrence & Ahlman, Inc., Dundee, Ill., immediate past president of ALCA; Bob Earley, editor, and Dick Foster, publishing director of LAWN CARE INDUSTRY.

Four major committees were formed consisting of members of the board of directors and other volunteers from among those who attended the meeting. Committees, basic goals and initial members are:

Membership/Dues - to decide on classifications of members and a dues structure. Initial members are: White, Doug Baker, Murphy, Eldred, Derrick, Duncan and Burton.

Bylaws - to draft a proposed set of bylaws for the organization. Initial members are: Zwiebel, Schnare, Brandt, Weber, Kelly and Doug Baker.

Name and incorporation — to decide on a name and to go through legal stages of incorporation. Initial members are: Erbaugh, Burton and Schnare.

Management - to decide how the organization will be managed on a day-to-day basis. Initial members are: Burton, Ober, Latting and Cruse.

Those in attendance hired a

Chicago association management firm - Bostrom & Associates - on a 90-day basis to aid the organization in legal incorporation and other start-up tasks. Although no final name for the organization has been chosen, all preliminary work will be done under the name of the Professional Lawn Care Associ-

Inquiries about the organization should be directed to: Glenn Bostrom, Professional Lawn Care Association, Suite 1717, 435 N. Michigan Ave., Chicago, Ill.



Dick Foster (left), publishing director of LAWN CARE INDUSTRY, addresses the group of lawn care businessmen at the Fort Mitchell, Kentucky Holiday Inn.



Glenn Bostrom. who will be managing the association, at least for its first 90 days.



Pro. tem. officers of the Professional Lawn Care Association, from left: Jerry Faulring, Hydro Lawn, Gaithersburg, Md., president; Doug Baker, Leisure Lawn, West Carrollton, Ohio, vice president; and John Latting, Lawn Groomer, Normal, Ill., secretary-treasurer.



Gordon Ober (left), of Davey Lawnscape Service, Kent, Ohio, makes a point during discussions, as Ron Giffen, Lakeshore Equipment & Supply Co., Elyria, Ohio, and Ron Collins and Joe O'Donnell, R. W. Collins, Inc., Satellite Beach, Fla., look on.



From left: Steve Derrick and John Latting, both of Lawn Groomer, Normal, Ill.; Don Burton, Lawn Medic, Inc., Bergen, N.Y.; and Larry Brandt, Spray-A-Lawn, Cincinnati,



From left: Jerry Amstutz, Spray-A-Lawn, Orrville, Ohio; and Dr. Paul Schnare, Atkins Lawn Pros, Columbia, Mo.



From left: Jim Kelly, Keystone Lawn Spray, Wayne, Pa.; Ronnie Zwiebel, Chem-Care Lawn Service of Alabama, Birmingham; and Marty Erbaugh, Lawnmark Associates, Peninsula, Ohio.



Meeting in committee, from left: Bill Fischer, Spring-Green Lawn Care Corp. Naperville, Ill.; and Rick White, Village Green Lawn Spraying, West Chicago, Ill.



From left: Ritch Skelton, Duncan Landscape Associates, Vienna, Ohio; Kent Potts, Brazos Valley Nursery, Bryan, Texas, both representing the Associated Landscape Contractors of America; and John Cruse, Easy Lawn Co.,

Meeting in committee, from left: Jim Duncan and Rick Eldred, both from A-Perm-o-Green Lawns, Inc., Austin, Texas.



Many broad goals of a lawn care association were discussed by those in attendance. On the top of the list was relations with government on the federal, state and local levels. Many feel that the association should collect and disseminate information flowing into and out of Washington, and collect and disseminate information on situations occurring in one state that could cause trend-like situations to develop in other states. As the lawn care industry becomes more visible, there is more likelihood that government agencies will try to regulate it, and those in attendance felt that the industry should have a say in any regulation that occurs.

Training program for both staff and management on a regional and national basis was discussed. The association hopes in the future to establish training programs in areas such as agronomy, sales, business management, advertising/promotion, public relations and safety.

Those in attendance said that they hope the association in the future can develop operating standards for the industry or a code of ethics that lawn care

companies might use as a guideline to running a sound business. This would be particularly useful to new companies entering the industry.

It is expected that some type of newsletter or other form of communication will be established by the association to disseminate information to members. There would probably be other forms of communication also, such as a government update newsletter periodically.

Those in attendance said that it is time for the lawn care industry to take its place among other green industry groups such as golf course superintendents, sod producers, nurserymen and others. It is expected that the association will work together with other green industry associations on projects that would mutually benefit all involved.

One established industry group that already has a number of members from the lawn care industry is the Associated Landscape Contractors of America. Representatives from ALCA attended the meeting and suggested that lawn care businessmen might find it advantageous to affiliate with ALCA soon or at some time in the future. In any event, the ALCA representa-



Dave Murphy, Green Valley Co., Shawnee Mission, Kan.



Fred Rowley, Rollins Lawn Care, Atlanta, Ga.



Howard Evers, Tru-Green Corp., East Lansing, Mich.

tives in attendance offered that group's assistance in formation. management or other activities.

It is hoped that the association can establish an annual national convention which would include an educational program and a trade show specifically for the lawn care industry. Those in attendance indicated that this could become a reality as soon as next year.

Because the lawn care industry is relatively young, it was mentioned at the meeting that a lawn care association could serve as a statistics-gathering body to develop information on the size of the industry and the

**Custom-made** 

tank trucks

built to your

specifications.



19506 Nottingham Rd., Cleveland, Ohio 44110

## Complete line of accessories: Lawn Spray Guns . . . . . . . . \$ 14.95

Synflex Spray Hose ..... \$ 49.50 per 100 Ft.

Spray Nozzles,

Full Cone, Large Droplet .. \$ 6.95 Soil Probe Made For

Lawn Sampling ..... \$ 18.95 Measuring Wheels . . . . . . . \$ 29.95 Hannay Reels — Electric ... \$235.00 

Wanner Hydracell Diaphragm Pumps, FMC Piston Pumps.

Tuflex Fiberglass Tanks.

#### GRAHAM LAWN CARE EQUIPMENT, INC.

6460 Osceloa Way Douglasville, GA 30135 (404) 942-1617

Circle 112 on free information card

## **TOOLS, TIPS** & TECHNIQUES

### Gasohol and small engines may not mix

Now that gasohol has been appearing in service station pumps and receiving widespread publicity, the question might arise "can I use gasohol in my lawn care equipment? Should I use it?'

Scientists at the Tecumseh Research Laboratory, Ann Arbor, Mich., have issued a cautionary warning regarding its use in small engines. The lab is operated by Tecumseh Products Co., a firm with sales of \$750 million annually in small engines, air conditioning and refrigeration compressors.

In 1974, Tecumseh developed a blend of 10 percent anhydrous isopropyl alcohol and 90 percent gasoline (labelled IPA) to stop corrosion caused by tiny fuel residues that remained in every Tecumseh engine after factorytesting.

Use of this mixture successfully cured problems associated with the condition commonly referred to as "sour gas." But, warn the scientists, there's a difference between Tecumseh's test fuels and gasohol, and a difference between automobile engines and small engines for outdoor power equipment. Anhydrous isopropyl alcohol reacts with the peroxides which develop in fuel because of the water content in the gasoline, it neutralizes them, and in the process gets converted to acetone, which is harmless to engines. However, gasohol generally contains grain or methyl alcohols that are not anhydrous. These alcohols react with the water content present in gasohol and tend to form strong acids which can corrode metal parts, even eat rubber and plastics.

This is particularly evident in cases of off season storage of lawn equipment where the fuel supply is likely to be stored for a long time.

There's also a significant difference between automobile and lawn equipment engines. Except in cold starts, a car does not run with rich fuel/air ratios. Government-required efficiency and emission controls preclude consistent rich operation. However, in small engines the situation is different. They do run rich, and they are stored for long periods. Here, the potential for corrosion is very real, and this corrosion comes from the acid formations.

Tecumseh's scientists advise you to play it safe. Decide for yourself the pros and cons of gasohol in your automobile. But, save potentially expensive repairs and parts replacement costs by using only unleaded regular gasoline or leaded regular gasoline in your outdoor power equipment.



scope of services offered. Along with this would come an association directory of qualified industry member companies. It is also hoped that a lawn care association could provide things such as group insurance plans and pension plans, something many small businesses in the industry are lacking.

Consumer education about the industry was discussed by those in attendance. The association hopes to develop regional and national promotion programs to establish the industry as

consumer and increase market demand and improve market perception.

a sound one in the eyes of the

The association hopes to be able to provide input to landgrant state universities to influence curriculum design to help provide a qualified and knowledgeable work force for the industry in the future. Areas such as internships might be a part of a program such as these.

The association also hopes to influence and fund research efforts by universities, government agencies and manufacturers. This would be research specifically designed to meet the needs of the lawn care industry.

Faulring told LAWN CARE INDUSTRY that he welcomes suggestions and comments from all members of the industry, particularly in the early stages of formation of the association. His address and phone are: Suite 301, 656 Quince Orchard Rd., Gaithersburg, Md. 20760, 301-948-

For further information, contact: Glenn Bostrom Professional Lawn Care Association Suite 1717 435 N. Michigan Ave. Chicago, IL 60611 312-644-0828



Larry Brandt, Spray-A-Lawn, Cincinnati, Ohio.



Ronnie Zwiebel, Chem-Care Lawn Service of Alabama, Inc., Birm-



Jim Kelly, Keystone Lawn Spray, Wayne, Pa.



Gordon Ober, Davey Lawnscape Service, Kent, Ohio.



Doug Baker, Leisure Lawn, West Carrollton, Ohio.



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

RESEARCH

#### Turfs vary widely in wear tolerance

Professional turf managers have long recognized that certain grasses could stand heavier traffic than others, but no comparison of relative wearability was available.

Now, coomparative wear tolerance has been made of 47 turfgrasses, both alone and in specific combinations.

A wear simulator was designed and constructed by turf scientists with the Texas A & M Experiment Station, under a grant from the United States Golf Association Green Section.

As a group, the improved turftype perennial ryegrasses have superior wear tolerance compared to the fine-leafed fescues, rough bluegrass and creeping bentgrasses.

As has been observed in the case of overall winter turf performance, there is not a great deal of difference in wear tolerance among many of the recently released turf-type perennial rvegrasses.

In two years of tests, Caravelle perennial ryegrass has ranked at or near the top in overall wear tolerance, according to Dr. James Beard, professor in the Department of Soil and Crop Sciences with the Texas Agricultural Experiment Station and Texas A & M University.

Comparative wear tolerance among the fine-leaved fescues, rough bluegrasses and creeping bentgrasses showed that Kensington chewings fescue has ranked at or near the top in wear

However, this group is definitely inferior in wear tolerance to the perennial ryegrasses, and even the best, Kensington, ranked about equal to an average

The fine-leafed fescues are exhibiting better comparative wear tolerance in winter overseedings of bermudagrass turfs than they have in higher cut monostands (one kind) maintained under lawn conditions in Michigan, according to Dr. Beard.

Between the two rough bluegrasses, Sabre has consistently ranked superior to Denmark (common) in both years of tests. Among the creeping bentgrasses, Penncross ranked higher than Seaside and Emerald in wear tolerance. Beard said that the research on wear tolerance will continue.

## Finally, An Aid For **Teaching Turfgrass**

Superintendents, Contractors, Lawn Care Managers, New, On-the-Job Reference The Turf Managers' Handbook is a compr hensive, organized approach to turfgrass science and care. It has been designed written by leading turf specialists from Purdue, Dr. William Daniel and Dr. Ray Freeborg, for on-the-job reference and text for students. The book contains 150 illustrations and 96

color photographs. Data includes 240 tables and forms, included are specifications for rootzone employment, calculations for



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

Please send copies of the hardback (\$18.95 ea.) \_\_\_\_ copies of the paperback (\$14.95 ea.)

A shipping charge of \$1.25 per book must be added

Please charge to my VISA or MASTER CHARGE (circle one)







Weighs 51 lbs. ... aerates 1/4 to 11/2 inches deep ... can be operated very effectively by young inexperienced help.





Remarkable new machine will add thousands to your profits each year.

Not found in stores, sold factory direct to save you money. Good engineering + simple design = low price. Powered by 2 hp Briggs Stratton engine . . . aerates ¾ to 1 ½ inches deep . . . Very easy to control . . . Works in hard to get at places . . . Safe and easy to operate. Engine warranted for 90 days . . . Gear train & tines carry 1 full year warranty . . . try one for 15 days . . . your money back if not fully satisfied.

Can be used as a tiller to weed beds and shrubs from 6 to 18 inches in width. One of the most versatile lawn-garden machines money can buy . . . Built by Company with 30 yrs. experience in the manufacture of tough dependable tools. For full information

**DERBY TILLER COMPANY** Rumson, New Jersey 07760 I want more information

Visa-Bank Americard & Master Charge orders accepted by phone Mon-Sat 9-5. Call (201) 741-0601

Circle 134 on free information card

## **PRODUCTS**



## Soil sampler with "backsaver" handle

Clements Associates, Inc. announces availability of its JMC soil sampling equipment with its "backsaver" handle. The handle eliminates bending over to pull a core out of the ground. The unit's sampling tube is pushed into the ground by foot pressure.

Circle 202 on free information card



### 1,250-gallon steel tank spray rig

Torco Equipment Co. is offering a four-page brochure detailing its TS 1250, a 1,250-

gallon stainless steel tank spray rig mounted on a two-ton chassis. Features include: FMC 20 gpm turf pump for powders and granulars; mechanical agitation with seven paddles and six bearings; jet sweep that eliminates tank settlings; easy access for pump and filter service; PTOdriven with only two belts involved; calibrated sight gauge with 18-inch leak-proof hatch; unique heavy-duty, electric-driven reel; lightweight hose offering free wheeling pull-out; metered gun with unique Torco nozzle. The brochure also has information on the company's 300- and 500-gallon models, and information about the Torco spray gun, with a 70° spray pattern.

Circle 214 on free information card



### Centrifugal pump

The MP Pumps Division of Tecumseh Products Co. announces the addition of the series 120 "Hi-head" centrifugal-pump to its product line. Featuring the unique "Pumpak" design common to many other MP models, the series 120 is designed to fit NEMA JM pump motors. With standard NPT two-inch suction and 1½-inch discharge openings, the pump is rated at up to 200 GPM and up to 140 feet total discharge head.

Circle 205 on free information card



## "Roll-aboard" loading trailer unit

A new line of Trailevators, designed for greater convenience and efficiency in load hauling, has been introduced by Magline, Inc. The new trailer units lower to the ground level for fast, "roll-aboard" loading, and hydraulically elevate the load to towing position in seconds. Bed sizes range from 60 inches wide and eight feet long to 70 inches wide and 10 feet long.

Circle 201 on free information card

## Storage tanks for lawn care tank farm

Amerglas Corp. offers a line of fiberglass reinforced plastic storage tanks ranging in size from 500 to 4,000 gallon capacity horizontal and 500 to 20,000 gallon capacity vertical, suitable for lawn care tank farm usage or a batch mixing system. The tanks can store corrosive materials, which eliminates the need for sand blasting and painting. The company can fabricate any type of custom work within its capacity ranges.

Circle 213 on free information card

## Brush control on industrial sites

Front tire: 9.5L-10

Rear tire: 21.5L-16.1

The federal Environmental Protection Agency has approved registration of Garlon 3A liquid amine herbicide for control of woody plants and broadleaf weeds on rights-of-way and industrial sites, Dow Chemical Co. has announced. According to David Frederick, product manager for Garlon, the new herbicide is active against more than 35 woody species and also controls more than 10 species of common annual and perennial broadleaf weeds.

Circle 210 on free information card



#### Flow meters

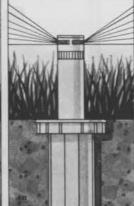
"Satoh hugs the hillside like a mountain goat.

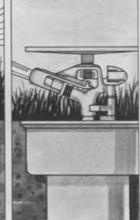
And that satisfies me."

Signet Scientific offers a broad, versatile and economical line of flow metering and control

## The taller the grass ... the higher we pop!







From residential to light commercial turf installations, Champion has a pop-up to do the job! When you compare the cost, precision construction and performance, you'll buy Champion. The 18HP (2" pop-up), the P180 (2½" pop-up) and the 6178 Impulse pop-up are just three of over one-hundred fifty sprinklers,

valves, controllers and accessories featured in the new Champion, fullcolor catalog. Ask for your free copy.



1460 N. Naud St. Los Angeles, CA 90012 (213) 221-2108/(213) 223-1545 Satoh satisfaction starts with the Stallion Ground Hugger's dependable, smooth-running 38hp water-cooled Diesel engine. With nine forward speeds (three reverse) and dualspeed live PTO (540 and 1,000 rpm), the cost-efficient Stallion Ground Hugger is ideal for hilly terrain uses such as municipal park maintenance and golf course grooming.

STALLION

And its standard power steering gives you effortless maneuverability.

Let Satoh satisfy your tractor requirements like a pro. It satisfies



Get it at your **SATOH** tractor dealer. P.O. Box 5020, New York, N.Y. 10022 LAWN CARE INDUSTRY

## **PRODUCTS**

devices. Standard sensors can be mounted in pipes ranging from 1/2-inch and up. Instruments are located remotely and present measurement of low flow rate and total flow in a variety of units.

Circle 211 on free information card





### Landscape edging

Steel edging available from Joseph T. Ryerson & Son, Inc. gives lasting beauty and low-cost protection to landscape designs in commercial, industrial and residential applications. Used as a retaining wall for driveways, walks, terraces and for line definition around building perimeters, flower beds and trees - it installs easily, permanently and requires no maintenance. Several widths and thicknesses are available in 16 and 20 foot lengths. Technical bulletin 50-7 is available for further information.

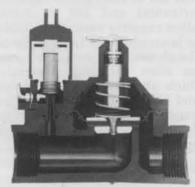
Circle 203 on free information card



### Polyethylene tank power sprayer

From Master Mfg. Co. comes two new Dobbins brand polyethylene tank power sprayers. These two new lightweight models are ideal for fertilizing and pesticide application on lawns and trees. The tank is non-corrosive. There is only one moving part in the pump which can deliver a 20-foot vertical stream at 65 psi. The pistol grip spray gun adjusts from fine mist to solid stream.

Circle 208 on free information card



Nylon irrigation valve available

Weather-matic Division, Tel-

sco Industries, has introduced

a one-inch remote control irriga-

tion valve with glass-filled nylon

body and cover. The 11024FB

full close positions. Product bulletin No. 279 is available for further information. Circle 209 on free information card

model features a brass flow adjustment and brass bleed con-

trol. The flow stem is non-rising

and operates from full open to

## Impact sprinkler has side-splash eliminator

Champion Brass Mfg. Co. has introduced a modified version of its popular U61D impact sprinkler. Designated the U61-DP, the re-engineered impact features a precision arm to prevent the side splash of water and produce a more precise spray pattern. It can be adjusted from a 360° fullcircle operation to patterns ranging from a wedge-like 20° to a wide 340°. A free, full-color catalog is also available.

Circle 204 on free information card

### Brass impact sprinkler

Johns-Manville offers a data sheet on its new 195 series brass impact sprinkler. The sheet gives comprehensive performance characteristics in tabular form. Information detailed in the sheet includes pressure at sprinkler base, flow rate, sprinkler radius, maximum rectangular spacing and precipitation per hour.

Circle 207 on free information card



### Pipes for pump, pivot installation

Connecting underground pipelines to pumps and pivots is now easier and more efficient with Hydro Engineering's Telescoping Z Pipes, made of heavy gauge steel and sold ready for in-stallation. The pipes telescope together after depth of the PVC line is determined. Several configurations are available, and the pipes can be made to order.

Circle 206 on free information card



#### Rotary offers vacuum chamber

The newest addition to Yard-Man's complete line of sidedischarge rotary mowers is Model 11720, a push-type rotary with a 20-inch cut. This lightweight unit with a non-rust cast aluminum deck incorporates a highly efficient "vacuum chamber" action to provide outstanding suction to lift grass blades while they are being mowed for a cleaner, neater cut.

Circle 212 on free information card

## Free from Hypro

## Sprayer Pump Handbook



**New Edition!** 

8 pages of helpful information to help you select and use your pumps better. Hookup diagrams for piston, roller and centrifugal pumps. Graphs of pump outputs, flow through spray nozzles. Data on pump and sprayer component selection plus much more. Send for your

free copy now. When you need pumps for sprayers or pressure wash systems,

make your choice Hypro.



Circle 108 on free information card



When your reputation depends on your being #1, your sprayer should be #1.



The PC100 Complete Pressure Spray Unit shown above with Hypro 12 galloniminute pump with pressures up to 300 PSI (Also available FMC John Bean and Myers pumps.)

The TUFLEX manufacturing process al lows a five year war-ranty on all tanks.

For economy prices and more information on our complete line of tanks. write or call now:

Juflex: is the only manufacturer to specialize in seamless fiberglass spray tanks specifically for the pest control and lawn care industry. Remember when craftmanship was an art . . . at Tuflex it still is! The exclusive Tuflex process carries a full five year warranty on all handcrafted seamless fiberglass tanks.

**Tuflex Manufacturing Company** P.O. Box 13143, Port Everglades Station Fort Lauderdale, Florida 33316 Phone 305/525-8815

Plant Location: 800 Eller Drive, Port Everglades in Fort Lauderdale Circle 138 on free information card



## Double-duty turf beauty.

The natural choice.

The elite bluegrass growing in the sun is Glade. The elite bluegrass growing in the shade is Glade. That makes it the natural choice for all lawns. It performs well in up to 60% shade with a higher resistance to powdery mildew. Additionally, Glade has better-than-average resistance to Fusarium blight. It's now used as a prime ingredient for fortification in many professional turt grass mixes. A Rutgers selection, Glade has outstanding medium to deep green color. Low-growing Glade germinates and establishes fast, developing a thick rhizome and root system for close-knit sod.

Most lawn areas have both sun and shade naturally. That's why Glade Kentucky bluegrass is the natural choice. Specify Glade for your next turf grass mix. It's available at your local wholesale seed distributor.

Another fine, quality-controlled product of Jacklin Seed Company,

## BEHIND THIS ISSUE



We did it. There is going to be a lot more work, a lot more organization and a lot more involvement from all facets of the industry, but we did it. We took the first steps towards forming a national lawn care association [see "Industry Association Is Formed," page 1].

It's not the first try at getting the lawn care industry organized. A few years ago, Jim Sackett of Leisure Lawn in Troy, Ohio and others tried to get an association organized, but it never really materialized after the first few meetings were

But the time is right now, at least that is what the 40 lawn care businessmen from all over the country who took time together at the peak of their lawn care season have said. We at LAWN CARE INDUSTRY would like to think that our magazine has had something to do with making the time right. The people in that room said that our magazine has helped pull together the industry, have made them and manufacturers and others aware that there is indeed a lawn care industry to be reckoned with.

As soon as we began publishing LAWN CARE INDUSTRY two years ago this month, the letters began rolling in, inquiring if there was a lawn care association organized on a national level that lawn care businessmen could join. In formal presentations at turf conferences (and some informal ones too) we heard talk to the effect of: "Why don't we have an industry association? What do we have to do to get one organized?"

Earlier this year, the situation came to a head when we were approached by a group of lawn care businessmen at a turf conference. They wanted to work together to form a lawn care association and they wanted our help. We had a few more meetings, discussed the idea with manufacturers, suppliers and turf educators, and decided to call a meeting.

We invited representatives from 38 of the top lawn care companies in the country to the Holiday Inn in Fort Mitchell, Kentucky in the Cincinnati metropolitan area, and held our breath. Just about all of the companies responded. A few could not participate due to other commitments, but offered their help and support at a later date.

I wasn't sure what would happen the next day when I checked into the hotel. Gordon Ober of Davey Lawnscape was registered in the room next to mine, and we spent the better part of the evening



Faulring (left) and Foster

discussing the next day's events. I still wasn't sure if we were going to be able to pull it off.

But soon after the meeting started, I knew we were on the right track when about a quarter of the way into my carefully prepared agenda, somebody said: "Why are we spending all of this time discussing whether or not we need a lawn care association? We wouldn't all be here if we didn't believe that. Let's get on with it and organize."

The two people in the picture at top right had a lot to do with getting the association off the ground. LAWN CARE INDUSTRY publishing director Dick Foster (it was his idea to start the magazine almost three years ago) broke one logjam by pledging \$5,000 of the magazine's budget to help get the association rolling. The rest of the lawn care businessmen in the room ponied up \$10,000 more worth of seed money. Then Jerry Faulring of Maryland's Hydro Lawn was unanimously elected president.

To Jerry (who has a lot of hard work ahead of him) and to the officers and board of directors, we offer our congratulations on getting the lawn care association formed. Now it is up to everybody in the lawn care industry to make it work.

Rob Garley

## **ADVERTISERS**

Aquatrols Corp. of America20
Ashland Chemical Co 7
BASF Wyandotte Corp18
Boots Hercules Agrochemicals Co cover III
Champion Brass Mfg. Co27
Deere & Co
Derby Tiller Co
Du Pont Co
Ford Tractor Co 6
Graham Lawn Care25
Hypro, Div. Lear Siegler, Inc28
Jacklin Seed Co
L & M Lawncare
Lofts Pedigreed Seed, Inc cover IV
Dorf A Lown Conn
Perf-A-Lawn Corp
Rainbird Sprinkler Mfg. Corp22
Satoh Agricultural Machine Mfg., Ltd27
Sierra Chemical Co 8
S.P.I.C/Monsanto4-5
Summertime Lawn Care Products21
The Toro Co
Tuflex Mfg. Co
Velsicol Chemical Corp 9
version diffilled outp

#### **COMING**

The August issue of LAWN CARE INDUSTRY will feature a Marketplace story on the lawn care industry in Seattle; a special emphasis on lawn building techniques such as seeding, aeration, dethatching, liming and equipment and materials available for the tasks; and a special report on lawn care franchising by assistant editor Dan Moreland.

## CLASSIFIED

When answering ads where box number only is given, please address as follows: Box number, c/o LAWN CARE INDUSTRY, Dorothy Lowe, Box 6951 Cleveland, Ohio 44101.

Rates: 35¢ a word for line ads, 65¢ a word for display ads. Box numbers add \$1 for mailing. All classified ads must be received by the publisher before the 10th of the month preceding publication and be accompanied by cash or money order covering full payment.

covering full payment.

Mail ad copy to Dorothy Lowe, LAWN
CARE INDUSTRY, Box 6951, Cleveland,
Ohio 44101.

#### **HELP WANTED**

WE ARE LOOKING for an individual to work in our Chemical Lawn Care Division. Candidates should have a knowledge of: turf management, basic business operations, sales and service, material handling procedures, proper application techniques, equipment use and maintenance. Send resume to:

Lawn and Turf Landscaping, Inc., 6136 Winchester Road, Fort Wayne, Indiana 46819 or call 219 747-3298.

#### **USED EQUIPMENT**

FOR SALE: 10-1977 Chevy one trucks, 750 gal. spray tanks, R&M 3L4 pump, electric hose reels, spray hose, ready to spray. Phone 513 845-0631.

1976 CHEVY 1 ton lawn care spray truck, 17,000 miles, rust proofed, 500 gallon tank, mechanical agitation, PTO driven, 20-20 bean pump, electric hose reel and 300 foot of hose, \$11,500 or best offer. Phone 317 873-5231, ask for George.

#### **MISCELLANEOUS**

KELWAY SOIL pH TESTER, used by professionals everywhere. Direct reading, longlasting, portable, lightweight, no power source. Model HB-2 reads moisture too. Sold, guaranteed and serviced by Kel Instruments Co., Inc., P.O. Box 1869, Clifton, N.J. 07015. 201 471-3954.



A freshly-minted term for Cheap Nitrogen



You can CHEA-NITE all of the people some of the time



And when they catch up with you, they will be irate... may be burned up



BOOTS HERCULES AGROCHEMICALS CO. Wilmington, Delaware 19899



You can CHEA-NITE some of the people all of the time



But you can't CHEA-NITE all of the people all of the time



To avoid irate calls from burned up customers use Nitroform® organic nitrogen — it's a good nite.

Choose either Blue Chip® for granular spreading or Powder Blue™ for liquid application. Two-thirds of the nitrogen is water insoluble and gives long continuous feeding. No burning or leaching. Nitroform's 38% nitrogen guarantees you a full measure of N for your dollar. Nitroform has slow release characteristics that are predictable and dependable. Released by soil microorganisms, the nitrogen is available during plant growth cycles when organisms are also most active.

