



Golf course superintendents from around the country were introduced to snowmobiling while attending the annual GCSAA turf show in Minneapolis. Over 50 superintendents and their wives were treated to an afternoon of snowmobiling, courtesy of Polaris E-Z-Go, division of Textron. The company makes snowmobiles in addition to golf cars.

Arizona Turf Conference Headed by Lofts' Ledeboer

Dr. Fred B. Ledeboer, director of research, Lofts Pedigreed Seed Co., Bound Brook, N.J., will headline the Arizona Turfgrass Conference scheduled for May 5 and 6 at the Doubletree Inn, Tucson, Dr. William R. Kneebone, University of Arizona turf scientist and program chairman, has announced. Ledeboer will discuss cool season grasses.

Other speakers include Clyde Elmore, extension weed scientist, University of California, Davis, who will discuss weed control for ornamentals; and Jack D. Butler, extension turf specialist, Colorado State University, Fort Collins, Colo., who will serve as conference keynoter.

Also, Thomas J. Meeks, regional director for the U.S. Golf Association, Far Hills, N.J., will describe "Getting a Golf Course Ready for a Tournament." Kneebone says the banquet speaker is Andy A. Bertoni, of the W. A. Cleary Corp., who lives in Northville, Mich.

Landscape Association Names Five Design Award Winners

Residential design awards were presented to landscape architects and installing firms for outstanding work by the National Landscape Association at the recent Landscape/Garden Center Management Clinic in Louisville, Ky.

Awards in the complete residence category were given to Green Bros. Landscape Co., Inc., Smyrna, Ga.; and to Chazz Cox Associates and Gateway Gardens, Inc. in Winter Park, Fla. In the multi-family residence category the top award was presented to Wayne Mucci Associates, Lake Forest, Ill.; other awards were given to Foley-Koch Landscaping, Inc., Mt. Prospect, Ill. and Moore's Landscape and Nursery, Glenview, Ill. In the active use area category an award was presented to Concepts, Inc., Ridge, N.Y. In the entrance category, Chazz Cox Associates and Gateway Gardens, Inc. took honors.

Activated Charcoal Use for Turf Studied

Two University of Delaware researchers have found that activated charcoal can be used to correct weed control chemical mistakes in application and other problems.

Dr. William Mitchell, professor of plant science, and Barry Hesseltine, researcher assistant, have found that activated charcoal or the "black eraser" can often "tie up" spray residues and let a turf manager safely proceed with a new seeding or sodding. Some of the most popular herbicides used for pre-emergence crabgrass control will also prevent the establishment of new turf for a period of two to three months after application.

Mitchell and Hesseltine say that if, after treatment with a crabgrass killer in April, it is decided that the turf needs reseeding, mistakes can be erased by spraying about seven pounds of activated charcoal on each 1000 square feet. A new seeding can be made the same day without damage from the crabgrass killer residue.

The researchers also found that herbicide residues can slow up the growth rate of newly installed sod and in some cases actually prevent the sod from bonding with the underlying soil.

Activated charcoal was effective in eliminating this potential cause of sodding failure. The research conducted by Mitchell and Hesseltine was reported at the recent Northeastern Weed Science Society meetings in Boston. Tests involved several herbicides and lawn grasses. The tests showed tall fescue to be more tolerant of some herbicide residues than either perennial ryegrass or Kentucky bluegrass.

Mitchell stressed that since a large percentage of the cultivated sod used for home lawns contains cultivars of Kentucky bluegrass, it is important that the presence of herbicide residues be considered. He said it has been shown that where a residue problem exists, it can be minimized or eliminated by use of activated charcoal.



Dr. Watson Receives Award From USGA Green Section

The Green Section of the United States Golf Association has given its top award for distinguished service to Dr. James R. Watson, vice president of customer relations and chief agronomist for Toro Co., Minneapolis.

Dr. Watson, honored for his contributions to turf research, is the 16th recipient of the award which is made annually. He has conducted research on adaptability of species and strains of turfgrasses, fertilization practices, snow mold prevention and techniques for the winter protection of turfgrasses. His turfgrass adaptation studies led to the development of new cultivars in Bermudagrass and creeping bentgrass for sports turf.

He is a contributor to several standard texts on turfgrass science and has also written many articles on turfgrass care and management.

Housing Developments Hold Course Market Key

While the golf course market will always constitute an important business for Toro Company, Minneapolis, its prospects for reestablishing its high past growth rate will depend in part on an easing of interest rates and the trend toward golf

All-Pro Tingelhoff Applauds Natural Turf

The conversion back to natural turf at Miami's Orange Bowl represents a "substantial victory" for the National Football League Players Association, according to all-pro center Mick Tingelhoff of the Minnesota Vikings.

He said the association opposes artificial turf because its hard-asphalt base and slippery surface produce more knee injuries than natural grass fields. He predicted NFL owners will never again replace natural grass with artificial turf.

"I hope the switch back to natural grass in Miami heralds a new trend," the Viking star said at a luncheon sponsored by Cushman-Ryan turf care equipment during the 47th Golf Course Superintendents Association of America conference in Minneapolis. The 35-year-old Viking player, whose team plays its home games on natural turf, said artificial playing surfaces also can shorten a player's career. He said the hard surfaces subject legs to a "merciless pounding" and result in bruises and similar nuisance injuries.

"Asphalt really wears you out and it can wreck your legs," Tingelhoff told more than 120 turf equipment dealers. "There is no way you can recover from your injuries within a week. I don't know of a

player, trainer or team physician that likes artificial turf."

The former University of Nebraska All-American said artificial turf surfaces "are faster" than natural grass. But he said even small running backs, who rely on speed, dislike artificial turf fields. "What good is speed if you ruin your knees falling on a hard surface?" he asked. "The greater the speed, the more force there is upon impact. It is a matter of basic physics and every running back knows it."

However, Tingelhoff admitted, it is impossible to prove artificial turf has ended or shortened anyone's NFL career. "The association would definitely put artificial turf to an end if we could," he said. "But I don't know how we could prove it." He said Robert Kennedy Memorial Stadium in Washington, D.C. has the best playing surface in professional football. The field has Nugget bluegrass on a 20-inch base largely formed of sand and peat. Irrigation drainage and heating are controlled by small underground lines plus a water pump inside the stadium.

"The surface is very porous and soft," he said. "It is actually softer than natural turf surfaces, so therefore, fewer knee injuries result. And the field actually drains faster than artificial surfaces."

courses in new housing developments.

In the company's annual report recently released, it was noted that increased marketing emphasis is being given by the company to other high-growth areas; the commercial markets for the Turf Products Division and the commercial and agricultural markets for the Irrigation Group.

The report said the golf course market accounted for 13 percent of Toro's sales in 1975, for irrigation products and turf maintenance equipment. With a decline in the construction of new courses from about 450 to 150 last year, Toro feels the existing golf course market represents the principal short-term opportunity for Toro's irrigation and mowing equipment.

Nelson Is New President Of Landscape Contractors

Duane Nelson, a landscape contractor in Spokane, Wash., has been installed as president of the Associated Landscape Contractors of America at its recent annual meeting in Phoenix, Ariz.

Also installed were Dick Brickman, Theodore Brickman Co., Long Grove, Ill., president-elect; Ronald A. Ahlman, Lawrence & Ahlman, Dundee, Ill., vice president; William C. Byers III, Landscape Industries, Inc., Smyrna, Ga., vice president; William Thornton Jr., Thornton Industrial Landscape Contractors, Cincinnati, Ohio, treasurer; and Vernon D. Smith, Millcreek Gardens, Inc., Salt Lake City, Utah, secretary.

Nine Outstanding Dealers Honored by Cushman-Ryan

Nine firms have been named outstanding dealers by Cushman-Ryan turf care equipment, Lincoln, Neb.

Officials from the dealerships were presented plaques by Frank McDonald, Cushman-Ryan sales manager, at a luncheon during the 47th annual Golf Course Superintendents Association of America in Minneapolis. The annual award is based on marketing, sales and service achievements.

Dealers honored were Gulf Shore Turf Supply, Inc., Pensacola, Fla.; Fallis Turf Equipment, Ltd., Richmond, British Columbia; Morin Equipment, Ltd., Ste Foy, Quebec; Duke Lawn Equipment, Ltd., Burlington, Ont.; Westward Power Equipment, Edmonton, Alberta. Cushman Motor Company, Inc., Minneapolis; Toro Pacific Distributing, Gardena, Calif.; Krigger & Company, Inc., Pittsburgh; and Tennessee Electric Motor Company, Nashville.



Dr. Fred V. Grau, president of the Musser International Turfgrass Foundation, presented a check to Dr. Harry Niemczyk of the Ohio Agricultural Research Center, at the recent GCSAA turf show in Minneapolis. The money will be used to help support a graduate student at Ohio State University. Ben Warren of Warren's Turf Nursery is treasurer of the foundation.

BUILT LIKE A ROCK

...Only Stronger!



"Bunton lawn-turf equipment is built to take a beating... it's tough! It's built to cut grass, even in the hard to get to places. Even a shove off the back of a truck can't damage the heavy-duty 12 gauge steel frame and cutter housing." So listen to Rocky Graziano... send for more information today... with Bunton, you can't lose! Available from 8-inch to 52-inch cut.



BUNTON CO. 4303 Poplar Level Road, Louisville, Kentucky 40213, U.S.A.
Phone 502/459-3810 Telex 204-340

Circle 139 on free information card

Toro® Groundsmaster 72®
high-capacity trimming
rotary mower.



Reason to buy #1

Only self-contained rotary
with a 4-cylinder water
cooled engine. Delivers
extra power. Long life. Low
maintenance. Quiet operation.

Federal Contract No. GS-00S-28263.
For further information write The Toro
Company, Dept. WTT-46, 8111 Lyndale
Ave. So. Bloomington, Minnesota 55420.



Circle 107 on free information card

Process Turns Cattle Manure To Odorless Soil Conditioner

A new process to improve the biological conversion of cattle manure into soil conditioner has been developed by the BioCon Division of Searle Agriculture Inc., Hereford, Texas. The product from the process is being introduced to the lawn and garden industry under the brand name "Tilleez". The soil conditioner is sold in bulk to golf courses and other quantity buyers.

Company officials told WEEDS TREES & TURF the conditioner improves the tilth and fertility of soil without creating the problems of odor, burning and weeds usually associated with manure. The conditioner is produced by a new plant in the Texas Panhandle which biologically converts manure from cattle feedlots into humus for garden and lawn use.

The process, developed after years of experimentation, eliminates offensive odor, even when the

conditioner is wet. The process also dissipates the heat generated by decomposition and substantially reduces weed seeds and other harmful organisms, company officials said. Basically, manure from feedlots is pulverized and deposited in vats at the plant. In the vats, air is forced through the manure to stimulate digestion by aerobic bacteria.

Decomposition of the manure by aerobic bacteria is what makes the conditioner virtually odorless, dry or wet, according to Dr. William C. Hackett, division general manager. Aerobic bacteria — microorganisms that thrive in air — can digest manure without producing the odor that occurs when anaerobic bacteria — bacteria that live without air — perform the decomposition, Dr. Hackett said.

In less than a week, the composting — which would have taken nature a year to perform unaided — is completed in the vats, and the conditioner is ready for bagging. Elimination of offensive odor is only



R. Wayne Mezitt, vice president and general manager of Weston Nurseries, Inc., Hopkinton, Mass., will head the convention committee for the American Association of Nurserymen's 101st Annual Convention and Trade Show July 10-14 in Boston.

one of the advantages which the process imparts to the conditioner, company officials said. Heat generated during decomposition, which causes manure to burn vegetation, is dissipated from the conditioner in the vats. Exposure to that heat substantially reduces weed seeds and other harmful organisms in the manure before they can reach the soil.

Wholesale Nursery Growers Choose Taylor as President

The Wholesale Nursery Growers of America recently held an election at its winter membership meeting in Arlington Heights, Ill.

Re-elected to serve for one-year terms were: Robert Taylor, Concord Nurseries, North Collins, N.Y., president; Hubert Nicholson, Commercial Nursery Co., Decherd, Tenn., vice president; Ben Davis II, Ozark Nurseries Co., Tahlequah, Okla., secretary-treasurer; and Bill Scarff, Scarff's Nursery, New Carlisle, Ohio, director-at-large.

Re-elected for two-year terms were Martin Usrey, Monrovia Nursery Co., Azusa, Calif.; Hans Hess, Hess' Nurseries, Cedarville, N. J.; Austin Kenyon, Greenleaf Nursery Co., Park Hill, Okla.; and Edward Porter, Triangle Nursery, McMinnville, Tenn.

HERTRON

DIAMONITE

gel based reel lapping compound

- Pre-mixed in one gallon resealable plastic jugs
- Reduces "walk or throw-off" by 90% — Clings to reel blade
- Never settles out of suspension
- Washes completely clean in seconds with regular tap pressure
- Saves time and labor — Costs less to use than mixing your own

Patent pending.

GEL MAKES THE DIFFERENCE

Contact Hertron
306 Clanton Road, P.O. Box 3322
Charlotte, N.C. 28203

Circle 130 on free information card

Salt May Seriously Damage Landscape Plants and Trees

When roads are icy, salt trucks can look very beautiful. But what deicing salt does to landscape plants is often not so pretty. Symptoms of salt injury to evergreens include drying and browning of needles. Die-back and witch's broom-like growth occurs on deciduous species like red oak, beech and crabapples.

"Some ornamental plants are more tolerant than others to flying salt spray or salt on the soil," Harold Davidson, extension horticulturalist at Michigan State University, told WEEDS TREES & TURF. "When you are choosing plants for locations near salted streets or highways, it is a good idea to choose those that are known to be salt tolerant."

Honey locust, Norway maple, blue spruce and Austrian pine are some of the best trees for areas where salt spray is a threat. Japanese maple, box elder, white spruce, red pine, white pine, Scotch pine and English yew are very susceptible to damage by salt spray. Oaks are also likely to be injured, David-

son said. Most shrubs are susceptible to salt injury, including most of the barberries, dogwoods, euonymus, honeysuckle, firethorn, elder, viburnum and coralberry. Most grasses, vines and ground covers, on the other hand, are at least moderately tolerant.

California Insect Expert Explains Elm Disease Control

A University of California-Riverside professor of entomology and expert on tree insects says if your elm tree has been attacked by the elm bark beetle, you still can fight the insect if there is no disease.

First, water adequately. Trees suffering from drought are much more susceptible to beetle attack. Next there is chemical control: a methoxychlor spray. This is much less toxic than DDT to man and wildlife, he told WEEDS TREES & TURF.

"Look for general tree symptoms first," he said. "If the tree looks weak; if its leaves are not so green as they should be; if you find

grass that looks like paprika in the cracks, crotches and around the base of the tree — you probably have the bark beetle. Then examine the bark; the brownish beetle makes holes one-eighth inch in diameter, or less; beetle larvae and pupae inside the bark are about the size and appearance of rice grains.

He said the beetle is most likely to strike by early April, with the peak in late April. A large second brood might appear in mid-June and peak in late July. A smaller, third brood will peak in early September. Sprays should be applied in early April and mid-June.

If the elm bark beetle has already attacked in great numbers and infected the tree with Dutch elm disease, however, there is nothing to do but cut the tree down, bury or burn its parts and spray surrounding elms. "The problem is," he said, "people do not want to cut down trees because it is expensive. If they do cut the tree down, they do not want to burn the wood until winter. This is exactly the wrong thing to do, because this firewood lets the beetle emerge from the wood and carry the disease to other trees."



People Walk All Over Us ... But We Like It.

- FOR PARKS, GOLF COURSES, HOME LAWNS
- SHADE TOLERANCE
- DOES WELL EVEN ON POOR SOILS
- DARK GREEN-BLENDS WITH OTHER GRASSES
- EXCELLENT WEAR

Fill out coupon and clip for overseeding brochure

OREGON CHEWINGS AND CREEPING RED FESCUE COMMISSION

Name _____

Address _____

State _____ Zip _____

1349 Capitol N.E., Salem, Oregon 97303





JETPAK
425

SOLO ENDS YOUR SPRAYER HEADACHES

Tired of sprayers that corrode, drip...
Seals that dissolve... Valves that shrink
or swell?

The SOLO all-plastic sprayers stand up to all
agrichemicals in water or oil solution. Including
your most exotic weed and brush killers.
No rubber or metal comes into contact with
the formula.

Made for commercial use, by the world's
oldest and largest manufacturer of portable
high-concentrate mist blowers, SOLO's
manually-operated sprayers are still attractively
priced for the semi-pro and casual markets.



HANJET
455

The HAN-JET-455 is an
all-purpose sprayer for
gardening, weedkilling,
sanitation and many other
outdoor and indoor applica-
tions. It weighs a mere 3
lbs and sprays its entire
1.3-US-gal. contents after
just one pumping.

The famous JET-PAK-425
is surely your best buy for
all casual-to-professional
spraying jobs at any de-
sired pressure from 0 to
90 psi. Ten pump strokes
deliver one quart of liquid.
Ideal for no-drift herbi-
cide spraying at low pres-
sure. Used extensively in
the tropics for more than
ten years — a product of
mature design and ex-
treme reliability.

SOLO supplies a wide line of sprayers,
blowers, chain saws, tillers and other
types of outdoor power equipment. We
invite dealer and distributor inquiries on
all of these products.

SOLO

BOX 5030, NEWPORT NEWS
VA 23605 — (804) 245-4228
BOX 464, BURLINGTON,
ONTARIO L7R 3Y3

Circle 156 on free information card

Toro Holds Parts Seminars In Management for 23

Twenty-three persons were awarded
certificates by the Toro Co., Minne-
apolis, Minn. at the completion of a
training seminar in parts manage-
ment and inventory control.

The sole woman attending was
Gloria Reynolds, of Adams Equip-
ment, Inc., Baltimore. Zaun Equip-
ment, Inc., of Florida, sent three
men, one from each of its branches:
Carl Jeise, of Jacksonville; Dick
MacDonald, of St. Petersburg; and
Kevin Quinn, of Orlando. Minne-
sota Toro, Inc., had two repre-
sentatives: Alex Donaldson, of
Edina; and Rick Gwynn, of Crystal.
Two Canadians in attendance were
Alex Cormack, of Turf Care Prod-
ucts, Lt., Markham, Ontario; and
Alain Forest, of Agri-Tech, Inc.,
Boucherville, Quebec.

New York State Arborists Elect Wickey as President

Richard Wickey, park supervisor
for Garden City, N.Y. was elected
president of the New York State Ar-
borists Association at its recent an-
nual meeting.

Three vice presidents were also
elected: 1st vice president Jake
Bruinooge, Bruinooge Tree Service,

of Spring Valley, N.Y.; 2nd vice
president Samuel Blakley of S. G.
Blakley Tree Co., Mt. Vernon,
N.Y.; 3rd vice president Leo G.
Cook, Goodell Tree Service, of
Vestal, N.Y.; James W. Taylor,
James W. Taylor Tree Surgery of
Walden, New York was reelected
secretary-treasurer.

On the board of directors, past
president Carl Lundborg of Bartlett
Tree Experts, Westbury, N.Y. will
serve a one-year term, as will Philip
Brogan of Lewis Tree Service,
Syracuse, N.Y. For two-year terms,
Raymond Smith, Davey Tree Ex-
pert Co., of Buffalo, N.Y. and Jon
Hickey, Parr & Hanson of Hicks-
ville, N.Y. For three-year terms,
Jack Flanagan, Tree Preservation
Co. of White Plains and Robert
Mullane, Landscape Foresters, Ltd.
of White Plains, N.Y.

Margaret Herbst, with head-
quarters at 101 Park Avenue, New
York, N.Y. 10017 was reappointed
executive secretary.

Wickey has worked for the past
17 years as park supervisor in
Garden City. Before this position,
he served in the Nassau County
Park Department for eight years. He
has been active with the Asso-
ciation since 1958.

He is a graduate of the Long Island
Agricultural and Technical Institute
at Farmingdale.

TRELAN

"Whole Tree Chipper"

Chips trees up to
17" dia. and produces
high quality chips at a
rate of over 25 ton
per hour -----

For more
information
write or call - -



STRONG
MANUFACTURING COMPANY
498 - 8 Mile Rd., Remus, Mich.
Phone (517) 561 7591

Circle 121 on free information card

WEEDS TREES and TURF

Sprinkler Irrigation Group Publishes License Guideline

The Sprinkler Irrigation Association has announced the publication of its *Landscape Irrigation State Licensing Guideline*. Developed by the SIA's landscape irrigation committee, the guideline is a study of the need for state licensing programs, the formulation methods of actual legislation, an evaluation of existing legislation and its specific application to the industry, consideration of the licensing of landscape irrigation consultants and an outline of methods of obtaining industry support and informing the public and legislatures of needs for the legislation.

The Guideline is available from the SIA office at 13975 Connecticut Avenue, Silver Spring, Maryland 20906 at a cost of \$4.00 per copy. The 72-page booklet contains the following sections:

Introduction, terminology, statement of need, protection of potable water supply, protection from the public from injury or damage, protection of consumer interests, protection from financial liability, conservation of power and water, guidelines for the development of a state licensing law with model

legislation and notes and commentary and a summary.

The basic portion of the guideline, the model licensing law, is presented in a format that is both useful and easy to understand. The actual suggested wording of legislation is contained on the left hand pages with explanatory notes and comments as to its implications and necessity, along with room for personal notes, on the right hand page.

As a guideline, all possible material pertaining to a state licensing program has been included. All points presented are actually a part of licensing laws in effect in at least one state at the time of preparation. Even though selective deletions may be required in a given state to meet specific local requirements, an effective licensing law may be formulated from the guideline if sufficient material is judiciously incorporated to serve the needs of any given state.

Extensive review of the material was made to insure that it included the most up-to-date information available from states having existing licensing laws, answered problem areas as they might have developed in these states and also met basic legal requirements as well as appropriate governmental regulations.

The guideline, which has been three years in the development, was reviewed by Leo B. Hoschler, registrar of contractors for California; John Kayetan, state registrar of contractors for Arizona; John Heidman, member of the Texas State Board of Landscape Architects; F. J. MacDonald, executive vice president of the American Institute of Landscape Architects; and Malcolm D. MacArthur of the firm of Lee, Toomey and Kent, legal counsel to the SIA.

W.I.N.

with
NITROFORM®
and save!

W.I.N. with Nitroform® nitrogen . . .
and save! On time and labor.



Reed & Perrine bags it!



HERCULES Turf and Horticultural Products
INCORPORATED Wilmington, Delaware 19899
STH76-26A

Circle 141 on free information card



Earle H. O'Dell (left) of Chesapeake, Va., and Houston B. Couch of Blacksburg, Va., were honored at the 16th annual Virginia Turfgrass Conference held recently in Fredericksburg. O'Dell, secretary-treasurer since 1969 of the Virginia Turfgrass Council, received the R. D. Calk award honoring the council's first secretary-treasurer and Couch received the Tolly H. Quinn service to industry award. O'Dell, praised for his role as secretary-treasurer, is assistant manager of the turf and garden division of Todd Co., Chesapeake. Couch, a professor of plant pathology at Virginia Tech in Blacksburg, was cited for his work with turf diseases.

Volume on Street Trees Published by Penn State

Street trees, used properly in an urban environment, provide lasting benefits to man. But, a tree planting plan in which details are ignored — either in the development or actual establishment — usually ends in disaster.

The Pennsylvania State University's College of Agriculture has published a book, *Street Trees*, designed to assist those who take part in planning and carrying out tree beautification programs in urban areas.

"This book has been prepared for use by shade tree commissions and professional horticultural firms who plan and carry out tree planting and maintenance," said Dr. Roland R. Daniels, Penn State assistant professor of environmental horticulture and author of the publication.

Topics include site selection, variety selection, site preparation, planting, and care and maintenance following planting. Included in an appendix are a checklist of current street plantings and analysis of potential planting sites; proposed specifications for selecting, planting, and maintenance of street trees within developments; general speci-



Newly elected officers of the Midwest Regional Turf Foundation are from left, Danny Quast, Milwaukee Country Club, president; Dr. W. H. Daniel, Purdue turf specialist, re-elected as executive secretary; and Kermit D. Delk, Springfield Country Club, Ohio, vice president. Over 700 attended the Foundation's conference last month at Purdue.

fications for deciduous shade and flowering trees; standards of workmanship for tree care and maintenance; and suggested contract specifications for establishment and maintenance of street plantings.

Two other features are a tree hardiness zone map of Pennsylvania and an outline of characteristics of all trees suitable for planting in the state. The book may be purchased for \$2.00 plus six percent Pennsylvania sales tax. Make check or money order payable to The Pennsylvania State University and send with your name and address to STREET TREES, Box 6000, University Park, Pa. 16802.

Frank's Nursery Sales Inc. Expects To Boost Sales 15%

Frank's Nursery Sales Inc. said it expects 1976 sales to be about \$60 million, up 15 percent from \$52.3 million last year.

The increased revenue will come from 62 stores it will have operating at year-end, compared with 54 units a year earlier, the company said. During the year, Frank's said, it plans to open 11 stores, including two garden centers it is acquiring from Anderson's in Columbus, Ohio.

Improved Quarter Margins Reported by Toro Company

Toro Company, Minneapolis, has reported sales of \$35.8 million and earnings of \$751,000 for the second fiscal quarter ended Jan. 31. Sales for the similar period of the preceding year were \$37.4 million and earnings \$849,000.

Sales for the first six months ended Jan. 31 were \$56.8 million, a decrease of 13.4 percent from the \$64.4 million registered for the same period of the preceding fiscal year. Net earnings for the first half were \$98,000, compared with \$941,000 in the first half of fiscal 1975.

Sales Up 50% Last Year, Echo Chain Saw Reports

The Echo Chain Saw Division, Kioritz Corp. of America, Northbrook, Ill., has announced sales for the 1975 fiscal year were up over 50 percent in a recent statement by Donald A. Bartelt, director of marketing.

"While the chain saw industry, in general, was off approximately six percent during the past 12 months, our sales were up dramatically for the third consecutive year since the Kioritz Corporation of America was established," he said.

W.I.N. with **NITROFORM®** and save!

W.I.N. with Nitroform® nitrogen . . . and save! On time turf is out of play.



Robison's Lawn & Golf bags it!



HERCULES Turf and Horticultural Products
INCORPORATED Wilmington, Delaware 19899
STH76-28B

Circle 142 on free information card

Crownvetch—Seed or Plants?

Until 1946, no seed or crownvetch was commercially available. Plantings had to be done slowly and laboriously and expensively with crowns, according to well-known agronomist Dr. Fred V. Grau.

When Grasslyn, Inc. brought forth hulled, scarified seed of crownvetch in 1946, it amounted to a revolution in establishing erosion-control groundcover on slopes. For the first time, this ground-hugging legume could be established by the low-cost method of seeding, Dr. Grau told WEEDS TREES & TURF.

Until the advent of Penngift crownvetch seed, Pennsylvania had specified rooted plants of honeysuckle. Now virtually all of the crownvetch established on the slopes of the thousands of miles of highways is done by hydroseeding. This is a process that was pioneered in 1939 by Dr. Grau and the late C. N. (Doc) Keyser on the first section of the Pennsylvania Turnpike. It

consists of a water slurry of seed, limestone, fertilizer and other ingredients. The slurry is sprayed on a rough slope and mulched with straw, wood cellulose fiber or various kinds of nets. Planting of plants or crowns continued for a time because old habits are hard to break. Soon the economics of seeding on raw subsoil slopes dictated the demise of the slow, expensive plant-planting method, Dr. Grau said. Ironically, Grasslyn was the only firm producing both crowns and seed, but consistently their management recommended seed, even though the sale of plants would have been more to their advantage financially. "But don't you get coverage faster from plants?" some ask. The answer is no, Dr. Grau said. A crown or potted plant may take four to eight weeks to get rooted down and to start spreading. The bare soil between the plants meanwhile is subject to erosion. A recent hydroseeding job in New York State was done in late June. Specifications were prepared by Dr.

Grau. Two months later, when he saw the slope, there was 100 percent cover of crownvetch and companion grass. The legume was six to eight inches tall and appeared to be six to eight months old.

He said specifications writers would do well to seek the source of accurate information before putting a spec out to bid. The first consideration is "no topsoil." Next come adequate lime and the correct analysis of fertilizer. Third, and of extreme importance, is excess inoculant. Fourth is adequate mulch and the right kind for the circumstances.

New Rain Bird Distributor In West Is Polson Company

Rain Bird Sprinkler Manufacturing Corp., Glendora, Calif. has appointed Polson Company as its new franchised turf distributor for the state of Washington and parts of Idaho and Montana.

Polson manager John Bangert said his company's new irrigation facility in Seattle, Wash. is now opened and handles all of the contractor's needs.

BROUWER

A WORLDWIDE NAME IN SOD HARVESTING EQUIPMENT



THE MODEL A3 HARVESTER WITH ATTACHMENTS WILL ROLL — SLAB — FOLD

FLEXIBLE WITH ORIGINAL TRACTOR MANEUVERABILITY
WHEN MOUNTED ON EITHER A MASSEY 135 OR FORD 3000 STANDARD FARM TRACTOR
IT CUTS 16" — 18" — 24"
AND USES 48" — 54" — 56" — 60" PALLETS

Brouwer Turf Equipment RR 1, Keswick, Ontario, Canada
(416) 476-4311 L4P 3C8

Circle 136 on free information card



John Van Dam (center), University of California cooperative extension farm advisor, accepts a \$2,000 check from Alan M. Dennis (left), president of the Southern California Turfgrass Council to help sustain ongoing turf research at the University's South Coast Field Station in Santa Ana. Charles F. Rei (right) is chairman of the Council's turfgrass research fund.

Headquarters Sales Group Created by Scott's ProTurf

Jack Cantu, O. M. Scott & Sons vice president and general manager of the Pro-Turf Division, Marysville, Ohio, recently announced the formation of a special department to provide products and services from Scott headquarters directly to company lawn, school and cemetery turf managers, as well as to commercial lawn applicators and landscapers.

John Dunham and Jim George will jointly head the department. Dunham has a strong technical turf background with experience in the lawn applicator industry, while George is a former ProTurf sod market technical representative.

Cantu made it clear that the headquarters sales group will limit its activities to direct sales to specified portions of the professional turf market. Golf course superintendents, sod growers and commercial nurserymen will continue to be served through ProTurf's coast-to-coast network of 67 tech reps.

Johns-Manville Plans Center In New Jersey for Service

Johns-Manville's Ag-Turf Division has announced plans to establish a service facility in northern New Jersey to serve the eastern irrigation market, according to William J. Christman, division general manager.

The new center, which the company expects to have in operation during the first half of this year, will serve as a physical distribution point for the company's complete line of sprinkler products. Johns-Manville, whose sprinkler manufacturing facilities are located in



Turf research at Penn State has been supported by \$9,000 from members of the Penn State Turfgrass Alumni Club over the past four years. Club president Gerald Brennemen of the Longvue Country Club, Pittsburgh, second from left, presented a check for research to the faculty at Penn State during the annual turfgrass conference held recently at University Park, Pa. Faculty shown are Dr. J. M. Duich, left, Dr. D. V. Waddington, receiving grant, and Dr. T. L. Watschke, right.

Fresno, Calif., is opening the center in view of the importance of the eastern market.

"The new service center, in conjunction with our new California brass foundry, should enable us to give better service to the irrigation market on the East Coast than any of our competitors," Christman said. "We recognize the importance of this market, and that is why we are gearing up to do something about it," he said.

A new Johns-Manville red brass foundry, located in Fresno, went on-stream last month. Utilizing electric furnaces, the automated facility will be devoted to the production of sprinklers and accessories. Anticipated production runs will average

500 molds an hour. The foundry cost almost \$10 million.

Diamond Shamrock Exec Says Growth To Continue

Diamond Shamrock Corporation Chairman, C. A. Cash told the Cleveland Society of Security Analysts recently he expects 1976 results to exceed 1975, when the company recorded net income of \$114 million on sales of \$1.1 billion. However, he noted that, "While we cannot expect to maintain the kind of percentage growth rates we have achieved in the last two years, we do expect to achieve a continuous record of earnings growth."

Reviewing the diversified chemicals and oil and gas company's performance, he noted that since 1970: return on sales doubled to 10% in 1975; return on equity increased to 26% last year; and return on capital employed rose to 15%.

In the new Biosciences and Metals Unit, Cash said the company will have doubled its production capacity for its proprietary fungicides in time for 1978. He attributed the rapid growth of the agricultural chemicals business to research successes such as Daconil and Bravo fungicides and Dacthal herbicide.

The "Tow-Boy" SOD HARVESTER



Princeton Manufacturing Company

- Under \$10,000
- Up to 1500 sq. yds. pr./hr.
- 2 loaders—1 driver
- Hooks & unhooks in 5 min.
- Proven low maintenance
- Custom handcrafting

For brochure write or call collect:
2625 Johnstown Road
Columbus, Ohio 43219
(614) 475-8520

Circle 149 on free information card

Davey Lawnscape Division Expands Service in Ohio

Davey Lawnscape Service, the lawn care division of Davey Tree Expert Co., Kent, Ohio, has opened two new offices and warehouse facilities to provide expanded service in northeastern Ohio.

Davey's new lawn care service was introduced last year to homeowners and commercial establishments in Portage and Summit counties. In view of the public's initial response and acceptance of the program and demand from adjacent counties, Davey Lawnscape Division is expanding to provide service in Cuyahoga and Stark counties this year.

The service — a professionally applied, full season lawn fertilization, insect and weed control program — was specially designed to fit the grasses and seasonal growth patterns in northeastern Ohio, according to J. Martin Erbaugh, lawnscape general manager.

"Davey Lawnscape Service is four separate, balanced formula, liquid chemical applications which provide the right nutrients, herbicides and insect control ingredients at properly timed intervals to feed lawns and control common weeds and insects," Mr. Erbaugh told WEEDS TREES & TURF.

"The service is provided at a price competitive with what the homeowner or businessman would spend for materials on a do-it-yourself basis, and we will care for all, or just a portion, of the property," added Mr. Erbaugh. "With our service, time is saved, proper application at the right time is assured, and most important, it is done by trained professionals."

Each technician, a graduate of the Davey Institute of Lawn Sciences, operates a spray vehicle equipped with a specially designed applicator. The applicator is designed to assure uniform coverage while minimizing overspray, "drift" and unsightly streaking.

Superintendents, Sod Farms Aid California Turf Study

The golf Course Superintendents Association of Southern California and Pacific Sod Farms have made donations to the turfgrass research fund of the Southern California Turfgrass Council. The superintendents donated \$700 and Pacific \$500.

Program Outlines Completed For California Turf Institute

Program outlines for the 1976 Southern California Turf & Landscape Institute, to be held April 28 and 29 at the Royal Inn, Anaheim, have been completed, reports John Van Dam, co-chairman of the educational event which attracted nearly 700 registrants last year.

Sharing sponsorship of the Institute are the University of California Cooperative Extension and the Southern California Turfgrass Council. Co-chairman with Van Dam is Alan Dennis, Council president. Van Dam is a UCCE turfgrass specialist.

According to program coordinator Victor A. Gibeault, extension horticulturist, joint sessions will be held Wednesday morning and Thursday afternoon. Among the topics slated for review are how grasses grow, drought tolerant varieties, pest activity, sodding practices and climaxed with a closing panel discussion Thursday afternoon that will consider problems and solutions associated with intensely used turfgrass areas.

With split sessions scheduled Wednesday afternoon and Thursday morning, registrants will choose between subjects related to plant management or personnel management. One plant session will be devoted to living with kikuyu grass. Employee development, visual aids in training and updating of CETA, OSHA and pesticide regulations are to be feature topics in the personnel management segment.

Among the noted speakers for the 1976 Institute are Drs. James Beard, Texas A & M University; Jack Butler, Colorado State University; and A. L. Turgeon, University of Illinois.

3 BILLY GOAT Indoor/Outdoor Vacuums



Model
KD50
KD35

Model BT70

Model
BG60



BILLY GOAT

INDUSTRIES INC.

P.O. Box 308
LEE'S SUMMIT, MO. 64063

One man with a Billy Goat becomes a big clean-up crew. BG 60 is available in self-propelled and push models, with gasoline or propane engine, or batteries. For all models—optional intake hose for hard to reach areas.

Model	HP	Snout width	Blower housing	Application
BG 60	8	30"	Steel	Industrial
BT 70	8	30"	Steel	Grounds, park
KD50	5	26"	Steel	Lawns, drives
KD35	3½	26"	Steel	Lawns, drives

Circle 105 on free information card

Toro Names Michigan Man Regional Contractor of Year

Bern Flier, president of Flier's Underground Sprinkling, Grand Rapids, Mich., has been named Upper Midwest "Contractor of the Year" by Toro Co., Minneapolis.

Control of Mole Crickets In Bahiagrass Explained

Mole crickets can create real problems for bahiagrass, according to the Florida Nurserymen and Growers Association. These insects become very active in late March and early April. The female emerges from the ground, she begins to fly hunting for the male and then they mate.

Control of mole crickets is difficult while the breeding season is in progress. As soon as this is over the female may then bury into the soil to deposit eggs. If a soil insecticide is applied, residual in the soil, there is a chance much of the population

will be eliminated. Bahiagrass should be watched for signs of mole cricket runs, the soil will be soft and spongy. In bare areas the runs may be seen.

Two New Turf Distributors Are Appointed by Rain Bird

Rain Bird Sprinkler Mfg. Co., Glendora, Calif. has appointed two new franchised turf distributors.

Western Industrial Supply, Amarillo, Texas, will serve the Panhandle Texas market area. Ernest Oakley, president of Western, said it will stock the full line of Rain Bird turf irrigation equipment as well as other related equipment. It will also have capabilities in assisting with design, specification and installation of irrigation systems for residences, commercial sites and golf courses.

Irrigation Sprinkler & Turf Co., Division of Perry Supply, Albuquerque, N.M., will serve New Mexico. Paul Clendenin, president of

Irrigation, said it will carry the complete Rain Bird turf line and other related products. The company said it has broad experience in the turf care field.

International Harvester Co. Profit Slump in 1st Quarter

International Harvester Co., Chicago, said its earnings fell 54 percent in its first fiscal quarter. The company reported profit of \$29.9 million, down from a record \$65.2 million in the year-earlier period. Sales in the period ending Jan. 31 fell slightly to \$1.08 billion from \$1.09 billion the year before.

The company said, however, that its first quarter net rose sharply from the "depressed" levels of fiscal 1975, when Harvester earned \$720,000 and \$1.5 million, respectively, from continuing operations. Harvester also said its first quarter profit was the second best ever for the period.

"ALL IN THE FAMILY"



4 RAIN JETS Do a Better Job than 24 Ordinary Sprinklers ...First System Engineered Free

See your problems disappear with the Rain Jet method of water distribution which provides drops, not mist. A realistic gallonage rate, water economy, good penetration, and effective use of fertilizer are achieved by Rain Jet's patented, rotary pop-up, pendulum action.

Because fewer Rain Jets are needed, you install them easily and profitably with far less digging and piping.

Choice of Brass or Adjustable Heads in various patterns — true squares, rectangles, full, 1/2, 1/4 circles. Unusual Shrub Heads fully adjustable from closed to 12-ft. radius.

Over a million satisfied customers worldwide. Write for Free Literature, or Phone Collect (213) 849-2251 — Carl Frasier.



"Showers of Diamonds"®

FOUNTAINS BY RAIN JET®

ADD BEAUTY PLUS PROTECTIVE LIGHTING. Patented RAIN JET nozzles form dancing patterns of Jewel-like water droplets. Delightful lighted and unlighted! Efficient low-energy design. Complete Fountain and Bowl Assemblies — no plumbing needed. Fountain Heads from \$17.75 for use with existing pools.

See our Fountain Shows at Sea World, Disneyland, Magic Mountain, Marineland, etc... or visit our Factory Showroom. Custom inquiries invited. Send for Full Color Literature, or Phone Collect (213) 849-2251 — Bob Trost.



A unique, exhilarating massage! Utilizes our time-proven principle to produce the finest massaging shower head action ever developed. Only RAIN JET has the patented rotary, oscillating nozzle with swirling fingers of water. Adjustable from brisk to gentle. Shampoos hair squeaky clean. Exceptionally efficient low-gallonage design saves hot water. Solid-brass, chrome-plated. Pearl cone \$19.95, Chrome cone \$29.95, or Gold cone \$39.95. Send for Free Brochure.

RAIN JET CORP., 301 S. Flower St., Burbank, CA 91503, Dept. SFS6 — "Top Quality Products for Over Twenty Years"

Circle 150 on free information card