

SERVING THE AMERICAN LAWN APPLICATOR AND MAINTENANCE PROFESSIONAL

ALA

NOVEMBER 1986 • \$1.25

ALSO IN THIS ISSUE:

**SPREADERS:
THEORY VS.
RESULTS**

**CHEMICAL
PREVIEW '87**

**LATE SEASON
NITROGEN
FERTILIZATION**

**THE SECRET OF
CONTROLLING
WEEDS**

**EQUIPMENT
PREVIEW '87**



THE NEW ALL-TERRAIN SLICER SEEDER



The SS-35-20 Slicer Seeder from SALSCO, with a 20" seeding swath on 2" centers, allows you to cover 18,000 square feet per hour. The SS-35-20 seeds within a 39" radius and maneuvers with ease on 40 degree inclines. Truly a slicer seeder for all terrains!

**COME SEE THE SS-35-20 AND THE COMPLETE SALSCO LINE
IN BOOTHS 806 / 907 AT THE PLCAA.**

SALSCO, INC.

105 School House Road • Cheshire • CT 06410
Tel: (203) 271-1682 • Telex: 643708

TABLE OF CONTENTS

BUSINESS FEATURES

Equipment Preview '87

The growing lawn service industry continues to attract more and more interest from manufacturers that are building better turf machines.....**44**

Chemical Preview '87

Increasing pressure placed on the industry's use of turf pesticides by adverse media coverage has influenced the development of next season's turf chemicals.....**54**

TECHNICAL FEATURES

The Secret of Controlling White Grubs

White grub control requires more than just spraying insecticide on the turf, it requires a thorough knowledge of the insect's life cycle.....**34**

Late Season Nitrogen Fertilization

Late season nitrogen fertilization has been practiced for some time, but new evidence supports the wisdom of this practice.....**40**

DEPARTMENTS

People.....	30
PLCAA Update.....	31
Products.....	68
Questions and Answers.....	32
Views Across The Industry.....	6

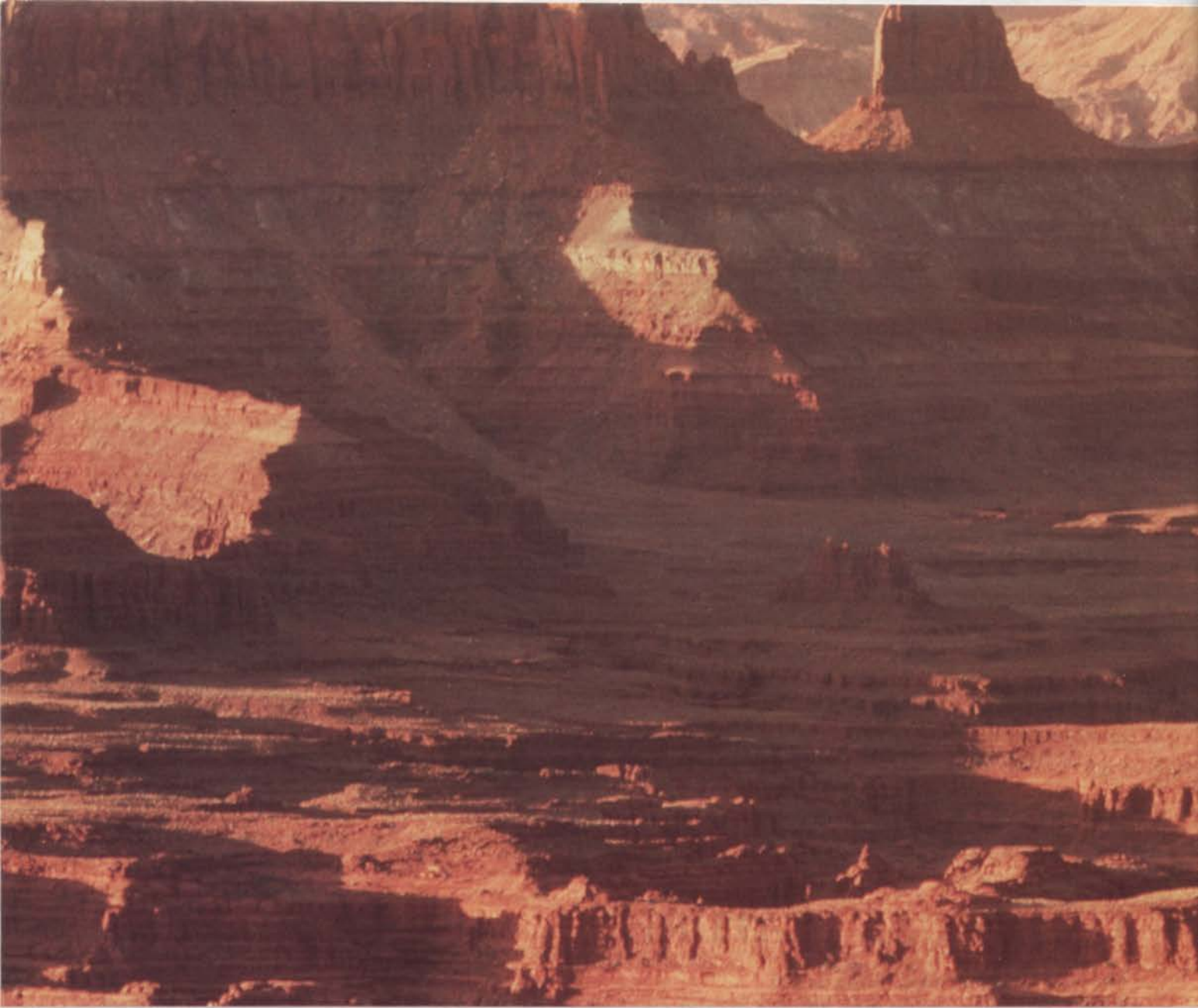
Advertiser's Index.....	77
Calendar.....	6
Classifieds.....	77
Inside Story.....	10
News in Brief.....	14



COVER

Many new pieces of professional turf equipment are on the market or soon will be on the market, like the Model SS-35-20 slicer-seeder from Salsco, Inc. pictured on our cover.
(Cover photo by Barney Taxel)

ALA (USPS 65747000) is published twelve times per year. Copyright 1986 Gie, Inc. Publishers, 4012 Bridge Ave., Cleveland, OH 44113. All rights reserved. No part of this publication may be reproduced or transmitted by any means without permission from the publisher. One year subscription rates: \$12.00 in the USA and Canada; Single copy rate: \$1.25; Foreign subscriptions: \$60.00 per year. Subscriptions and classified advertising should be addressed to the Cleveland office. Second class postage paid at Cleveland, Ohio and additional mailing offices. Postmaster: Return Form 3579 to ALA, 4012 Bridge Avenue, Cleveland, Ohio 44113.



There are few places left whose appearance can't be improved by Toro.

And we'll let Mother Nature deal with those.

But for those places you're responsible for—office parks, recreational areas, residential areas, housing complexes and more—Toro equipment provides the attractive, finished appearance you can build a solid reputation on. And a thriving business.

We know commercial cutters expect more out of a mower than anyone else. So we designed the

broadest, most durable line of equipment in the industry—riding and walk mowers; 36", 44", or 52" decks; bagging options, edgers and trimmers, generators, blowers, and more. And because Toro is constantly

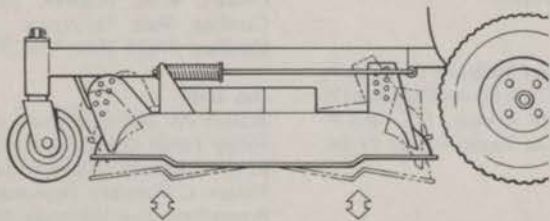
innovating (to make your job more profitable and your customers happier), we've just introduced two *new*

new Groundsmaster® riding mowers and two *new* Commercial mid-size walk mowers. The Groundsmaster 117 and 217-D riders are seventeen





horsepower, gasoline and diesel models. They, along with the two new Commercial 110 and 116 midsize walk-behinds, are designed and engineered to provide a quality cut in the most demanding conditions. They all utilize floating cutting units within carrier frames that let you follow the contour of the terrain with minimal scalping. And Toro's grass collection systems and Wind-Tunnel® design let you collect the clippings or discharge them



without clumping. For the best-looking lawns in any conditions, on any terrain, look to Toro. A company that understands that to keep your business growing, you need a reliable partner—Toro commercial equipment. For more information about the complete line of Toro equipment, contact your local distributor or commercial dealer. Or send in the coupon.

Circle 51 on reader service card

© 1985 The Toro Company. Toro, Wind-Tunnel, and Groundsmaster are registered trademarks of The Toro Company.

MAIL TO: D.L. Brown, Commercial Marketing Dept., The Toro Company
8111 Lyndale Avenue S., Minneapolis, MN 55420

- I'd like more information about Toro Commercial equipment. Please have a distributor or commercial dealer contact me.
 I'd like to arrange for a demonstration of Toro Commercial equipment.

Name _____

Title _____

Company _____

Address _____

City _____ State _____ Zip _____

Telephone (_____) _____

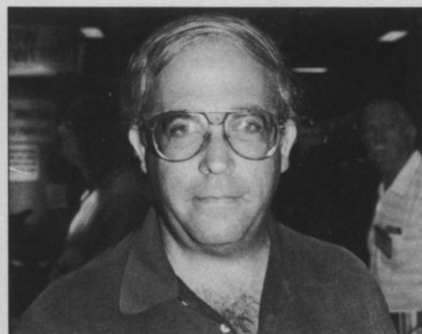


The professionals
that keep you cutting.

AL116

VIEWS ACROSS THE TURF INDUSTRY

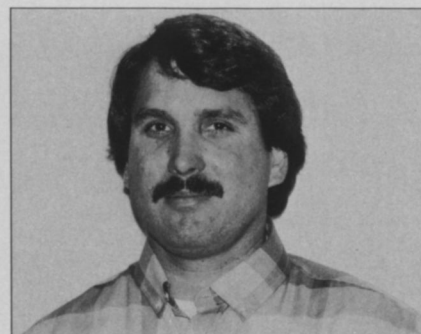
WHERE DO YOU BUY YOUR LAWN CARE SUPPLIES?



"I buy mostly in the fall, at least I have in the past. Most companies offer a certain discount if you buy in the fall and have a pre-paid plan that starts in the following spring. You can go through the winter without paying for it and then pay for it in the spring. I usually buy my chemicals and fertilizers in the fall, but I wait until spring to buy seed and things like that. This coming year I am thinking about ordering all of my materials at one time. I just borrow the money and prorate it out over 12 months." — **Stephen Clay, Smoky Mountain Lawn and Landscape Service, Inc., Knoxville, Tennessee**



"Usually on an as needed basis. When I have a need for chemicals, I get most of them from a supplier within about 20 miles from me. The reason is more of a cash flow situation. I don't have a big enough operation to buy all my chemicals at one time for an entire season. I just buy them on an as needed basis and it helps me to control my inventory and cash flow better. When I have the demand for it and can foresee good enough conditions, that's when I will go ahead and add another piece of equipment, a certain service or supply." — **J.L. Miller, Green Grass Chemical Lawn Care, LaCombe, Louisiana**



"We buy chemicals year-round because we spray year-round because of our climate. That's where we're different from the rest of the industry. The rest of them shut down for snow time. We don't get any snow, so we just keep on spraying. We do have a spraying business and a mowing business. With the mowing, you tend to buy more equipment in the summer because there's more breakdown when you're using it more. Things really grow like crazy out here in the summer. We still mow year-round, but we don't get nearly as much grass in the winter." — **Larry Bourbonnais, Larry Bourbonnais Co., Riverside, California**

CALENDAR

Nov. 10-12

Missouri Lawn and Turf Conference, Chase Park Plaza, St. Louis, Missouri. Contact: Greg Martin, University of Missouri, 314 Hearn Building, Columbia, Missouri 65211; 314/882-4087.

Nov. 10-12

Penn State Golf Turf Conference, Keller Conference Center, Penn State University, University Park, Pennsylvania. Contact: Dr. Joseph M. Duich, Department of Agronomy, 21 Tyson Building, University Park, Pennsylvania 16802; 814/865-9853.

Nov. 12-14

Empire State Turf and Grounds Exposition, Rochester Riverside Convention Center, Rochester, New York. Contact: Ann Reilly, New York State Turfgrass Association, Inc., 210 Cartwright Blvd., Massapequa Park, New York 11762; 516/541-6902.

Nov. 17-20

1986 Professional Lawn Care Association of America Annual Convention, Baltimore Convention Center, Baltimore, Maryland. Contact: Jim Brooks, Executive Vice President, PLCAA, 1225

Johnson Ferry Rd. NE, Suite B-220, Marietta, Georgia 30067; 404/977-5222.

Dec. 8-11

Ohio Turfgrass Conference and Show, Ohio Center, Columbus, Ohio. Contact: Dr. John Street, Ohio State University, Agronomy Extension, 2021 Coffey Road, Columbus, Ohio 43210-1086; 614/422-2047.

Dec. 12-13

Southern Nevada Desert Turfgrass Conference. Contact: Bob Morris, Clark County Extension Office, 953 East Sahara Avenue, S.T. and P. Building, Suite 207, Las Vegas, Nevada 89104; 702/731-3130.

Dec. 12-15

National Fertilizer Solutions Association Convention and Exhibition, New Orleans Convention Center, New Orleans, Louisiana. Contact: Bob Wanzel, National Fertilizer Solutions Association, 10777 Sunset Office Drive, Suite 10, St. Louis, Missouri 63127; 314/821-0340.

Dec. 15-16

17th Annual Georgia Turfgrass Conference,

Georgia Center for Continuing Education, Athens, Georgia. Contact: Gilbert Landry, Jr., University of Georgia, College of Agriculture, Athens, Georgia 30602.

Jan. 7-9

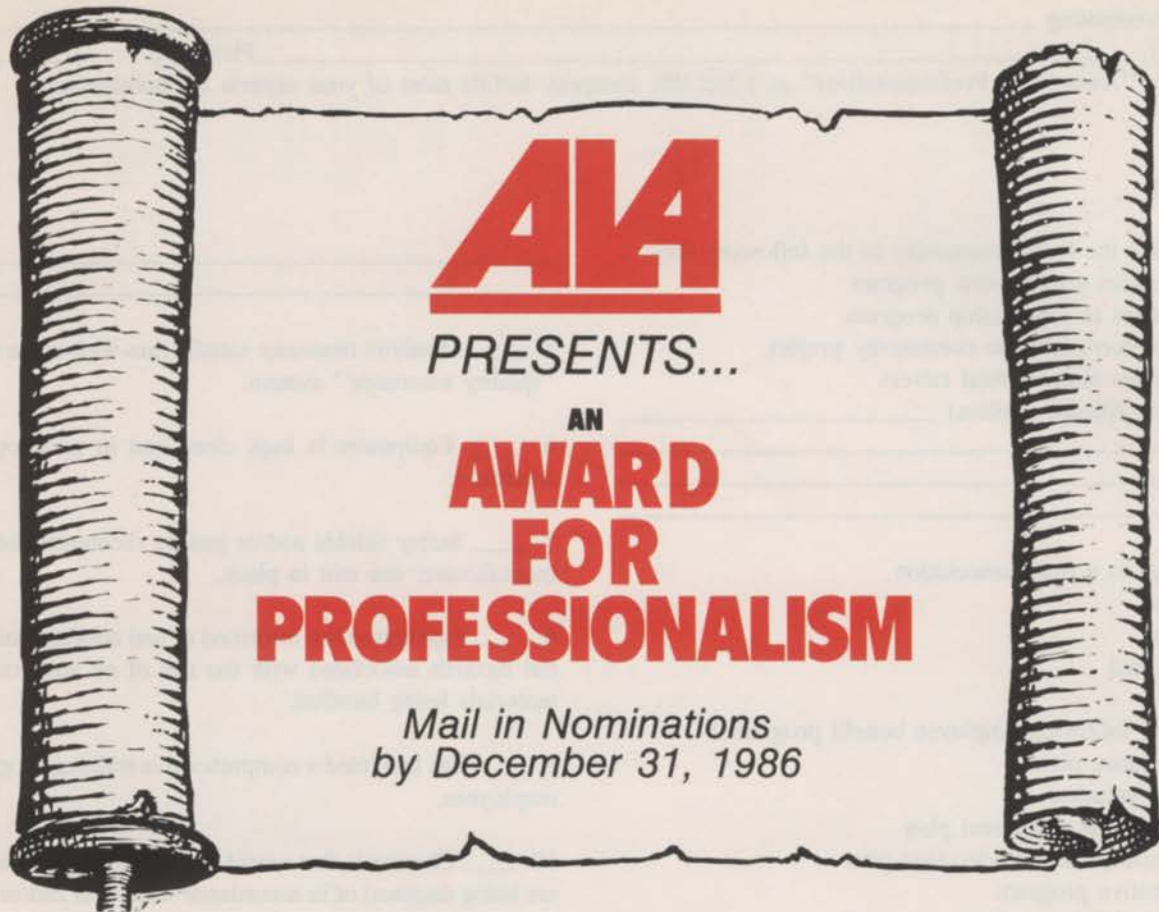
25th Annual North Carolina Turfgrass Conference and Exhibit, Winston-Salem, North Carolina. Contact: A.H. Bruneau, Box 7620, North Carolina State University, Raleigh, North Carolina. 27695-7620; 919/737-2326.

Jan. 13-15

Eastern PA Turf Conference and Trade Show, Valley Forge Convention and Exhibit Center, King of Prussia, Pennsylvania. Contact: Dr. Thomas L. Watschke, Department of Agronomy, Pennsylvania State University, 16 Tyson Building, University Park, Pennsylvania 16802; 814/863-1613.

Jan. 21-23

Virginia Turfgrass Conference and Trade Show, Marriott, Richmond, Virginia. Contact: J.R. Hall, III, Virginia Polytechnic Institute, Virginia Cooperative Extension Service, Blacksburg, Virginia 24061; 703/961-5797.



ALA
PRESENTS...
AN
**AWARD
FOR
PROFESSIONALISM**

*Mail in Nominations
by December 31, 1986*

In an effort to promote professionalism, be involved in community awareness, and help our industry create a positive public image, *American Lawn Applicator* magazine is sponsoring a contest in which an "Award For Professionalism" will be presented.

The winner will be presented a plaque with his company's name inscribed on it; camera-ready art stating they were chosen to receive an "Award For Professionalism" (art will be suitable for reproduction in advertisements and brochures); and a complimentary subscription to *ALA*. In addition, photographs of the presentation, which will be made at a local or national meeting or at the winner's place of business, and a brief article about the company and the award, will be sent to the winner's local newspapers. *ALA* will also do a brief article on the winner in an upcoming issue.

Do you know a lawn care service company owner who deserves to be recognized for his efforts in operating a professional business? Is his operation respected in his community and by his peers? If so, then why not nominate that business to receive *ALA's* "Award For Professionalism"?

Here is what you have to do. Read over the nomination form on the following page. If you work for, or know of, a company that meets most of the following criteria, then nominate that company by completing this form and returning it to us. All information must be verifiable, and nominations must be received no later than December 31, 1986 to be eligible. A company need not meet all criteria to win. The winner of the contest will be announced in the February issue of *ALA*.

I am nominating _____
(Address) _____ Phone: () _____
for ALA's "Award For Professionalism" as I feel this company fulfills most of your criteria for nomination.

CRITERIA:

1. Supports the local community in the following way: _____

- ___ sponsors youth sports program
- ___ donates to scholarship program
- ___ volunteers labor to community project
- ___ donates to local fund raisers
- ___ other (please explain) _____

5. ___ Monitors customer satisfaction with some form of "quality assurance" system.

6. ___ Equipment is kept clean and in good operating condition.

2. Belongs to a trade association.

- ___ local
- ___ state
- ___ national

7. ___ Safety shields and/or guards recommended by the manufacturer are still in place.

8. ___ Employees are informed of and educated on potential hazards associated with the use of all equipment and materials being handled.

3. Has the following employee benefit programs:

- ___ insurance plan
- ___ paid vacation
- ___ savings or retirement plan
- ___ company-funded education plan
- ___ incentive program
- ___ other (please explain) _____

9. ___ Has instituted a comprehensive training program for employees.

10. ___ Chemicals that would constitute a hazardous waste are being disposed of in accordance with local and/or federal regulations.

11. ___ Lawn care chemicals are being used according to manufacturer's recommendations.

4. Is supportive of, and involved with, industry problems at the:

- ___ local level
- ___ state level
- ___ national level

12. ___ Trees, ornamentals, sod, and seed are being used in locations specified by growers and are installed according to their recommendations.

13. ___ Company's place of business is kept neat, clean, and well-maintained.

(Explain) _____

14. Additional comments if any: _____

Your name: _____ Your company's name: _____

Address: _____ Phone: () _____

Please tear out this form along the perforation and mail it to: Award for Professionalism, ALA Magazine, 4012 Bridge Avenue, Cleveland, Ohio 44113.

RYAN® INTRODUCES THE Lawnaire® IV



The self-propelled walk-behind aerator that does a professional job on home lawns and smaller turf areas.

- Equipped with 30-3/4" coring tines providing an aeration pattern of 9 holes per square foot.
- Penetration up to 2 3/4".
- Two weight options provided for increased downward pressure - a 38 lb. steel bar and/or steel drum that holds 55 lbs. of water.

- Convenient lift handle for raising and lowering transport wheels which provide added maneuverability.
- Covers up to 21,000 square feet per hour.
- Tine wheel shaft and water drum shaft are equipped with two grease fittings and protected by felt seals to keep out dirt.
- 3 h.p. industrial engine with rotary stop switch for easy shut-off.
- Fuel tank holds two quarts.

Designed for the professional who wants to provide quality core-type aeration at a high rate of speed, the new Lawnaire IV is the most dependable walk-behind roll-type aerator on the market.

More and more homeowners are asking for lawn aeration to break down thatch and improve turf quality. The Lawnaire IV offers lawn care professionals and rental outlets a core aerator that pays for itself in just weeks.

LAWNNAIRE IV SPECIFICATIONS

Model 544863

DIMENSIONS

Width 28"
Swath 19"
Weight Dry-215 lbs.
Water in drum-265 lbs. (6.6 gallon capacity).

POWER

Engine 4-cycle, 3 hp industrial with 6:1 gear reduction, dual air cleaner, with rotary on-off switch, low tone muffler.
Clutch Belt tightener.
Driver Primary: V-belt 4L-section to clutch idler. Secondary: #40 roller chain to tine assembly. Transport: #40 roller chain to barrel.

Lubrication Two grease fittings in each axle hub.

UNIT

Penetration Up to 2 3/4"
Aeration Pattern 3 3/4" x 7" center to center.
Speed Operation: 225 f.p.m.
Transport: 190 f.p.m.
Productivity Up to 21,000 sq. ft. per hour.
Tines 3/4" Coring-type, formed from .08" thick heat-treated alloy steel, 30 tines per aerator.
Tires Two 8 x 1.75 semi-pneumatic with ball bearings.

For more information call your Ryan Sales, Service and Parts Dealer today.

Or call toll-free 1-800-228-4444

OUR REPUTATION IS BUILT TO LAST

Cushman-Ryan, OMC Lincoln
P.O. Box 82409
Lincoln, Nebraska 68501-9971

Tine Replacement Part #522361

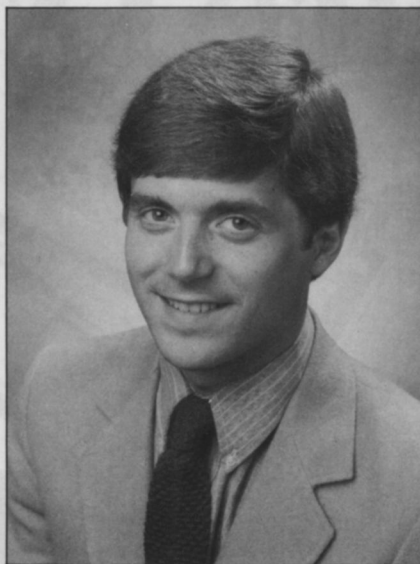


INSIDE STORY

Well, the year is almost over and once again it is time to start thinking about stocking up with supplies for the 1987 turf season. Our cover story this month contains a run-down on some of the new mowing and turf maintenance equipment that manufacturers will have in store for us at the beginning of the year.

In spray rigs, manufacturers tell us the trend is toward multiple compartment tanks and built-in storage areas for granular material and granular spreaders. "It gives an applicator the ability to be a total custom application company," says Mike McKee, President of New England Green, Inc., Springfield, Massachusetts. McKee's company is coming out with an improved all-fiberglass bed for their custom-built spray rigs.

McKee hopes his spray rig design will help instill a higher level of professionalism in the industry. "We are trying to get companies to be more discriminate pesticide users, as opposed



to just blanket spraying every lawn with whatever is in the tank mix in the morning," says McKee.

Sal Rizzo, President of Salsco, Inc., Cheshire, Connecticut, says sales of his

new SS-35-20 slicer/seeder have been going well. "We are sold out this fall on product," says Rizzo. "The orders coming in now are for spring."

Manufacturers of mowers, aerators, and other turf equipment have also told us of strong sales for their new and innovative equipment for the new year.

Assistant Editor Vivian F. Rose brings us a similar report on new turf chemicals for 1987 in her article "Chemical Preview '87." Rose spoke with company sales representatives and product managers to bring us news of new turf chemicals that should hit the market in time for the 1987 turf season.

And once again, we bring you a selection of interesting and informative technical articles. Happy reading!

Jim Weidner

YOU CAN'T AFFORD NOT TO COMPUTERIZE!

WITH OUR SOFTWARE YOU WILL:

- Cut billing costs by up to 75 percent.
- Cut routing/route management costs by up to 50 percent.
- Cut missed stops by up to 100 percent.
- Improve profits by knowing when to re-negotiate contracts.
- Enhance seasonal business by targeting your mailings quickly and accurately.

**Take no chances.
90 day money back guarantee.**

Pay for your computer or make the computer pay for itself with decreased costs and greater income.

CALL NOW:

904-596-0863
904-596-6347
Fortunate Enterprises, Inc.
3365 Oleander Drive
Spring Hill, FL 33526

WE'RE THE PEOPLE WHO HELP YOU GROW!



NEW Turf Lab

Portable and precise soil testing

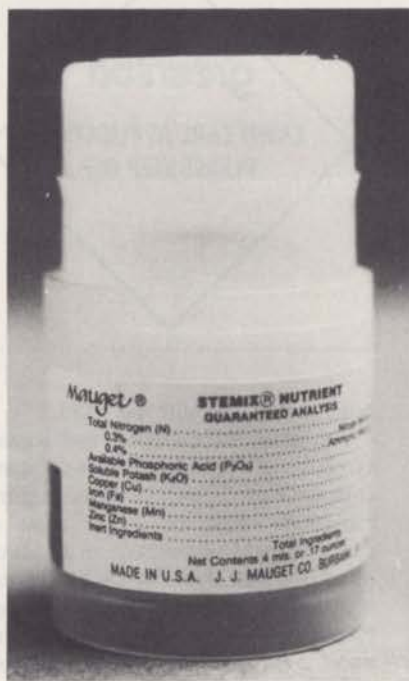
The easy-to-use LaMotte Turf Lab incorporates the latest technology in sample extraction, test procedures and color comparisons. You'll get accurate and reliable pH and nutrient level readings that will be useful in your ground maintenance and turf care programs.

Send for complete information.

LaMotte Chemical

LaMotte Chemical Products Co.
P.O. Box 329, Chestertown, Maryland 21620
301 778-3100

Mauget® Micro-Injection. The most efficient way yet discovered for feeding and treating trees.



The Mauget® Micro-Injection System provides the most efficient way to treat problem trees. Control elemental deficiencies, insects and disease with easy-to-use Mauget Micro-Injection capsules of premeasured and

thoroughly tested materials. Mauget Micro-Injection fits today's environmental conscious customer, too. No spraying. No excess residue. Contact your Mauget distributor today, and put more efficiency in your operation.



J.J. Mauget Company
2810 N. Figueroa Street
Los Angeles, CA 90065
1-800-423-2699

Circle 22 on reader service card

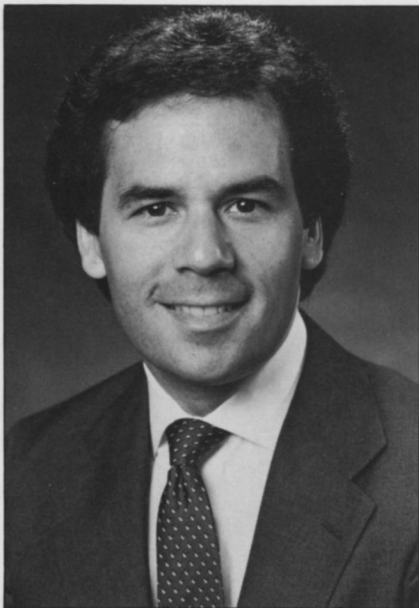
NEWS IN BRIEF

GREENLON INTRODUCES NEW POSTING SIGN

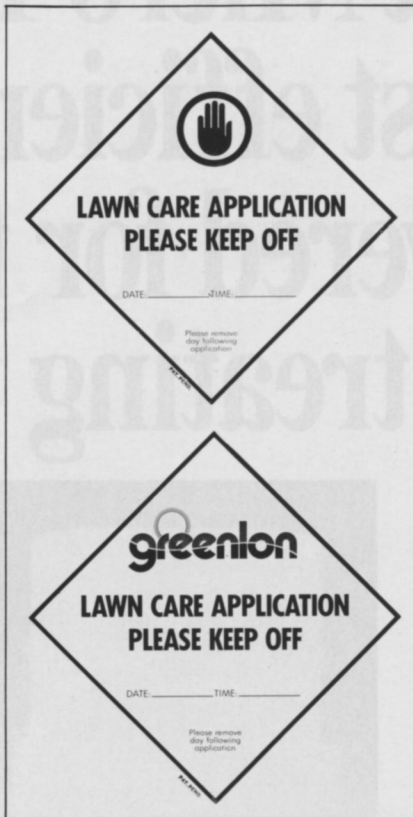
ChemLawn's decision to post signs in its customers' freshly treated lawns could spur the rest of the industry into making a similar decision. Rick Steinau, President of Greenlon Environmental Services, Cincinnati, Ohio, thinks he has a solution to what may become an industry-wide problem in the search for a suitable sign. Steinau has designed "Sign 'N Post," an easy-to-assemble, weather-resistant, and cost efficient sign for right-to-know posting purposes.

Steinau says he went to work on the sign after discussing the problem of finding an efficient sign with Bob Styduhar, ChemLawn Corporation's Manager of Legislative and Regulatory Affairs. His sign has gotten favorable reviews from such industry notables as Jim FitzGibbon, Chairman of LESCO, Inc. "He was so enthusiastic about it that he asked me to send him 15 copies to give to his sales staff to promote for me at no charge," says Steinau.

"My hope is to get the sign to the point where it is considered standard in the industry," says Steinau. The 4-1/2- by 4-1/2-inch sign is constructed of a clay-coated tag stock mounted on a wire post. Steinau says the sign will not sag under wet conditions. There is a patent pending on the combined sign and wire post design. "You cannot shake the sign off," claims Steinau. "If a child falls on the



Rick Steinau



post, it will not hurt the child."

The signs can be ordered with a generic symbol and wording or with a company's custom logo. Generic signs require a minimum order of 1,000 signs and custom artwork signs require a minimum order of 5,000 signs. The warning on the sign reads: "Lawn Care Application Please Keep Off." There is also provision for the applicator to write in the date and time of application and a note which advises that the sign be removed a day after the application.

For ordering and pricing information, write Sign 'N Post, 1920 Losantiville Avenue, Cincinnati, Ohio 45237.

VOTE NO ON PROPOSITION 65!

Proposition 65, the so-called toxics initiative, is a proposed law currently under consideration by the California State Legislature which supporters say would limit the discharge of chemicals known to cause cancer or birth defects into drinking water supplies. The law would also require companies to issue warnings

before they "intentionally" expose people to those chemicals. According to a report in San Diego's *The Tribune* newspaper, the toxic issue is led by environmental groups and their traditional Democratic allies, which include Hollywood celebrities. The proposition was initiated by State Assemblyman Tom Hayden, husband of Jane Fonda.

Opponents of the proposed law say it would hinder farmers, pesticide applicators, and manufacturers, while exempting homeowners and municipalities from the law. Those opposed to the measure include such industrial giants as Chevron Corporation and Dow Chemical Company, as well as Governor George Deukmejian, who says the measure is politically motivated and would result in clogging the courts.

Cynthia Drake, landscape horticultural consultant and pesticide applicator based in San Diego, has taken an active role in defying proponents of Proposition 65. Drake confronted a group of Hollywood actors who staged a recent voter registration rally to drum up support for Proposition 65. The group included such stars as Chevy Chase, Morgan Fairchild, Shari Belafonte-Harper, Whoopi Goldberg, Kristy McNichol, and Rosanna Arquette.

Drake claims Whoopi Goldberg stormed off the rally stage after Drake made a point by asking Goldberg how movie film could be processed without toxic materials. "I, of course, took the stage and listed all the reasons for voting 'no' on the proposition," says Drake. "When I left the stage, Rosanna Arquette and I staged a screaming match which I won when I asked her to explain selenium. She replied that we toxic pesticide sprayers regularly spray people with it. The crowd went wild when I informed her that it in fact occurs naturally in our soils and that Proposition 65 could not control it." Arquette then ran off the stage and got back on the celebrity bus which was headed for Los Angeles, the next stop on the Proposition 65 rally trail, according to Drake.

At the San Diego rally, Drake was supported by 10 California Women for Agriculture, a landscaper, fertilizer distributors, farm bureau representatives, and pesticide applicators, 30 opponents of Proposition 65 all told. Drake is convinced that writing letters to the media and legislators is the only way to head-off this proposition. Drake expects the proposition to be voted on November 4.

(continued on page 16)

Now Lebanon brings you the best of both worlds.



Lebanon lets you choose the fertilizer that's best for you.

For years, **Lebanon** has provided lawn care professionals with the finest homogenous granular fertilizers in the industry.

Now, we can provide the same balanced formula to those who prefer liquids. It's just one more aspect of **Lebanon's** ongoing commitment to give you the most complete line of products and services available anywhere.

Lebanon Liquid Turf Products* save time and money.

When you want a liquid fertilizer that gives you fast results, **Lebanon Liquid Turf Products** are your best choice.

They're virtually 100% homogenous, providing a uniform balance of N-P-K. And, because they can be pumped directly into your application trucks, filling is easier and you're ready to go in less time.

They're flexible, too.

Lebanon Liquid Turf Products are complete fertilizers; however, should you need to add a control product to handle a specific problem, all you have to do is mix it in. The liquid formulation assures even blending and a uniform application.

Choose our high-quality standard or custom blends.

Just like our granular formulations, **Lebanon Liquid Turf Products** are available in a variety of standard

or custom blends. No matter what your needs, we can develop the perfect **solution**—quickly and cost-effectively.

Lebanon Liquid Turf Products come with complete Lebanon service.

It takes more than high-quality product to create an effective program. That's why we back up our competitively-priced liquids with **Lebanon's** reliable, responsive service. So you can provide quality turf care programs to your customers.

See the difference quality can make.

Stop by booths 101-107 at the PLCAA Show in Baltimore, MD, November 17-20 and take a close look at the best of both worlds from **Lebanon**. But if you can't make the show, simply clip this ad and return it to **Lebanon Total Turf Care** along with your name and address. We'll be happy to send you samples of both our granular and liquid fertilizers.

*Lebanon Liquid Turf Products are available on the East Coast, excluding Florida.

Lebanon
TOTAL TURF CARE

A division of Lebanon Chemical Corporation • c/o Tidewater Agricorp
2121 Old Greenbrier Road • Chesapeake, VA 23320 • 804-424-7910

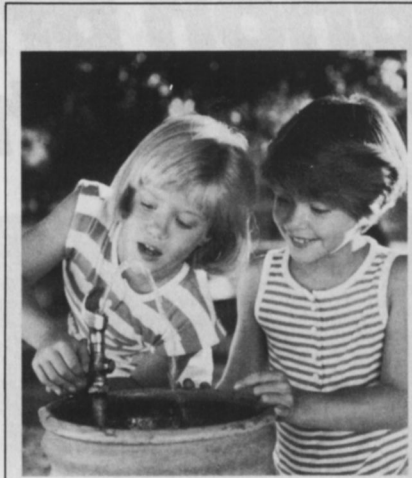
NEWS

(continued from page 14)

A "No on 65" organization now has an office in Sacramento and is being funded by various large companies. The funds are being used to make videotapes and pamphlets which state reasons for opposing Proposition 65. In each major city, a person has been designated to coordinate the grassroots effort. "I am one of the few people in San Diego who are really carrying the torch for this," says Drake. She distributes information from the organization to interested pesticide user groups and they in turn spread the word to their customers. "They are putting bumper stickers on their trucks," says Drake. "We are carrying signs at city hall."

Drake and a group of 10 organized and vocal individuals recently made an impression on a county board of supervisors meeting. "When they saw how many people I showed up with, they cancelled the meeting, and decided to put it off to a later date. Rather than risk all of their necks for the election, they are going to wait until the last minute," reasons Drake.

Lawn service companies and landscape companies with less than nine employees



They deserve better.

NO on 65
The Toxics Initiative.
It's full of exemptions.

are exempt from the provisions of the proposition, but the ramifications for those companies with more than nine

employees could be devastating. "If they apply products which contain carcinogens or teratogens," says Drake, "then they are open to attack by anyone who can take them to court to prove that anything they put on the lawn or trees somehow got washed off those plants into an underground water system. Up to this point the major manufacturers were held liable, they had to prove that this chemical was not going to hurt the water. They had the finances that could support them in a case like this. But for the average person with a company over 10 employees, they don't have those kind of finances."

A "zero discharge" clause in the proposition would mean that no amount of toxic chemical can enter the water table, according to Drake. "We are going to have law firms looking for people doing some sort of small polluting, yank them into court, have a chance to get 25 percent of the fines collected, and make a killing off this!" exclaims Drake. "That is the bounty hunter provision in this." She notes that insurance companies also would shy away from companies that could be taken to court at any moment.

Drake fears that the general public will unwittingly look at the issue on the ballot,

(continued on page 18)



For further expansion of important projects your support is needed. Be a part of future research. Send your contribution to:

O. J. NOER RESEARCH FOUNDATION, INC.
Robert J. Welch, Secretary-Treasurer
301 So. 61st St.
Milwaukee, WI 53214

TURF-PLUGGER CORE AERATOR



- Self Propelled
- Quiet Running
- Easy Maneuvering
- Straight Up-and-Down Motion for Better Penetration
- All Roller Bearings - Case-Hardened Shafts
- Low Maintenance

3 MODELS AVAILABLE

- 400 - 24,000 Sq. Ft./Hr.
- 500 - 26,000 Sq. Ft./Hr.
- 600 - 36,000 Sq. Ft./Hr.

Ask about major lawn care companies who use it exclusively!



Classen Mfg. Co.

1403 Roach St. • Norfolk, NE 68701 • (402) 371-2294

Circle 55 on reader service card

All Irons Are Not Created Equal!

How come you guys look so good this morning?

COMPARISON

Other Brands
4-6%

Lawn-Plex™
8% Fe

We've just been sprayed with R.G.B.'s Lawn-Plex!



Lawn-Plex™ 8% Fe Plus 8% Sulfur Provides The Following:

- The most highly concentrated chelated (phosphate-citrate) iron available in liquid form.
- Fully compatible with virtually all (NPK) formulations and pesticide tank mixes.
- Will not stain your customers' sidewalks or your equipment.
- Extremely low phytotoxicity. Ideal for spray application even during the heat of the day.
- Buffers ph to prevent alkaline destruction of pesticides.
- Maximizes green-up without excessive nitrogen.

U.S. Patent Nos: 4,214,996 & 4,351,735

RGB
LABORATORIES INC.

See You at the P.L.C.A.A. Show!
Booth 332

Circle 25 on reader service card

1531 Charlotte Street, Kansas City, Missouri 64108

(816) 474-3342

NEWS

(continued from page 16)

see only the words "clean water initiative," and vote "yes." They are not going to read the proposition. "I go out on the road with my spray rig and I have that bumper sticker on every conceivable inch of my car and people say, 'You're against clean water?'" says Drake. She will personally attempt to change some voters' minds by manning booths set up in front of several grocery stores to pass



Cynthia Drake

out pamphlets and talk to interested citizens. "Keep your fingers crossed for us out here in crazy California," says Drake, "this proposition *may not pass*, but by the skin of our teeth."

**CIBA-GEIGY BLASTS
EPA'S DIAZINON REVIEW**

Ciba-Geigy Corporation recently stated that the Environmental Protection Agency (EPA) has ignored the company's efforts to scientifically resolve concerns over certain uses of the insecticide, diazinon. The company called EPA's response an "inefficient adversarial process."

Diazinon's use on sod farms and golf courses was targeted for Special Review in January by the EPA because of potential hazards to birds. The insecticide has been registered for use for more than 30 years, and has been used on turf for more than 20 years.

"Before the Scientific Advisory Panel (SAP) review in May, we tried several times to resolve through scientific means the EPA's concerns. We were completely ignored," says Dr. Haney B. Camp,

Vice President of Research and Development for Ciba-Geigy's Agricultural Division. "Also the manner in which the SAP review was conducted did not allow an unbiased, complete airing, and review of scientific issues. An impartial review, the mission of the SAP, was thwarted," says Camp.

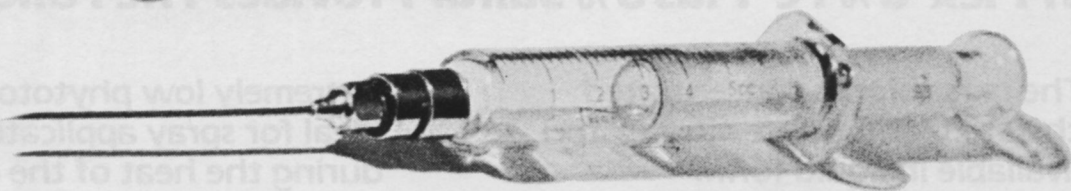
Twice following the SAP, Ciba-Geigy sought to discuss with the EPA its measures for substantially reducing the potential hazard to birds. The EPA rebuffed both requests. The company has evaluated new application rates, and is testing new formulations and other measures to reduce potential toxicity to birds. This fall, the company is conducting large-scale studies on golf courses. Such studies will provide definitive data on the safety of diazinon to birds.

"This comprehensive effort represents a substantial commitment toward alleviating concerns with, and reducing diazinon's potential hazard to birds," says Camp. "EPA has not only chosen to ignore this effort, but also is basing its decision on an inadequate scientific review. We will continue our scientific efforts to resolve these concerns, regardless of the EPA's decision."

(continued on page 20)



**Are Your Lawns
and Gardens
Chemical JUNKIES?
Don't Be a Chemical Abuser**



Reduce Your Overall Chemical Dependence with...

The organically safe way to grow great lawns, gardens, crops, flowers & vegetables

**We Carry A Complete Organic Line Of
Quality Plant Foods & Protectants Including:**

**Vita
Build**

- VITA BUILD—Soil Builder and Organic Plant Food
 - VITA GREEN—Secondary & Micro Nutrients
 - VITA FLOW—Organic Soil Conditioner
 - VITA TREE & SHRUB—Organic Tree & Shrub Root Food
 - VITA COAT—Winter Protectant, Anti-desiccant
- DEALER INQUIRIES WELCOME**

GREEN PRO SERVICES
Call For Catalog
800-645-6464
N.Y. State Call:
(516) 538-6444

Jacobsen Commercial Products.



The tough line that pushes the competition back to square one.

For grounds maintenance equipment as durable and productive as our new Commercial Products line, the competition will have to go back to the drawing board.

Because Jacobsen meets your needs . . . with more than 20 heavy-duty machines that take your demanding mowing schedules in stride.

From versatile, high-production riding mowers, to a wide selection of efficient walk behinds, to a complete set of professional-quality grooming tools, Jacobsen Commercial Products deliver unparalleled productivity, while cutting costs.

And, we've backed the line with very attractive financing terms from Textron Financial Corporation;

tough, competitive pricing; the quality and reputation of the Jacobsen name; and, extensive parts, service and warranty support programs, all making Jacobsen Commercial Products work even harder for you.

Jacobsen Commercial Products. The grounds maintenance equipment that keeps you a square ahead, and leaves the competition back at square one. For more information about this dynamic new line, or a free demonstration, see your nearest Commercial Products dealer. Or, call the Commercial Products Sales Mgr. at (414) 637-6711.

**JACOBSEN
TEXTRON**

Jacobsen Division of Textron Inc.

NEWS

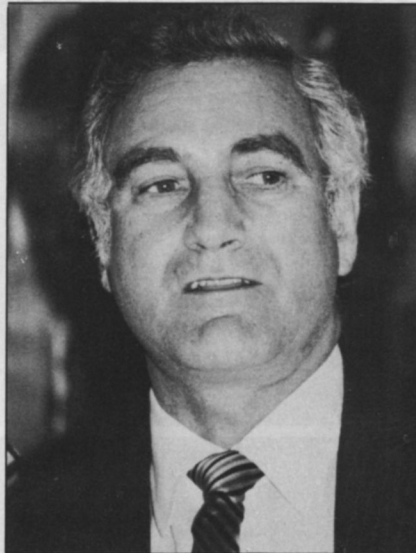
(continued from page 18)

"Ciba-Geigy and the EPA have successfully resolved concerns many times in the past. We do not understand why the Agency has turned a deaf ear to us this time, in comparison with past experience," adds Camp.

CHEMLAWN DISCONTINUES USE OF 2,4-D FOR 1987

In a move that will no doubt set a precedent for the industry, ChemLawn Services Corporation will suspend its use of 2,4-D beginning with the 1987 turf season. Vice President Dr. Robert Miller says ChemLawn has "suspended the purchasing of 2,4-D and phenoxy herbicides and will not use them next year."

The step was taken in light of the results of a recent study conducted by the National Cancer Institute on the incidence of certain types of cancer in Kansas farmers using phenoxy herbicides. The results of the study was reported in an article titled, "Agricultural Herbicide Use and Risk of Lymphoma and Soft-Tissue Sarcoma,"



Dr. Robert Miller

in the September 5, 1986 issue of *The Journal of the American Medical Association*. The researchers concluded that human exposure to phenoxyacetic acid herbicides increases the risk of non-Hodgkin's lymphoma.

"Although we don't consider that (the study) to be the final word," says Miller,

"it is a valid study and does raise some red flags and we are just taking a cautious approach." ChemLawn has already begun work on replacement products for the phenoxy herbicides. "We are evaluating a number of alternatives and that is as much as we will say about what we are going to do," states Miller.

MORE INTEREST IN DROUGHT RESISTANCE

Dr. Rich Hurley, Vice President of Agronomy and Research at Lofts, Inc., Bound Brook, New Jersey, predicts increased activity in breeding for drought-tolerant grasses in the West. "From Kansas City going west to Denver and from the Dakotas going down to mid-Texas, you have buffalograss there that is very well adapted," notes Hurley. "There is breeding activity with buffalograsses at Texas A & M and the University of Nebraska. I can see a day when we are going to have an attractive turf-type buffalograss that will provide a real improvement in terms of using less water in turfs in that area." Unfortunately, Hurley

(continued on page 22)

Quality brochures to promote your lawn service or landscape business

EXPANDED SELECTION!



LESCO . . . the full-service supplier to the lawn care industry now brings you quality brochures designed to increase customer response and enhance the professional image of your company. These brochures and forms will give your business an updated look for the 1987 season.

Brochures are of extremely high quality, printed in full color on fine paper stock and can be ordered with or without personalized imprinting. Small or large quantities are available and the entire assortment is very competitively priced.

For more information or to obtain samples, call us toll free.

(800) 321-5325 **(800) 362-7413**
NATIONWIDE **IN OHIO**

LESCO

LESCO, Inc., 20005 Lake Road, Rocky River, Ohio 44116 • (216) 333-9250

Circle 53 on reader service card

Winter cash flow with Freezgard® plus PCI*™



Now you can generate cash flow during winter months, while reducing your customers' liability risks from icy parking lots and sidewalks. Using your existing spray equipment, you can apply Freezgard to remove ice and hard-packed snow from residential, commercial and municipal properties.

Freezgard plus PCI is an anti-corrosive liquid deicer — effective at temperatures much lower than salt. After fresh snow is plowed with conventional snow-removal equipment, Freezgard is applied on remaining ice and hard-packed snow.

For temperatures above 20° (F), Freezgard will generally melt the entire buildup, depending on thickness. For temperatures from 20° down to -5° (F), Freezgard penetrates through the buildup and breaks the bond between ice and pavement, allowing the remaining buildup to be plowed away. Freezgard is one of the few products that will effectively break this bond down to -5° (F).

Look into Freezgard plus PCI for your winter cash flow.

- Uses existing spray equipment.
- No pump damage, easy equipment cleanup.
- 80% less corrosive than salt.
- Effective down to -5° (F).
- Leaves pavement clean, unlike messy sand applications.



**PCI, a corrosion control polymer, is patent pending, and is a trademark of Georgia-Pacific Corp.*



Great Salt Lake Minerals & Chemicals Corporation

P.O. Box 1190 • Ogden, Utah 84402
(801) 731-3100

NEWS

(continued from page 20)

points out that buffalograss is not well adapted to the humid Southeast or the cooler Northeast.

PRECISION PURCHASES GREAT NORTHERN EQUIPMENT

Precision Tank and Equipment Company, Virginia, Illinois, has reached a tentative agreement to purchase assets from Great Northern Equipment Company of Springfield, Illinois. According to Vern Ames, President of Precision, the equipment business of Great Northern will be merged into Precision's operations at their Athens, Illinois location by the end of October.

Precision plans to manufacture and service the complete line of Great Northern Equipment, and will maintain the reputation of quality that Great Northern has become known for.

To assist Precision in maintaining this reputation, Precision will employ six former Great Northern key personnel: Don Wallner, Floyd "Tip" Pettit, Glen

Marquis, William Wallner, Greg Blackman, and Mary Ann Patton. Those personnel will be available to serve you as in the past.

For information relative to the merging of the two firms, please contact: Vern Ames at Precision's Virginia, Illinois office at 217/452-7228 or Harry "Butch" Nichols at their Athens, Illinois location at 217/636-7023.

DOW SPONSORS ONE DAY CONFERENCES

A series of one-day Midwest Turf Management Conferences, free of charge to lawn care operators and other interested parties, will be held in November and December. The Dow Chemical Company is sponsoring the meetings.

Sessions will be held November 12 in Cincinnati; November 13 in Indianapolis; December 2 in Livonia, Michigan; December 3 in Strongsville, Ohio; December 16 in Rolling Meadows, Illinois; December 17 in St. Louis, Missouri; and December 18 in Kansas City.



Dr. Rudd McGary

Subjects to be discussed include: Customer Attraction and Retention; Dow Marketing Tools; Alternative Uses of Employees; Materials Selection and Usage; and Manpower for 1987 and Beyond.

Speakers include Ed Wandtke and Rudd McGary, senior consultants with All-Green Management Associates, Columbus, Ohio; and Dow representatives George Gossett, Barry Brown, Stan Howell, Eunice Hall, Jack Watkins, Jeff Poole, and Dave Maurer. Registration in-

(continued on page 24)

ANNOUNCING NCTE '86

North Central Turfgrass Exposition
December 9-11, 1986

O'Hare Exposition Center, Rosemont, Illinois

NCTE '86 returns to Chicagoland for this year's educational conference and trade show.

NCTE '86 presents two additional sponsors with programs:

- Sod Growers Association of Mid-America
- Sports Turf Managers Association

NCTE '86 continuing sponsors are Central Illinois Golf Course Superintendents Association, Illinois Turfgrass Foundation, Midwest Association of Golf Course Superintendents, USGA Green Section, and University of Illinois Cooperative Extension Service.

NCTE '86 features will include:

- A top sports figure as Keynote.
- Pesticide Applicators Training session and test.
- A full day seminar on equipment maintenance designed for mechanical personnel.
- The largest educational program and exhibit trade show in NCTE history.

For further information, registration, and housing contact:

ILLINOIS TURFGRASS FOUNDATION
435 North Michigan Avenue
Suite 1717
Chicago, Illinois 60611
312/644-0828

How you live may save your life.

You may find it surprising that up to 60% of all cancers can be prevented. By avoiding excessive exposure to sunlight, by not smoking cigarettes, by not overeating and by following a diet high in fiber and low in fat.

The battle isn't over but we are winning.

Please support the American Cancer Society.



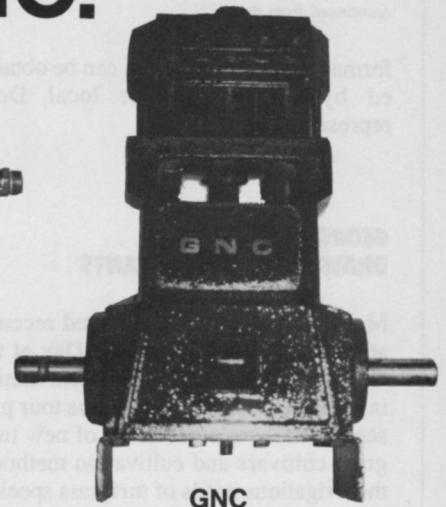
GNC PUMP, INC.



**GNC Pump
10 GPM
\$500.00**



**Mighty Mag
\$185.00**



**GNC Pump
20 GPM
\$1200.00**



**Mag I
\$75.00**



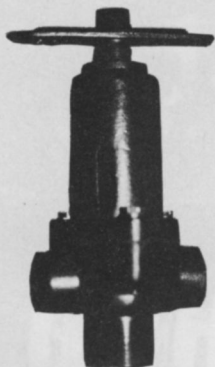
**Mag P
\$69.96**



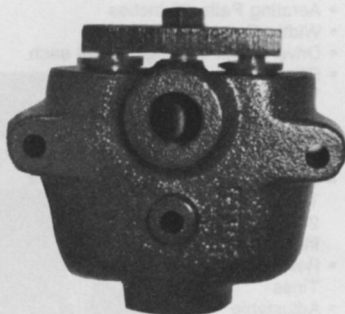
**Plastic Swivel
\$29.95**



**Mini Mag
\$39.95**



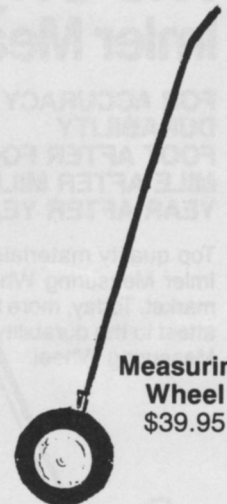
**Regulator
\$85.00**



**10 GPM Valve Chamber Assembly
\$95.00**



**20 GPM Valve Chamber Assembly
\$225.00**



**Measuring Wheel
\$39.95**

GNC PUMP, INC.

Offering a Choice for the Lawn Care Applicator

- Piston Pumps
- Pump Parts Interchangeable with FMC Bean Parts
- Spray Guns
- Measuring Wheels

All prices FOB
Houston, TX

**GNC Pump, Inc.
6741-B Mayard
Houston, TX 77041
(713) 937-3449**

DEALER INQUIRIES WELCOME

Circle 91 on reader service card

NEWS

(continued from page 22)

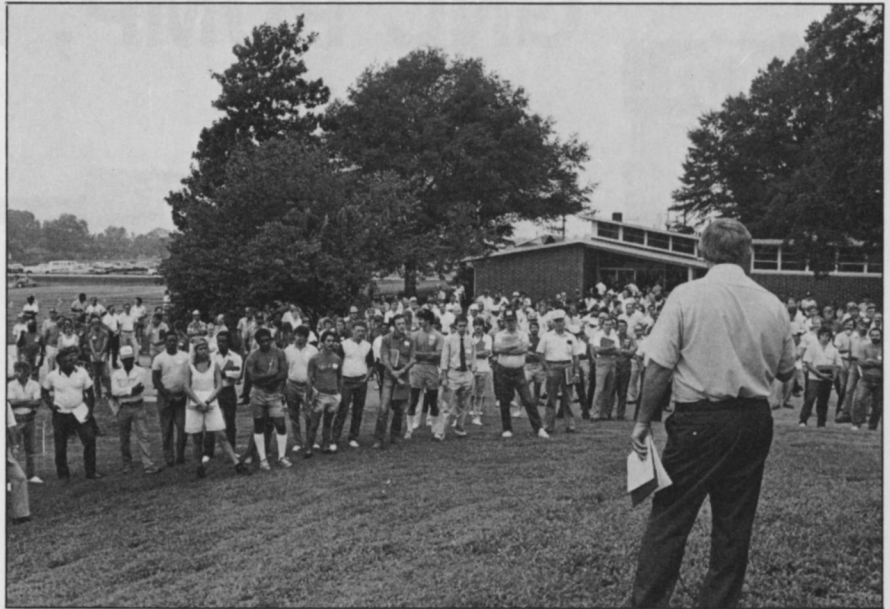
formation and reservations can be obtained by contacting your local Dow representative.

GEORGIA FIELD DAY DRAWS 400 PARTICIPANTS

More than 400 people gathered recently at the 1986 Turfgrass Field Day at the Georgia Agricultural Experiment Station in Griffin, Georgia. Among the four presentations were evaluations of new turfgrass cultivars and cultivation methods, the irrigation needs of turfgrass species, the effectiveness of herbicides, the influence of soil pH on growth, and the effectiveness of plant growth regulators on bermudagrass.

Also, the enhancement of color in centipedegrass with iron and nitrogen was featured, as well as the use of preemergent herbicides for weed control, and turfgrass tolerance to traffic, herbicides, and plant growth regulators.

The field day was designed for golf course superintendents, parks and recrea-



Attendees listen to a presentation at the 1986 Georgia Turfgrass Field Day.

tion directors and employees, athletic coaches, grounds maintenance personnel, professional lawn service personnel, and interested homeowners.

Urban agriculture has become one of the major thrusts of the Georgia Station

in recent years. Situated less than 70 miles south of the Atlanta metropolitan area, the Georgia Station is in an ideal position to look at programs that will benefit those living in urban areas.

(continued on page 26)

The Original Imler Measuring Wheel

**FOR ACCURACY AND
DURABILITY
FOOT AFTER FOOT ...
MILE AFTER MILE ...
YEAR AFTER YEAR!**

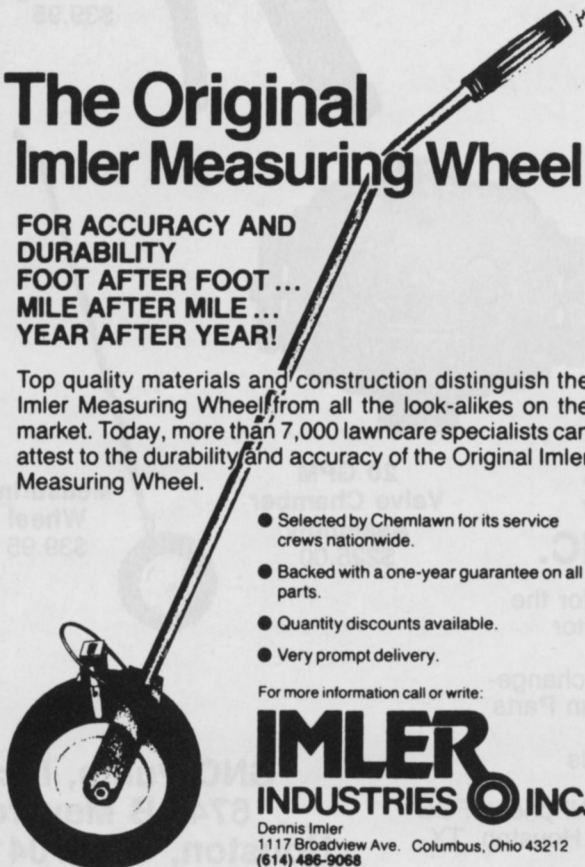
Top quality materials and construction distinguish the Imler Measuring Wheel from all the look-alikes on the market. Today, more than 7,000 lawncare specialists can attest to the durability and accuracy of the Original Imler Measuring Wheel.

- Selected by Chemlawn for its service crews nationwide.
- Backed with a one-year guarantee on all parts.
- Quantity discounts available.
- Very prompt delivery.

For more information call or write:

**IMLER
INDUSTRIES INC.**

Dennis Imler
1117 Broadview Ave. Columbus, Ohio 43212
(614) 486-9068

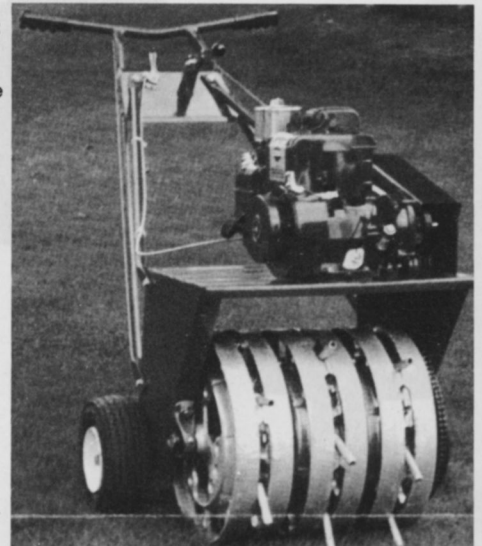


WALK BEHIND AERATOR

SPECIFICATIONS:

- Engine: 5 HP, 4 Cycle Briggs and Stratton, 6 to 1 Gear Reduction
- Weight: 450 pounds
- Drive: Chain Driven and Belt
- Aerating Path: 20 inches
- Width: Overall 30 inches
- Drive Wheel Castings: 6-34# each
- Pillow Type
Tine Holder:
1 1/2 X 2 1/2
Steel,
Unbreakable
- Core Type
Tines:
21-5/8 X 3 1/2
inches
- Retractable
Tines
- Adjustable
Handle for
Ease of
Handling
- Tire and
Wheels
11 X 4 X 5

Is rugged
and requires
little
maintenance.



For More Information, call or write:



EARL J. CRANE INC. AND ASSOCIATES

3975 S. Seneca Co. Rd. 19
Tiffin, Ohio 44883
Phone: 419/447-8313



Adelphi^{*}
KENTUCKY BLUEGRASS

**THE GREENER
KENTUCKY BLUEGRASS™**

For information contact:

J&L ADIKES, INC.
Jamaica, NY 11423

JACKLIN SEED CO.
Post Falls, ID 83854
Tangent, OR 97389

NORTHRUP KING CO.
Minneapolis, MN 55413

VAUGHAN SEED CO.
Bound Brook, NJ 08805
Downers Grove, IL 60515

ROTHWELL SEEDS LTD.
Lindsay, Ont., CAN K9V 4L9

* U.S. PLANT PATENT NO. 3150

Performance Plus

All★Star^{**}
PERENNIAL RYEGRASS

**RESISTS
CERTAIN INSECTS**

For information, contact:

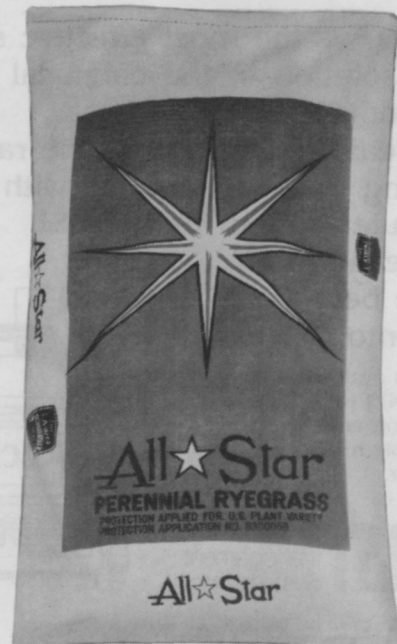
J&L ADIKES, INC.
Jamaica, NY 11423

INTERNATIONAL SEEDS, INC.
Halsey, OR 97348

ROTHWELL SEEDS LTD.
Lindsay, Ont., CAN K9V 4L9

JACKLIN SEED CO.
Post Falls, ID 83854
Tangent, OR 97389

VAUGHAN SEED CO.
Bound Brook, NJ 08805
Downers Grove, IL 60515



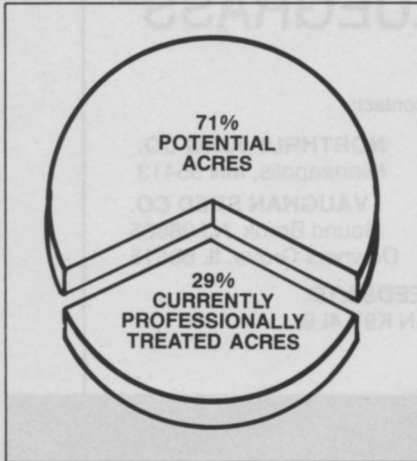
** U.S.P.V.P. APPLIED FOR NO. 8300059

NEWS

(continued from page 24)

LOTS OF TURF LEFT UNTREATED

About 29 percent of the 4.2 million acres of lawns in the United States are currently being treated by professional lawn care operators, according to a report in Dow Chemical Company's *Lawn Care Report*



This is how Dow Chemical perceives the disparity between customers and potential customers.

newsletter. The balance, 71 percent (three million), could be considered potential business for operators.

Aggressive marketing can go a long way in tapping that unrealized market potential, advises the newsletter. Operators should consider utilizing a variety of marketing tactics including direct mail, advertising, public relations, market research, and strategic planning. By implementing these techniques, operators can successfully increase their business and profitability.

OPEI OFFERS SAFETY VIDEO

The Outdoor Power Equipment Institute has produced a 17-minute safety video titled, "The Right Impression." The video blends humor with important power equipment safety messages delivered by impressionist Joey Van and musician Julio Fonesca. During the course of the video, Van assumes the voice and mannerisms of several celebrities, including John Wayne, Sylvester Stalone, Peter Faulk, and George Burns. Each of Van's assumed personalities introduce and ex-



plain the six basic safety steps to follow when operating a variety of lawn mowers, tillers, edgers, trimmers, shredder-grinders, and log splitters.

The video program is available for \$29.95, plus \$3 shipping and handling. To order the tape, specify format (VHS, Beta, or Umatic) when writing to, Safety Video, OPEI, 1901 L Street, N.W., Suite 700, Washington, D.C. 20036; 202/296-3484.

TOUR VIEWS JAGUAR SOD PRODUCTION

Jaguar distributors from across the United States met recently in San Diego, California. Part of the meeting included a tour of AmSod, Inc. to view production of Jaguar tall fescue sod. Using advanced management techniques, Jaguar sod is being harvested within a 12-week cycle.

(continued on page 28)

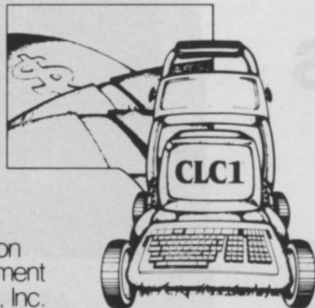
CLC1[®] Lawn Care Software

CLC1[®] is the most effective software solution in the chemical lawn care industry today.

Increase your share of the rapidly growing lawn care market with a computer system from DMSI.

Take a look at the best — look into CLC1[®].

CLC1[®] is available in MS. DOS to operate on any IBM compatible micro computer.



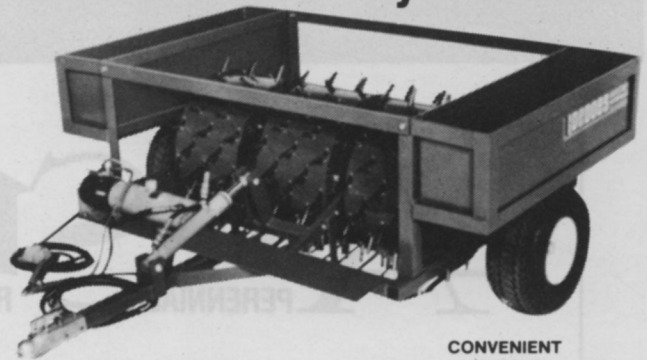
dmsi Distribution Management Systems, Inc.

(402) 553-8005

6910 Pacific Street, Suite 305 Omaha, NE 68106

Circle 46 on reader service card

Trailer Aerator By Dedoes:



EASY HOOK-UP PUSH BUTTON CONTROL

This versatile unit features a 1-7/8" x 200 lb. torque load hitch that can be pulled by a wide variety of tractors or utility vehicles. The remote control hydraulics not only allows easy hook-up but also makes operating a pleasure. Stay in your seat—just push the button to raise or lower the drum.

The easy to load weight boxes provide convenience for adding weight for operating in all kinds of soil.

CONVENIENT
12-VOLT
BATTERY OPERATED
HYDRAULICS

The trailer aerator can easily be converted to an optional flat bed trailer giving you a versatile hydraulic dump bed.

We have units that fit most utility carts, garden tractors, full size tractors and units that can be pulled by most utility type vehicles.

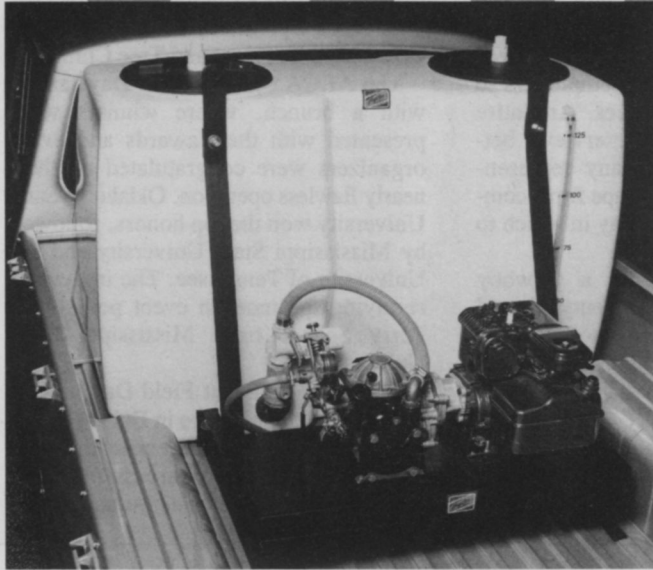
So if you're responsible for strong, healthy grass and concerned with saving time and money, investigate Dedoes quality aerators.

DEDONES INDUSTRIES
INCORPORATED

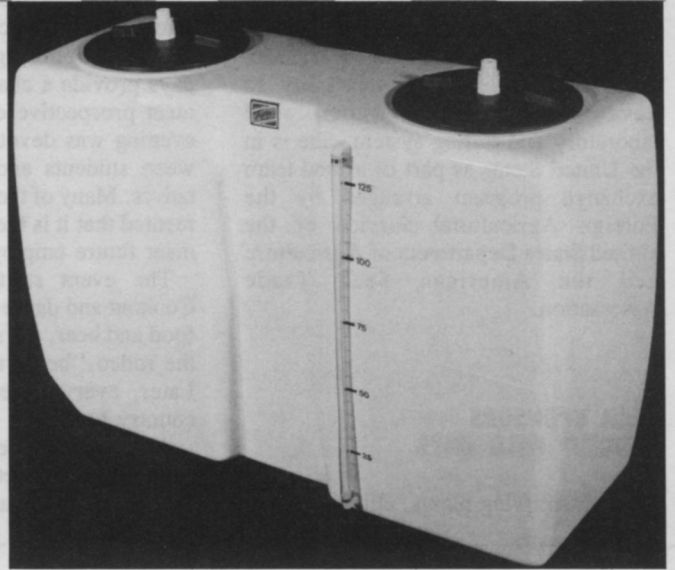
1060 W. West Maple Rd., P.O. Box 575 Walled Lake, MI 48088 313-624-7710 OUT OF STATE 800-521-7086

Circle 47 on reader service card

THINK SMALL?



MODEL PC15510D



MODEL 0150PC 140 GALLON

For today's smaller **mid-sized** and **mini** pick up trucks, **TUFLEX** introduces its latest innovation in seamless fiberglass tank design, the **MODEL 0150PC** 140 gallon tank.

Dimensions of 52" long, 20" wide and 34" high allow the **MODEL 0150PC** to tuck neatly behind the cab and forward of the wheelwells, maximizing that important usable bed space.

Tank features include:

High gloss molded exterior • Two 12" fillwells with vented covers • Retainer wires • Calibrated sight tube gallonage indicator • Outlet fitting. Also available as two compartment tank, Model 0150BU, or incorporated into a complete sprayer utilizing roller, piston, diaphragm or centrifugal pumps.

DON'T FORGET!

Think small for big results with Tuflex's Model 0150PC tank and spray systems.

Call TOLL-FREE
for economy prices and
more information
on our complete line of tanks.

1-800-327-9005

In Florida call collect 305-785-6402

Tuflex[®]
MANUFACTURING CO.

1406 S.W. 8th St., Pompano Beach, FL 33060

NEWS

(continued from page 26)

Tall fescue sod using varieties such as Jaguar is increasing in importance in the Southwest, Central, and Southeast sections of the country for such uses as home lawns and athletic fields, according to John Zajac, Vice President of Garfield Williamson, Inc. of Jersey City, New Jersey.

A distinguished visitor to the Jaguar sod production site was Dr. Li Min, Professor of Grassland Sciences at Beijing University, Peoples Republic of China. Dr. Min is charged with the responsibility to develop a Chinese national seed laboratory and testing system. She is in the United States as part of a seed team exchange program arranged by the Foreign Agricultural Service of the United States Department of Agriculture and the American Seed Trade Association.

ALCA SPONSORS STUDENT FIELD DAYS

From identifying plants, climbing trees,

designing landscapes, to building patios, 250 students, from colleges and universities around the country, competed in 20 events held at the 10th Annual ALCA Student Field Days hosted by Oklahoma State University. The students, whose majors include landscape contracting, landscape architecture, and horticulture, enjoyed three sunny days on the campus of OSU.

While the students were diligently competing in their various events, 77 representatives from 40 landscape contracting firms watched intently, keeping track of promising students. The field days provide a chance for employers to meet prospective employees. An entire evening was devoted to interviews between students and company representatives. Many of the landscape firms commented that it is the best way in which to meet future employees.

The event started with a Cowboy Cookout and dance. After plenty of good food and beer, the students took turns on the rodeo "bull" and other fun events. Later, everyone enjoyed dancing to a country band.

At 8 a.m. the next morning, students began the competition. The morning events were Weed and Turf Identification,

Indoor Plant Identification, Insect and Disease Identification, Business Management Problems, Construction Estimating, Cut and Fill Estimating, Maintenance Estimating, Irrigation Design, Residential Design, Woody Plant Identification, Small Engine Repair, and Sales Presentation.

After lunch, the competition moved outside, where students had a chance to show their skills on Ball and Burlaping, Irrigation Installation, Back Hoe Operation, Maintenance Equipment Operations, Skid Steer Operation, Brick Patio Construction, Surveying, and Tree Climbing.

The ALCA Student Field Days ended with a brunch, where winners were presented with their awards and event organizers were congratulated on their nearly flawless operation. Oklahoma State University won the top honors, followed by Mississippi State University and the University of Tennessee. The individual receiving the most in event points was Perry Sellars from Mississippi State University.

Next year's Student Field Day will be held at Richland College in Dallas, Texas on April 3-5. The ALCA expect the 1987 Student Field Day to surpass the 1986 field day in attendance and quality. ■

Custom-made tank trucks built to your specifications.



Graham Lawn Care Equipment, Inc.

8878 Bright Star Road
Douglasville, GA 30135
(404) 942-7026

Circle 44 on reader service card

COMPUTERIZE

Lawn Care Business System

- The system does it all for you.
- One complete package! Hardware, software, installation, training, maintenance, and support.
- Increase your customers, income, and profits.
- Reduce your expenses, office time, and paperwork.
- Our marketing package can significantly increase income.
- Available on IBM and Altos computers.
- Immediate installation and productive operation.
- We are the largest supplier of systems to the Lawn Care Industry.
- The system has been operating successfully for six years all across the U.S.
- Lawn Care professionals who speak your language.

Rainbow Computer Sales

84 Ninth Street 1716 Lake Crest Lane
Somerset, NJ 08873 Plano, TX 75023
(201) 828-7444 (214) 964-7409

Call Toll-Free

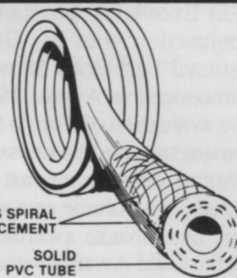
(800) 524-1825

Circle 45 on reader service card

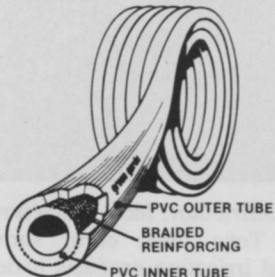


You Can Depend on the green garde® High Performance Spray Team

NEW! 4-SPIRAL WHITE HOSE . . . a unique 600 PSI hose designed to withstand the rigors of the spray industry. **Solid PVC Tube with two layers of criss-cross spiral reinforcement . . . nothing like it anywhere!** Available in 3/8" and 1/2" ID, 300 and 400 foot continuous lengths.



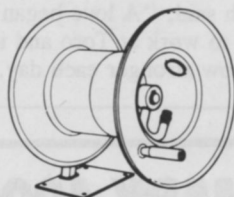
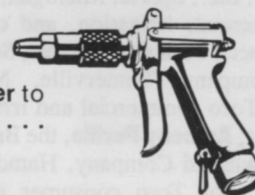
TWO LAYERS SPIRAL REINFORCEMENT
SOLID PVC TUBE



PVC OUTER TUBE
BRAIDED REINFORCING
PVC INNER TUBE

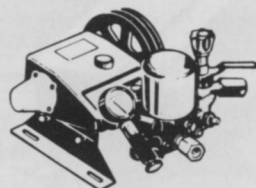
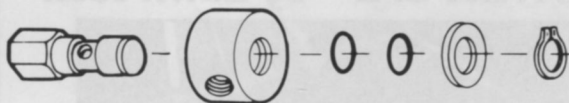
BRAIDED NEON HOSE . . . the best quality hose money can buy. **Avoid downtime and chemical spills . . . use the hose preferred by top operators all over North America.** 800 PSI working pressure; available in 1/4", 3/8", 1/2", 5/8" and 3/4" ID; 300, 400 and 600 foot continuous lengths. Some odd lengths, in various ID's, also available at special prices.

JD9-C Hi-Performance SPRAY GUN . . . used by just about everybody. A rugged, dependable, versatile performer in any spray application. Fully adjustable from fog to long distance stream. **Five tips** available to fit your needs . . . **adapter** to attach the many fine Spraying Systems wands and spray tips. **Also available . . . JD9-CT with gauge port and plug,** allows you to easily calibrate your sprayer.



Heavy-Duty ALUMINUM HOSE REELS . . . unique single pedestal design makes mounting anywhere a breeze. Constructed of marine alloy aluminum -- eliminates corrosion problems. **Attractive . . . and popularly priced!** Available in four sizes, with capacity from one to four hundred feet of 1/2" hose. MARK IV model accepts 250 feet of 3/4" hose.

REPLACEMENT HOSE REEL SWIVELS . . . tested at over 3000 PSI dynamic service pressure! The same heavy-duty units supplied on our hose reel, now available separately. Fits Hannay and other reels with no modification. Extended service **VITON** o-rings means longer wear; and, when replacement *does* become necessary, it can be done, in the field, with an inexpensive kit, in less than a minute. Three sizes: 1/2", 3/4", 1".



Hi-Performance TRIPLEX PLUNGER PUMPS . . . the choice of successful operators. Rugged! Reliable! Outperforms and outlasts diaphragm pumps! Pumps almost any fluid. Available in six models, from 3 to 35 GPM, up to 500 PSI service pressure. **Nothing else to buy . . .** pumps come with pressure regulator, pulley, glycerine-filled gauge, bypass valve, surge chamber, mounting rails, NPT adapters . . . **ready to use!**

Heavy-duty ROOTFEEDER . . . for tree and bed rootfeeding. Built to last . . . replaceable hardened tips. Up to 12 GPM capacity. Two stainless steel feeding needle extensions also available. **Fits on JD9-C Spray Gun.**

ACCESSORIES AND PARTS . . . we have exclusive design flooding nozzles (five patterns); hosecutters with stainless steel blades for fast, *safe* clean cuts on PVC hose; plated steel long-shank GHT hose fittings in 1/2", 5/8" and 3/4" sizes; aluminum alloy short shank GHT hose fittings in 3/8", 1/2" and 3/4" sizes; mini-hand duster *and* chest-carried combination duster/granule applicator; Band-It® banding products and tools, etc. All replacement parts in stock, **always.**

SERVICE . . . our most important product! It is the standard of the industry . . . and it's included in the price of every Green Garde product you buy. Normally, orders are shipped same day as received.

Green Garde® WARRANTY . . . the best in the business . . . and, it's EASY! If our product fails to perform satisfactorily you get a replacement, credit or refund. Quality products make our life simple . . . **try some Green Garde® quality today!**

See these and many other fine Green Garde products at your distributor or contact us at (312) 593-6464

© Copyright 1986 Encap Products Company — All Rights Reserved

ENCAP PRODUCTS COMPANY P.O. Box 278 Mt. Prospect, IL 60056

PEOPLE

The Toro Company presented the first distributor awards in its Partners in Excellence program held in conjunction with the GCSAA 57th International Turf Grass Show. The program, announced in August 1984, is a competitive evaluation of Toro's 55 distributors' businesses and business practices. Distributors compete against others in their size and sales volume category for Gold, Silver, and Bronze awards.

Receiving the Gold Awards were: **Fred Zeytoonjian**, Turf Products Corporation, Auburn, Massachusetts, for full Toro commercial, irrigation, and consumer product business; **Warren Schut**, Spartan Distributors, Inc., Sparta, Michigan, for Toro commercial, irrigation, and consumer products; **Paul des Champs**, Storr Tractor Company, Somerville, New Jersey, for Toro commercial and irrigation products; **Anthony Parillo**, the Bronson and Townsend Company, Hamden, Connecticut, for Toro consumer products; and **Wilbur Ostermeyer**, The Swanson Company, Fresno, California, for



Toro irrigation products.

In other personnel news at Toro, **Peter McDonough**, a long-time Fort Wayne, Indiana distributor, was honored by Toro with the annual retirement award at the company's national awards banquet, July 15, in Minneapolis, Minnesota. McDonough, 64, began working for Toro in 1958 as an East Coast sales representative. In 1969, after holding several high-profile sales positions at Toro, McDonough purchased Summit Power

Equipment Distributor, Inc., which now distributes Toro lawn care, snow removal, and irrigation products under the name Summit-Kenney Corporation.

In 1980, McDonough became a member of the Outdoor Power Equipment Distributors Association (OPEDA) and was elected OPEDA president in 1983. In appreciation of his retirement award, McDonough said, "A love began when I first went to work at Toro and it continues to grow stronger each day." ■

Keep Fertilizer Dry and Prevent Costly Spills with the "SHOWER CAP" by Lawn Tech



- Durable, see-thru vinyl cover fits most professional quality spreaders
- Completely waterproof and spillproof
- Easy to attach — just slip it onto spreader
- Secure fit prevents spills — avoids burnout and product loss
- Simple, 1-piece construction
- Folds up for convenient storage
- Limited 1-year warranty

\$14.95

plus \$2.00 shipping charge and state sales tax where applicable

Call or write: (216) 937-5517

Lawn Tech

P.O. Box 45463
Westlake, OH
44145

MINI DUMP MARK 4000



Turn your pickup truck into a multi-purpose dump truck. The Mini Dump fits most standard American pickup trucks with no modifications. The Mini Dump lifts and dumps up to 4,000 pounds and can be installed in one hour. The 600-pound carbon steel dump body insert features a high-incline dumping action, electric-hydraulic hoist and controls, all-welded construction, and a four-way tailgate. Each unit comes with a one-year limited warranty on all components and workmanship.

Mini Dump Corporation
P.O. Box 30278
Raleigh, North Carolina 27622
919/781-6306

Circle 21 on reader service card

PLCAA UPDATE

New York Governor Mario Cuomo has signed a toxic tort law which is bound to boost the number of lawsuits filed by employees who have previously worked with toxic substances, according to the Professional Lawn Care Association of America's (PLCAA) *Environmental Update* newsletter.

Enacted July 30th, the New York law revives certain litigation which has already been time barred. Claims related to exposure to DDS, asbestos, chlordane, and polyvinyl chloride could possibly amount to 5,000 new lawsuits.

New York law formerly required that an action be filed within three years after the employee was exposed to the toxicant. The new law permits the action to begin within three years after the employee discovered, or should have discovered, an illness or injury.

The newsletter illustrates how this change might affect PLCAA members by pointing out that a lawn care employee who last worked in New York in 1979 could initiate a lawsuit in 1986, if he believes the current illness is related to his prior lawn care employment. However, the former employee must not have had reason to know before this year that he had such an illness or that it was job-related.

PLCAA suggests employers might lessen the possibility of such claims if prior to separation from employment, the employee is examined by a physician or a separation from employment medical checklist is established. "If the examination clears the employee from the standpoint of the level of toxic substances in the employee's system and overall health, perhaps that would aid the employer if years later, the employee claimed an injury or illness was related to his work for the lawn care employer," reports PLCAA. The checklist could provide a similar benefit.

In other news, the Environmental Protection Agency (EPA) has proposed fining four companies a total of \$75,000 for failure to keep safety and health data records. The penalty resulted because information regarding 160 pesticides was not maintained by the companies involved. According to the newsletter, the fine is "part of the EPA message to hold on to health and safety data, or else face a legal challenge and possible fine." A PLCAA member should maintain proper records in accordance with EPA.

Additionally, EPA has sought an \$81,000 fine against a Denver pesticide firm for formulating and repacking pesticides without registering as a pesticide producer, failure to maintain appropriate records and submit them to the EPA, and dumping pesticides into dumpsters and on the ground.

With regard to community right-to-know legislation, the Missouri Department of Health has proposed its final regulations to implement the state's right-to-know law. According to the law, local fire departments and the law enforcement officers are entitled access to information from employers who use or produce toxic substances. There is trade secret protection for the employer, and a phase-in period for compliance, ranging from September 30, 1986 through September 30, 1987.

For more information, contact Terry

Hopper, Missouri Department of Health, P.O. Box 570, Jefferson City, Missouri 65012; 314/751-8209.

On the Federal level, a bill has been proposed requiring employers to inform current and former employees who work with toxic substances about the medical risks associated with their jobs.

The bill's purpose is to encourage disease prevention through notification. PLCAA reports that the bill's opponents argue it covers the same ground as OSHA's Hazard Communication Standard and state statutes. "We are concerned about this bill's interaction with employer toxic tort and workman's compensation exposure," states the newsletter. "If an employee is aware of the risks, as the bill proposes, does it make sense for the employee to have a right to sue an employer for alleged harm due to the exposure of these risks?" ■

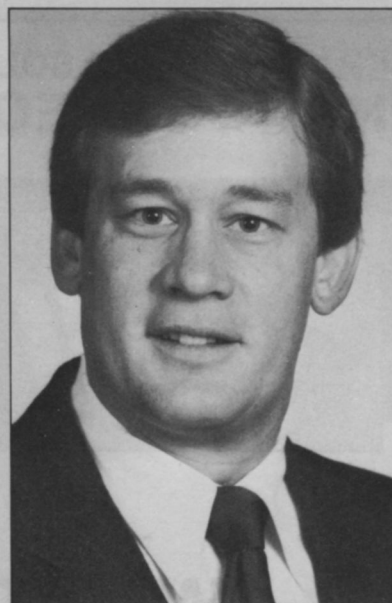
CLAYTON NAMED PLCAA OFFICIAL

Gary M. Clayton joins PLCAA this month in the newly created staff position of Director of Technical Services. He was appointed by President James G. Marria. Based at the Marietta headquarters, Clayton will be responsible for development and administration of training programs for the membership, as well as serving as a technical liaison with university, industry, regulatory, and allied association personnel.

Clayton will also work on the development of a national certification program for the lawn care industry, and provide technical expertise in the preparation of public comment and testimony which promotes the professional image of the Association and the industry.

He joins PLCAA after having served as Turf and Ornamental Market Specialist for PBI Gordon Corporation in Kansas City, Missouri. Clayton was Operations Manager for Bulkkem Corporation in Normal, Illinois from 1981 to 1985.

Clayton received a B.S. degree from Illinois State University and completed graduate work in Turfgrass Science at the University of Illinois. He has developed and presented numerous lawn care applicator seminars throughout



Gary Clayton

the country, and has authored and co-authored many turfgrass-related articles for industry trade publications. Clayton has been a speaker on many occasions at state and local turfgrass meetings, including PLCAA regional seminars, and is certified as an OSHA trainer and Hazardous Waste technician.

QUESTIONS & ANSWERS

Q. How do I motivate my employees?
— *D. Huddleston, Ohio*

A. Contrary to popular belief, money is not the prime motivating factor, it's high on the list, but it is not the number one means of motivation. Respect and responsibility share equally in the number one position ahead of money in most surveys. I give all my employees responsible positions, if anything goes wrong, they are responsible to follow through and correct the situation. — *Des Rice, Turf Management Systems, Inc., Mississauga, Ontario.*

Q. I have been told there is no problem in replacing damaged or worn-out parts with other than OEM parts; is this true? — *J. Weber, Ohio*

A. Using other than OEM parts can result in your warranty being void on new equipment, or lack of manufacturer product liability on old equipment. This could become a problem should you

be faced with a law suit at a future date. — *Gordon LaFontaine, Lawn Equipment Corporation, Novi, Michigan.*

Q. Does it matter what water I use in the tank? I have heard that city water varies greatly in pH from suburb to suburb. Should I be checking tap water pH? — *S. Welker, New Jersey*

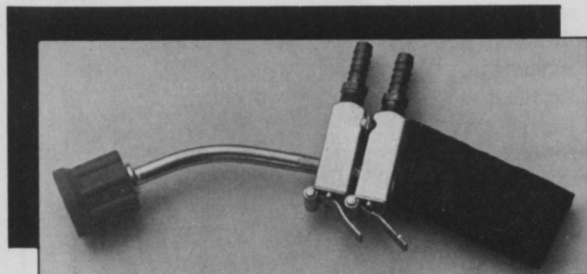
A. Absolutely! Water pH is critical to the performance of many pesticides. Most insecticides are sensitive to "alkaline hydrolysis," which means that they break down more rapidly in water which is more basic (alkaline) than neutral (i.e., pH higher than 7.0). Trichlorfon (Dylox® or Proxol®) is one material which is particularly sensitive to pH. At pHs greater than 8, trichlorfon breaks down in less than an hour. Most formulations have an acidifying agent which will enable the material to buffer moderately alkaline water, but some city water sources have extremely high pHs. Check your water pH periodically and ex-

periment with acidifying agents if your pH consistently measures greater than 8.0. — *Patricia J. Vittum, University of Massachusetts, Waltham, Massachusetts.*

ASK THE EXPERTS

Do you have a burning lawn care question for a member of our Advisory Board? Address your question to **Gordon LaFontaine**, President of Lawn Equipment Corporation; **Dr. William Meyer**, Vice President, Research, Turf-Seed, Inc.; **Des Rice**, President of Turf Management Systems, Inc.; **Dr. Al Turgeon**, Professor and Head of Agronomy, Pennsylvania State University; **Dr. Joseph Vargas**, Professor of Botany and Plant Pathology, Michigan State University; or **Dr. Patricia Vittum**, Associate Professor of Entomology, University of Massachusetts. Submit your question to **Questions and Answers, ALA, 4012 Bridge Avenue, Cleveland, Ohio 44113; 216/961-4130.** ■

CHANGE SPRAY SOLUTIONS INSTANTANEOUSLY



The TARGET PISTOL

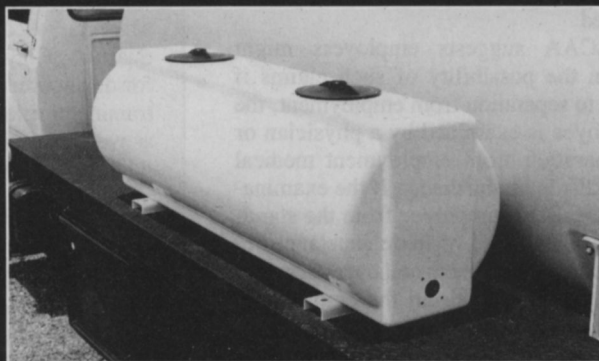
DUAL Trigger Spray Gun
by Perma--Green Supreme

Looks UGLY / Works GREAT!

1-800-346-2001 1-219-769-1630

Circle 42 on reader service card

Keeps your lawn care truck luxuriant, while it trims the weight.



This Modern-Light tank keeps the strength and clean appearance of stainless steel, with half the weight. Transfer-molded by our new process from vinyl ester resin, reinforced with continuous-strand fiberglass. Then lifetime coated with brilliant urethane jet-aircraft finish.

Easy-open vented or unvented 8" threaded plastic lids. Rugged steel mounting, permanently molded in. 125-gal. capacity with one or multiple compartments, even removable top. Other options, too.

Finally you've found a light tank good enough. Get the catalog.



MODERN WELDING CO., INC.

P.O. Box 2265 • 72 Waldo Street
Newark, Ohio 43055 • (614) 344-9425

Circle 41 on reader service card



The wrong fertilizer has its way of leaving a lasting impression on your customers.

Are low-cost fertilizers putting you on the spot?

Some fertilizer manufacturers try to convince you they don't sacrifice quality for price. But they start out with low-grade raw materials and you end up with a fertilizer that's inconsistent in density and sizing. The result? Erratic green-up. And a customer who's not very happy.

Reduce call backs, get predictable results with Lebanon Turf Care Products for professional lawn care.

Lebanon high quality fertilizers contain just the right balance of soluble and controlled release nitrogen. So green-up is fast and even, and lasts precisely as long as you want it to. Plus, they're supplemented with important secondary and micro nutrients which are vital to uniform turf growth.

Choose from our wide range of products. Or let us make a product just for you.

We feature over three dozen standard homogenous fertilizers, sulphur-coated urea blends and fertilizer/chemical control products. But we'll be happy to formulate an exclusive mix for your own unique soil needs.

Order early and save!

Lebanon has convenient early order and early pay discounts to meet any need. If you'd like to learn more about Lebanon programs, or simply have a question about our products, call **The Greenline** toll-free at 1-800-233-0628; in Pennsylvania call 1-717-273-1687.



Send for your free product sample and take a closer look at Lebanon quality.

Simply clip this ad, return it to **Lebanon Total Turf Care** along with your name and address, and indicate your preference of a homogenous or SCU blend fertilizer sample. It's our way of proving to you that with **Lebanon Turf Care Products**, you always get what you pay for.

Lebanon
TOTAL TURF CARE

A Division of Lebanon Chemical Corporation
P.O. Box 180 • Lebanon, PA 17042



THE SECRET OF CONTROLLING WHITE GRUBS

White grubs are really not hard to control, you just have to understand grub lifecycles and get some cooperation from the homeowner.

White grubs are the larvae (immature stages) of several species of scarab beetles. Probably the most familiar species for lawn care operators in the Northeast is the Japanese beetle, but the asiatic garden beetle, oriental beetle, European chafer, and northern masked chafer also can cause damage on home lawns. Midwestern and southern lawn care operators may be more familiar with June beetles (May beetles) in the genus *Phyllophaga*.

In any case, the grubs of all the species look very similar and cause the same kind of damage to the turf. The grubs are cream colored with a brown head capsule and three pairs of legs, of-



JB Grub (R) and EC Grub (L) to show relative size differences. Photo courtesy of NYSTA.



Adults and adult feeding injury. Photo courtesy of NYSTA.

ten are a dark grey color on the anal end, and usually are curled into a "C" shape except when disturbed. Japanese beetle grubs will reach a size of about 1/2-inch when full grown. Asiatic garden beetle grubs will be slightly smaller, while European chafer grubs will be slightly larger. The June (or May) beetle grubs are much larger (an inch or more) when full grown. All of these grubs feed directly on the roots of the turf, weakening it and inducing drought-stress before ultimately killing it.

As with any insect pest, the key to successful control of white grubs is understanding the life cycle. For most of the species mentioned earlier, the life cycle takes one full year to complete. Normally, adult beetles emerge in early summer and mate, and the females then begin to lay eggs in the soil. The eggs hatch into small (1/16- to 1/8-inch-long) larvae, which begin feeding on the roots immediately. These larvae molt to a second

stage (about 1/8- to 1/4-inch-long) after two to three weeks and continue feeding on the turf roots. Near the end of summer, these larvae molt to the third (and largest) grub stage, which initially is about 1/4-inch-long. This stage feeds on the turf roots into the fall, remaining active as long as the soil remains warm.

As the soil cools down with the approaching winter, the grubs gradually migrate downward in the soil, always staying below the frost line. They remain dormant through the winter and return to the root zone in the spring when the soil warms up again. They resume feeding on turf roots and feed for four to six weeks, during which time they can cause substantial damage. The damage often does not appear to be as severe as it is in the summer because spring rains provide adequate moisture for the turf so that the grass stand can tolerate some loss of roots from grub feeding. Skunk and raccoon damage can be devastating, however.

For many species, the third stage grubs complete their feeding by mid-June. The grubs then pass through the pupa, or "resting" stage, during which many internal transformations take place, changing the grub from a soil-oriented grub to a mobile and reproductive adult. This transformation takes about seven to 10 days to complete. Young adult beetles then emerge from the soil and seek others of the same species to continue the cycle.

The timing of the life cycle will vary with species and location. For example, in New England, the Japanese beetle adult first becomes noticeably active around the Fourth of July, but it takes about 10 days for a female to develop eggs within her



Grubs exposed after removal of sod. Photo courtesy of NYSTA.

downward for the winter.

Usually, the Japanese beetle grubs are back in the root zone by mid-April (and sometimes as early as late March), where they feed for about six weeks and then become less active. Pupae are first observed in soil samples in mid- to late June and the first adults are collected in traps in late June or early July.

The life cycle described holds true for the Japanese beetle in New England. Most

occur on turf) have a two- or three-year life cycle. The extra time is spent in the second and third larval stage, so the grubs will feed throughout the growing season. In contrast, the species with one-year life cycles do not feed actively on turf from mid-June through July. A June beetle infestation normally will involve grubs of all stages. Since the largest grubs are not very sensitive to insecticide applications, some of those large grubs will survive each treatment and the level of control may be less than expected.

In the case of the white grub species which have a one-year life cycle (Japanese beetles and cousins), there are two periods of the year when you can expect to see damage from white grub feeding activity. The grubs will be in the largest stage and feeding actively in September and October and again in April and May. If damage is observed in June, July, or early August, you can usually assume that white grubs are not involved. One possible exception is the June beetle complex, which can inflict damage in July or August if populations are high enough.

Well-maintained turf should be able to tolerate two to three June beetle grubs per square foot or five to eight Japanese beetle grubs per square foot without noticeable damage to the turf. This is assuming that the fertilization program is adequate but not overdone, the turf is being mowed 2 inches or higher, the area

In New England, the Japanese beetle adult first becomes noticeably active around the Fourth of July, but it takes about 10 days for a female to develop eggs within her body. The first eggs are laid in the soil around July 15, but most egg laying occurs during the last week of July and the first week of August.

body. The first eggs are laid in the soil around July 15, but the bulk of egg laying occurs during the last week of July and the first week of August. Each individual takes about five to six weeks to pass through the first two larval stages to the third (and most damaging) stage, so most of the New England beetle population is in the largest larva stage by mid to late September. During typical autumns, the grubs feed on turf roots through October and then begin to move

of the white grubs which are encountered in the Northeast and the Midwest have similar life cycles, but the precise timing of emergence of the various stages will vary by several weeks, depending on the species and the region. For example, the European chafer will develop about two weeks earlier than the Japanese beetle in a given location.

The June beetle complex is an exception, because most species of June beetles (there are perhaps 40 species which can

WE DELIVER SOLUTIONS BEFORE WE DELIVER THE SYSTEM

One to 64 users on Contel computers or IBM-XT compatibles.

Special Features of Lawn Care Management System

The system allows complete Lawn Production/Accounts Receivable control with Automatic Invoicing and Statement Generation. Production figures both complete and remaining, are available by round. Customer history is kept by treatment type for both Rounds and General treatments.

Reports Generated by Lawn Care Management System

- Delivery Report
- Cash Receipts Journal
- Sales Journal
- Held Invoice Report
- Customer Invoices
- Customer Aged Trial Balance
- Customer Statements
- Customer Lists
- Customer Labels
- Production Report
- Customer History Report

Integrated Modules Available

- Tree Service
- Payroll
- General Ledger
- Accounts Payable
- Inventory

CADO SYSTEMS OF CINCINNATI

4015 Executive Park Drive
Suite 111
Cincinnati, Ohio 45241
513/563-2225

TADS REFERENCES

Del-Air
Corpus Christi, Texas
512-855-1602
Ed and Mary Delgarza

A.B.C. Travel Land
Rockport, Texas
512-729-6543
Jeanie

Boltswagon of Denver
Denver, Colorado
303-623-1854
Nancy Tyler

Sterling Engine Service
Alice, Texas
512-664-2657
Glenn Marsh

CONTEL COMPUTER
SYSTEMS
AUTHORIZED INDEPENDENT DISTRIBUTOR

Circle 64 on reader service card

TURFCO EDGE-R-RITE MULTI-PURPOSE TURF EDGER

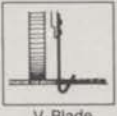
Just like a small sod cutter, the Blade does not spin, the oscillating motion does not throw debris.

Self-propelled and push models available.

Rugged design for commercial use.



Disc Blade



V-Blade

Optional Blades:

Disc Blade for cutting straight edge along sidewalks and driveways.

Right Angle Blade for golf course sand traps, and flower beds.

"V" Blade for removing a strip of turf along a sidewalk.



Right Angle Blade

TurfcO Mfg., Inc.
3456 N. Washington Ave.
Minneapolis, MN 55412-2688
Ph. 612/588-0741
Telex 5106013762

Write or call
for detailed
literature

TURFCO

Circle 63 on reader service card

is receiving weekly deep watering (not daily light watering), the soil pH is moderate (6.3 to 7.0), and that the area is not subjected to constant heavy traffic.

There are four factors which must be considered in controlling white grubs. First, you must time the application properly to get the maximum benefit. Second, you must be sure the insecticide penetrates the thatch and reaches the grubs in the soil. Third, you must select an appropriate insecticide. Finally, you must have realistic expectations for what the turf insecticides can do.

TIMING. There are two times which are appropriate for applying insecticides for white grubs. The first is when the small grubs are just emerging from the eggs. While the eggs are not sensitive to insecticide applications, the small grubs are extremely sensitive. For Japanese beetle grub control in the Northeast, this first window of application is from August 1 to 20 (slightly earlier in the Mid-Atlantic region, slightly later in northern New England). This date will vary depending on the region and species of grubs involved. For example, European chafer adults emerge and begin laying eggs about two weeks earlier than Japanese beetles, so insecticide applications should be made a couple of weeks earlier.

The second window of application for white grub control is in the spring, just as the grubs return to the root zone to resume feeding. In New England, this application happens to be between April 15 and May 10 in normal springs. This approach usually works well in spite of the fact that the target grubs are in their largest stage of development and might be expected to be less sensitive to insecticides. This is because the normal weather patterns in the Northeast provide frequent and substantial rainfall in April and May. When these rains occur, we normally get very acceptable levels of grub control.

Most grub species return to the root zone within a couple of weeks after the ground thaws, so the spring window of application will be about the same for most species within a given region. Again, this window is from April 15 to May 10 in central New England, but it would be somewhat earlier in areas of the Midwest or the Mid Atlantic regions, which have warmer, "earlier" springs. Normally an application later than mid-May is not satisfactory because the grubs are beginning to feed less actively, so they ingest and contact less material.

WATERING. The second critical factor in obtaining good white grub control is mov-

ing the insecticide through the thatch. Recent studies (conducted by Dr. Harry Niemczyk at Ohio State University) indicate that some of the turf insecticides currently being used are getting tied up in the thatch and are barely reaching the soil-thatch interface. However, it is essential that the turf manager does everything he can to maximize the movement of his insecticide through the thatch and into the root zone, where it can act on the grub population.

The best way to induce this penetration through the thatch is to water-in the insecticide immediately after application. "Watering-in" means at least 1/2-inch of water, and a full inch if at all possible. This is not always an easy matter when dealing with homeowners, but if you can find a way to water-in the area yourself, or convince the homeowner that "watering-in" does not mean waving the hose over the lawn for five minutes, you should increase the effectiveness of your grub control program. In fact, in some states, "watering-in statements" appear on the label of some grub insecticides. The applicator is responsible for watering in the material or leaving explicit instructions for the homeowner.

INSECTICIDE SELECTION. There are several factors which must be considered when

Sometimes Big Isn't Better

Discover the Mid-Size Walker Mower



Accepted practice in the lawn maintenance business has been to use the BIG commercial rider mower for open areas and walk-behinds for trimming. Now maintenance operators all across the country are discovering a new, fast efficient way to mow landscaped areas... for many jobs the maneuverable MID-SIZE WALKER MOWER does the whole job saving time, labor, and equipment investment. And Walker offers high productivity without sacrificing a quality cutting job, sure to please the most discriminating customer.

**WALKER MANUFACTURING CO., 1839 E. HARMONY ROAD,
DEPT. AL, FORT COLLINS, CO 80525 (303) 226-1514**
Circle 61 on reader service card

Is Your Full Color Brochure Marketing Expensive?

Try the Color Way!

We take the expense out of expensive with our **Sales Creators Self-mailer**.

- Brochures are customized to suit your business needs.
- Eliminate costly design, color preparations and/or agency fees.

Project your professional image, expand your market and maximize your advertising dollar with **Color Way**.

Call TODAY! 513-964-0180

— or write —

Color Way, Inc.

7768 Sunrise Dr., Springfield, OH 45502

for your "PROFIT PACKET"

Circle 62 on reader service card

selecting an insecticide for white grub control on home lawns. Our insecticide screening trials over the past five years have indicated that there are many materials which will provide at least 80 percent control of grub populations, and in most cases, 80 percent control should be adequate.

Most of the materials which are being used today take about seven to 10 days to have a noticeable effect on grub populations and remain effective for three to six weeks, depending on weather and other local conditions. One material (Proxol® or Dylox®) acts noticeably more quickly, sometimes inducing significant grub mortality in three or four days. This is one material which can sometimes be used with success in an area after the normal "window" has expired. Another material (Oftanol®) acts noticeably more slowly than the standard materials and normally takes two to three weeks to have a significant effect on grub populations, but it remains active for two to five months in some circumstances, so that a single application can provide longer lasting control than other materials currently available.

Our insecticide screening trials have indicated that liquid and granular formulations are equally effective against white grubs, assuming the active ingredient is

applied at the same rate and the plots receive prompt and adequate water. Liquid formulations have a tendency to act slightly faster on grub populations than their granular counterparts, but the granular formulations tend to be slightly more forgiving about watering-in immediately after an application. (Liquid applications really need to be watered-in immediately or the materials can volatilize into the air. Note, however, that granular materials also must be watered-in to reduce the risk of exposure to pets or children. In addition, the watering is critical for all formulations to move the material through the thatch.)

Most of the materials currently being used in the home lawn setting carry either "caution" or "warning" labels. While all insecticides can be toxic if misapplied or mishandled, none of these materials presents an undue risk if applied (and watered-in) properly. The only material which is labeled for home lawns which might be considered noticeably more toxic than other turf insecticides is Mocap®. It was originally marketed as a 10G formulation, but more recently the company came out with a 5G formulation which includes home lawns on the label. The 5G is perhaps slightly more toxic, as formulated, than comparable turf insecticides such as diazinon or Oftanol®.

One of your primary concerns in selecting a turf insecticide is, of course, whether it will work. There are several materials which we have screened on more than one occasion that normally will provide acceptable (at least 80 percent) control of white grubs. Almost all of our screening trials have involved Japanese beetle grubs, and different species will respond somewhat differently to the insecticides. For example, the oriental beetle tends to be very difficult to control. However, the list of materials in Table 1 should serve as a useful guide to the materials which are available for use on home lawns.

Just a few observations might be appropriate. First, one common turf insecticide is conspicuous by its absence in this discussion. Dursban® tends to be tied up in the thatch more readily than any of the other standard insecticides. Therefore, it usually does not penetrate through the thatch to the soil and does not provide adequate levels of grub control. By the same token, it is an excellent material to use on some of the surface feeders (chinch bugs, sod webworms, and such) because it remains tied up in the thatch.

Diazinon, long considered the industry standard, is currently undergoing review by the Environmental Protection Agency because there have been some bird kills

COMMON NAME	TRADE NAME	POUNDS AI PER ACRE	COMMENTS
bendiocarb	Turcam	2-4	Different class (carbamate) than many others, toxic to earthworms
carbaryl	Sevin	6-8	Also a carbamate, toxic to earthworms. Relatively new to grub control.
diazinon	Diazinon	4-6	The old stand-by, still fairly consistent in most settings.
ethoprop	Mocap	4-5	Relatively toxic to handle (and for children and pets). Broad spectrum.
isazophos	Triumph	2	Not yet registered. If it receives registration, will provide excellent alternatives. Relatively fast acting.
isofenphos	Oftanol	2	Somewhat slower than others, but remains active longer. Single application in spring sometimes provides adequate control for five or six months.
trichlorfon	Proxol	8	Very rapid knockdown and/or grub kill. Moves through thatch more readily than other materials. Sensitive to high (above 7.0) water ph.

Table 1. This is a list of materials which are available for use on home lawns.

(notably geese) which apparently were related to diazinon applications on turf. The initial review is looking at diazinon use patterns on golf courses and sod farms only, but if diazinon is restricted or removed completely from those sites, it is conceivable that some state regulatory agencies might also restrict use of

next five years.

The turf label for Sevin[®], which is undoubtedly familiar to many as a common ornamentals material, is also in the process of undergoing expansion, so there is another carbamate to consider. (Keep in mind that carbamates tend to be very toxic to earthworms.) There are also some syn-

other living things and might not make a significant difference to the overall vigor of the turf.

Remember that a properly maintained lawn (weekly deep watering instead of daily shallow watering, mowing at 2 inches with sharp mower blades, proper fertilizer and soil pH, adequate weed control, limited traffic, and so on) should be able to tolerate at least five Japanese beetle grubs (or similar species) per square foot without a noticeable effect on the turf. The lawn can tolerate this kind of grub activity, but sometimes the homeowner can't! Perhaps you, as the recognized "expert," can help the homeowner to understand the balance of nature and adjust his expectations to address the overall appearance of the lawn, not necessarily an inventory of pests. (Note that if you are dealing with one of the June beetle species, the lawn may show signs of stress with only two or three grubs per square foot. The June beetle grubs are much larger and therefore feed more and do more damage.)

The bottom line, then, is to identify your grub problem, determine its life cycle, choose an appropriate insecticide, apply it at the right time, and water it in very thoroughly. With perseverance and proper application technique, you can learn to live with white grubs! — Patricia J. Vittum ■

The turf manager must realize that no insecticide is going to kill every grub in every corner of a lawn. That must be explained to the homeowner.

diazinon on other turf sites, including home lawns, as well.

Most of the materials listed, and most commonly used on home lawns, are organophosphates (OPs). They act on the insect's nervous system. If an insect develops resistance to one OP, it usually develops resistance to other OPs at the same time. Until recently, most of the insecticides available for the home lawn setting were organophosphates.

Now there is one material (Turcam[®]) which carries a fairly broad turf label and is a carbamate. Some lawn care operators who have experienced problems with grub control with the standard OPs might want to experiment a little with Turcam, since it acts in a slightly different manner on the insect nervous system. In addition, there are at least a couple other carbamates that should be available in the

thetic pyrethroids which are being investigated, particularly for control of surface-feeding insects. These would provide yet another mode of action on the insect nervous system.

Finally, any turf manager must realize that no insecticide is going to kill every grub in every corner of a lawn. The federal government would never register an insecticide that was that potent, and the harmful side effects (killing beneficial organisms in the thatch) would make such a material undesirable. The turf manager must explain to the homeowner what he can and cannot expect from an insecticide application. Also, the turf manager should try to encourage the homeowner to tolerate a few grubs (or even a few weeds), rather than demand a pesticide application which also carries a risk of unnecessary exposure of people, pets, and

The author is Associate Professor of Entomology, University of Massachusetts, Waltham, Massachusetts.



BETASAN® WON'T LEAVE YELLOW STAINS THAT MAKE CUSTOMERS SEE RED.

There are two big reasons so many turf care professionals are sticking with Betasan® for effective crabgrass control.

Betasan won't turn grass yellow. Or anything else.

That's because Betasan is the safest preemergent crabgrass control you can buy. Safer on more turfgrass species than any other.

But even more noticeable is the fact that Betasan won't stain. Your applicators won't have yellow hair or fingers, stained trucks or equipment. They won't leave yellow walls or walkways, or track yellow footprints into your customers' homes.

And what good is saving a few dollars on your crab-

grass control materials if you end up replacing stained carpets and vinyl floors?

Actually, there's one more reason why this is a great year to choose Betasan.

The Betasan Crabgrass Rebate. With rebates of \$1.00 a gallon (or granular equivalent), you'll enjoy the biggest savings we've ever offered.

So don't let yellow stains be a red flag to your customers. See your distributor about the Betasan Crabgrass Rebate. And keep your bottom line green.

Always follow label directions carefully. Stauffer Chemical Company Specialty Products, APD, Westport, CT 06881-0854.

NOW BETASAN COSTS EVEN LESS.  **BETASAN®**

Betasan is a registered trademark of Stauffer Chemical Co. for a preemergence herbicide. ©1986 Stauffer Chemical Co.

LATE SEASON NITROGEN FERTILIZATION

Late season nitrogen fertilization has been practiced by professionals for some time, but new evidence shows the wisdom of this technique.

Late season nitrogen fertilization, sometimes referred to as fall fertilization, has been utilized by turf managers for years. This type of fertility program involves the application of much of the season's nitrogen during the late season months of September through December. It is important that late season fertilization not be confused with dormant and/or winter fertilization. The latter method implies that fertilizer applications are made after the turf has lost most or all of its green color and is not actively growing. This differs notably from the late season concept, which requires that nitrogen be applied before the turf loses its green color in the late fall.

Late season fertilization has become popular because many of the agronomic and aesthetic advantages attributed to its use supposedly are not realized when spring and/or summer fertilization are practiced. Purported advantages of the late season concept include: better fall and winter color; earlier spring green-up; increased shoot density; improved fall, winter, and spring root growth; and enhanced storage of energy reserves (carbohydrates) within the turf plant. Some claimed disadvantages include: increased chance of snow mold injury and decreased cold

tolerance.

The effects of late-season nitrogen application on creeping bentgrass (*Agrostis palustris* Huds.) were documented by Powell et al. (2,3) and Snyder and Schmidt (4) in research conducted in Virginia during the late 60s and early 70s. In those studies, it was clearly shown that the quality and root production of creeping bentgrass grown in the transition zone could be enhanced by using late-season nitrogen applications and avoiding early spring nitrogen fertilization.

While researchers (1) and turfgrass practitioners alike have demonstrated that the year-around quality of Kentucky bluegrass can also be enhanced by late season nitrogen fertilization, research efforts concerning effects on root growth and plant carbohydrate status have been lacking. This article will review past studies which have examined late-season nitrogen fertilization and relate those findings to the results of work recently completed at Ohio State University that assessed how the timing of nitrogen application can influence the quality, carbohydrate status, and root growth of Kentucky bluegrass.

QUALITY. Turf fertilized in September and again during October, November, or December is generally shown to possess better fall and winter color than a turf which was not fertilized at that time (1,2,4). In addition, signs of spring green-up have been shown to occur two to six weeks earlier if the turf has been fertilized during the previous fall (Figure 1). Most importantly, the enhanced rate of spring greening is realized without stimulating excessive shoot growth that accompanies the early spring nitrogen applications called for in most turf fertility programs.

The winter color of turf fertilized only during the spring and summer is decidedly inferior to that of grass which receives fertilizer during the previous fall. The rate of spring green-up is often slow as well, with acceptable color being attained only after nitrogen is applied during March or April. Although turf color then becomes

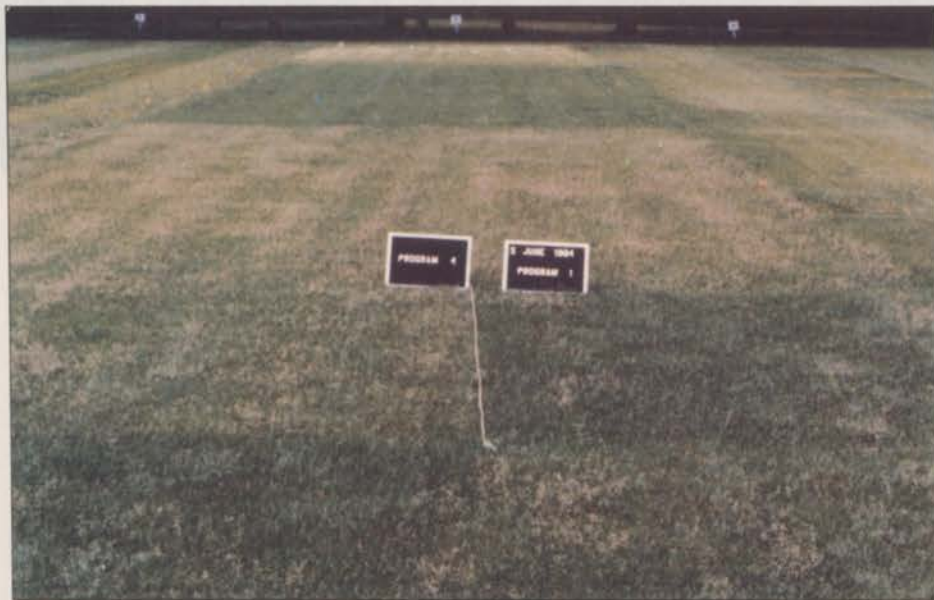


Figure 2. June photo showing color decline of turf fertilized the previous fall (left) as compared to turf fertilized during April (right).



Figure 1. Late-March photo shows earlier spring greening of plots fertilized the previous fall.

equal to that of turf which receives late-season nitrogen applications, the excessive shoot growth which accompanies spring fertilization is undesirable.

At Ohio State, we found that the spring color of late-season-fertilized turf remained quite good until late May or early June, when the effects of nitrogen applied the previous fall began to "wear off" (Figure 2). A 0.75- to 1-pound application of nitrogen is recommended at this time (late May-June) to maintain an acceptable level of turf quality throughout the summer period.

It is important to remember that the nitrogen source used for the fall applications be of the type that is not dependent on microbial activity to effect nitrogen release. This means that urea, sulfur-coated urea (SCU), IBDU, and ammonium sulfate are ideal nitrogen sources for the late season applications. Although SCU and IBDU are referred to as controlled-release fertilizers, the rate at which nitrogen is released from these fertilizers is mainly dependent upon soil moisture level and not on the degree of microbial activity. The use of microbially-dependent (i.e., UF-type) nitrogen sources for late season nitrogen applications may not elicit the desired fall/winter color response because they do not provide enough available nitrogen for plant uptake when temperatures are low. However, these slow-release nitrogen sources would be ideal for spring and summer use.

CARBOHYDRATE RELATIONS. Plant carbohydrate levels during early fall do not appear to be greatly affected by timing of nitrogen application (Figure 3). From December to February, however, the carbohydrate content of late

season-fertilized turf may be lower than that of turf fertilized only during the spring and summer. This probably occurs because: (1) energy must be expended to take up and assimilate fall-applied nitrogen; and (2) nitrogen applied during the fall and winter has been shown to increase respiration during the winter months (2). Regardless of timing of nitrogen application, carbohydrates are accumulated by the slowly-growing turf plant during the fall and winter months, reaching a peak sometime during the December-February period.

It is important to remember that the nitrogen source used for the fall applications be of the type that is not dependent on microbial activity to effect nitrogen release.

The early-spring (March-April) carbohydrate content of turfgrass plants fertilized the previous fall is often higher than that of those plants which did not receive late-season nitrogen. The ability to store energy at this time is a result of the earlier greening realized through the use of late-season nitrogen fertilization. Photosynthesis occurs in the still slowly-growing turf plant, thus allowing it to accumulate carbohydrates.

As root and shoot activity and plant respiration rates increase during the late winter and early spring, plant carbohydrate content generally decreases. This decline

may be quite significant when the turf receives an early season (February-April) nitrogen application, as compared to grass that has not been fertilized since the previous fall. The rapid decline occurs because carbohydrates are needed to support the increased shoot growth resulting from nitrogen applications made early in the season. Conversely, the more slowly-growing, late-season-fertilized turfgrass plants may possess a larger carbohydrate pool during the spring period. As will be discussed later, the process of spring root production can benefit from this greater concentration of carbohydrates.

Another possible advantage resulting from late-season fertilization is that the levels of stored carbohydrates are higher than those found in spring-fertilized turf as summer approaches. The higher levels of carbohydrates are desirable at this time of the year since greater stress tolerance and/or increased ability to recover from pest-, traffic-, or stress-induced damage may be realized.

ROOT GROWTH. For years, researchers have claimed that fall and winter growth of cool-season turfgrass species should be stimulated by late-season and/or winter nitrogen applications. This stimulation should occur as fall temperatures decline to the point that root growth is favored over shoot growth. Previous research at Ohio State has shown that root growth of cool-season turfgrass species does indeed occur during the fall after shoot growth has slowed or ceased. This situation develops because roots grow quite well when soil temperatures are between 40 and 65 degrees Fahrenheit, while shoot growth is favored at temperatures over 55 degrees. In fact, some root growth will

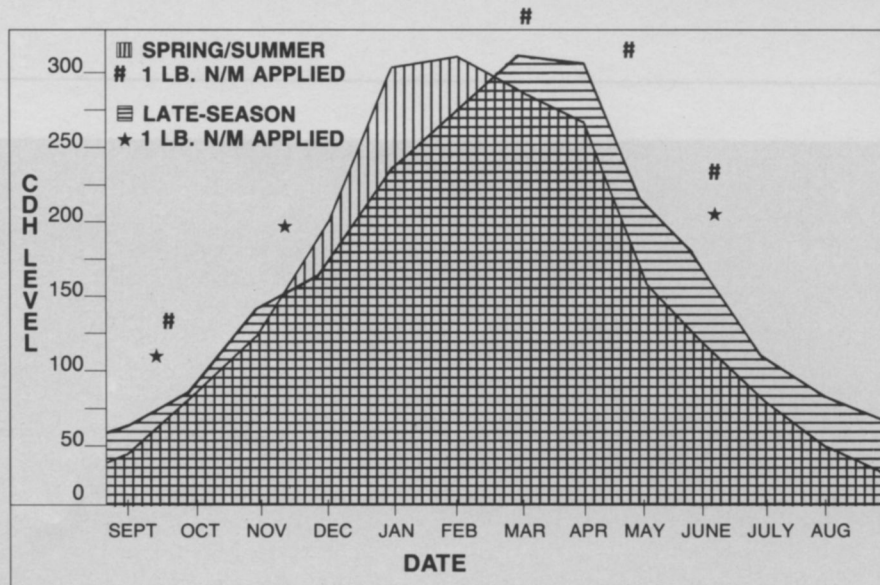


Figure 3. Carbohydrate status of the Kentucky bluegrass plant as affected by N programming.

occur as long as the soil remains unfrozen.

In the Virginia study conducted by Powell and his associates (3) on creeping bentgrass, no significant stimulation of winter root production by late-season nitrogen applications was observed. In fact, heavy and/or frequent nitrogen applications during the winter months (December and February) appeared to reduce the amount of roots produced during the winter. Research at Ohio State has similarly revealed no noticeable stimulation of fall or winter root growth in response to late season nitrogen applications (Figure 4).

Three possible reasons for the absence of increased root production can be offered here. The first is that soil temperatures optimal for root growth may not

be sustained for a long enough period of time in the fall and early winter, thus preventing any noticeable stimulation by late nitrogen applications from occurring. Secondly, it is possible that the fall "hardening-off" process (during which rapid accumulation and storage of carbohydrates occurs) effectively competes with the roots for available energy stores. Finally, uptake and assimilation of fall-applied nitrogen are energy-consuming processes that may also compete for carbohydrates. It is conceivable that singly, or in combination, these factors may prevent the stimulation of root activity that many thought would occur with late-season nitrogen fertilization.

The true advantage that late-season fertilization provides to turfgrass root growth is realized during the following spring. It has been shown that the root growth of turf fertilized during late-winter/early-spring declines soon after nitrogen application (3,4). Conversely, turf fertilized using the late season concept becomes green early and rapidly, without the need for an early spring nitrogen application, and root growth continues at a maximum rate. It appears that the excessive shoot growth encouraged by early spring nitrogen applications utilizes carbohydrates that may otherwise be used by growing roots.

DISEASE AND WINTER INJURY. It has been claimed that late-season fertilization reduces turfgrass cold hardiness and may increase the risk of winter damage by the snow mold diseases. Ledebor and Skogley (1) and Powell et al. (2) reported that late-season nitrogen applications caused neither problem in their respective studies. Observations over two winters at Ohio State detected no damage caused by either disease or cold injury. However, both types of injury potentially can occur

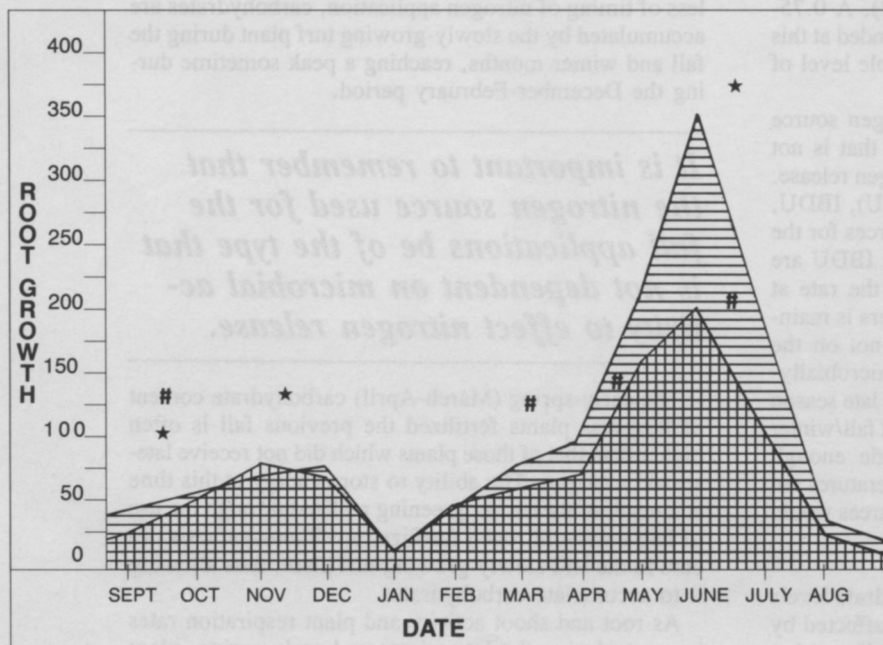


Figure 4. Seasonal rooting pattern of Kentucky bluegrass as affected by N programming.

if high rates (more than 2 pounds of nitrogen per 1,000 square feet) of a quickly-available nitrogen source are used at one or more application dates and/or applications are not timed properly.

WHY TIMING IS IMPORTANT. For the late-season concept to work successfully, it is essential that the turf be green when the late (October or November) nitrogen application is made. In central Ohio, this means that 0.75- to 1-pound of quickly-available nitrogen (such as urea) should be applied during the latter half of September. This will ensure that the grass will remain green late into the fall when the other application will be made. It is also important, however, that excessive shoot growth not be encouraged by over-application of nitrogen during September. The production of lush, succulent growth may decrease cold tolerance and increase the incidence of the snow mold diseases during the winter and following spring. For the same reasons, the October/November application should be delayed if extended periods of unusually warm weather (average daily temperatures greater than 55 degrees) are being experienced, or are forecast.

SUMMARY. Late-season fertilization lengthens the fall/winter green period and enhances the rate of spring green-up without stimulating excessive shoot growth, thus allowing the turf plant to maintain higher levels of carbohydrates than when spring/summer fertilization is used. Nitrogen applied during early spring increases shoot growth rates and decreases the levels of available carbohydrates in the plant, resulting in depressed root growth rates. Late-season nitrogen applications have no similar negative effects on root growth. No winter damage or snow mold injury occurred as a result of late-season nitrogen applications. — *A.J. Koski and J.R. Street*

The authors are research associate and associate professor, respectively, in the Department of Agronomy at Ohio State University, Columbus, Ohio.

REFERENCES

1. Ledebor, F.B. and C.R. Skogley. 1973. Effects of various nitrogen sources, timing, and rates on quality and growth rate of cool-season turfgrasses. *Agron. J.* 65:243-246.
2. Powell, A.J., R.E. Blaser, and R.E. Schmidt. 1967. Physiological and color aspects of turfgrasses with fall and winter nitrogen. *Agron. J.* 59:303-307.
3. Powell, A.J., R.E. Blaser, and R.E. Schmidt. 1967. Effect of nitrogen on winter root growth of bentgrass. *Agron. J.* 59:529-530.
4. Snyder, V. and R.E. Schmidt. 1973. Nitrogen and iron fertilization of bentgrass. p. 176-185. In E.C. Roberts, (ed.) *Proc. 2nd Int. Turfgrass Res. Conf. American Society of Agronomy, Madison, Wisconsin.*

NOW YOU CAN PRODUCE GUARANTEED RESULTS!



1. **NEW NON-COMPETITIVE PRODUCTS TESTED AND PROVEN BY LEADING UNIVERSITIES**
Non-Toxic
Natural/Organic
Enzymatic Nutrient Actions
Reduces the use of pesticides
Build stronger & healthier turf
Build immunity & disease resistance
Positive visual results within 14 days
Deep green color & increased turf density



2. SOLVE THESE PROBLEMS NOW!

Tight compacted soils
High salts & toxicities
No micro-enzymes or micro-organisms
Imbalances of primary, secondary & micro-nutrients
Off color and diseased turf
Bare and thin spots



3. NEW UNIQUE EQUIPMENT & ACCESSORIES

4 & 6 STAGE AUTOMATIC INJECTORS — allow prescription application of from 1 to 6 products to be mixed and applied at once.

SINGLE STAGE INJECTOR — applies product without a power sprayer

UNDER-GROUND INJECTOR — for applying nutrients through sprinkler systems



4. ATTEND OUR PROFIT MAKING SEMINAR

Learn to sell and earn high profits as a true professional. Learn to spot problems and their causes.

Build your ability to communicate with customers as a professional advisor. Point out problems, give reason and cause. Provide recommendations for cure and how to prevent re-occurrence of problem.

Sell non-competitive, natural/organic products and services. Get long term repeat sales. Build strong long lasting customer relationship that will insure them using your services indefinitely.

ENROLL IN OUR TRAINING SEMINAR NOW!

Call or write AGRO-CHEM, INC.,...NOW for date

AGRO-CHEM, INC.



CONTROLLED GROWTH
THROUGH CHEMISTRY

FRANKLIN PARK, IL 60131 • (312) 455-6900

VISIT US AT

Baltimore
PLCAA/86
NOVEMBER 17-20

EQUIPMENT PREVIEW '87

The new year will bring a bounty of new commercial lawn care equipment and improved versions of existing equipment.

The professional lawn service industry continues to become an increasingly attractive marketing arena for equipment manufacturers. Companies with few specialty turf machines are now developing more equipment to assemble a full-fledged commercial product line. The few remaining companies that have not had commercial turf equipment in the past have finally awakened to the potential in this market and are now manufacturing products for the coming season. The specialty equipment manufacturers continue to refine their machines and anticipate another banner sales year in 1987.

The down-sizing trend that seems to have influenced every American institution from Cadillacs to televisions is being felt in a variety of turf equipment lines. Some makers of spray rigs and mowing equipment are offering down-sized machines for the 1987 turf season. Their reasoning includes a need to adapt to smaller home lawns and increase maneuverability in the residential setting.

But beyond responding to trends, manufacturers will have a wide array of new professional turf products and improvements to their existing products in

design, one is characterized by a pull-behind feature and the other is a push model with the push model having an optional tow kit," says Harshman. These models will compliment the company's line of 32- and 38-inch sweepers.

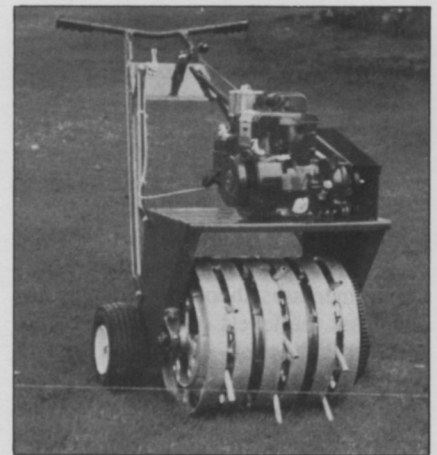
The objective in producing these smaller models was to develop lower-cost models that would have the same quality, efficiency, and performance as the larger models. The lower price was achieved by re-tooling the production line rather than down-grading the materials used in production, according to Harshman. "We tried to put some merchandising in the product line by taking features out without compromising performance," states Harshman.

Agri-Fab's 10-cubic-foot utility dump cart has also benefited from some recent production line improvements. Finally, a vinyl hopper cover is now available for the company's large broadcast spreader.

BLUEBIRD INTERNATIONAL. BlueBird International has introduced a new smaller version of its popular dethatching machine, according to Scott West, National Sales Manager. West says the heavy-duty commercial nature of the

professionals can also look forward to refinements in existing Classen aerators in 1987.

EARL J. CRANE, INC. After producing six prototypes of its aerator, the management of Earl J. Crane, Inc. feels that no further improvements are necessary for 1987. A walk-behind aerator is the only product the company makes. President Earl Crane says he expects a good year



because he has spent two years getting the aerator on the market. "We started from scratch with this one and have been working on it for a year and a half," says Crane. He says the aerator can go through a 36-inch gate and does a clean job of aerating without leaving unsightly debris. Maintenance on it is practically nil because of the changes made on the machine, according to Crane.

"It will run cheaper than anything on the market," claims Crane. The aerator features two or three malleable castings fitted with hollow tines that are case-hardened and cadmium-plated. The unit weighs about 450 pounds. It has a Briggs and Stratton engine with six to one gear reduction and an "oil minder" which shuts it off when the oil gets low.

CUSHMAN/RYAN. Shipments of the new Cushman Frontline out-front rotary diesel mower have just begun to leave the plant,

The down-sizing trend that seems to have influenced every American institution is being felt in a variety of turf equipment lines.

time for the 1987 buying season. The professional lawn service industry has created the demand for new and innovative turf equipment and equipment manufacturers will once again supply that demand in '87!

AGRI-FAB, INC. Beginning January 1, Agri-Fab, Inc. will have two new 30-inch lawn sweepers available. Vice President Milton Harshman says one will be a pull-behind unit and the other will be a push model. "They are basically of the same

equipment has been retained to allow easier transportation. He says the smaller machine was built in reponse to the growing number of smaller residential lawns.

CLASSEN MANUFACTURING. Although he is reluctant to discuss new developments at Classen Manufacturing in detail, President Tom Classen would say his company is working on a small overseeder for lawn and garden tractors. Classen says he is also working on an aerator for garden tractors. Lawn service

according to Frank McDonald, Cushman/Ryan's Director of Marketing. The new mower has a 22 horsepower diesel engine, four wheels, and power steering. It can be purchased with either a 60- or 72-inch deck, side or rear discharge, and will accommodate Cushman's Grass Caddy grass collection system. "We have been testing it with some lawn care operators and they seem to like it," says McDonald.

OMC Lincoln's Ryan line has been expanded to include a new 10 horsepower slitseeder. The Ryan Lawnaire IV walk-behind aerator has some important changes for 1987. The unit originally had a metal drum to which water could be added for extra weight. For 1987, the drum will be constructed of polyurethane. "It will be less noisy and have a longer life," according to McDonald. "It has new semi-pneumatic tires which will cushion it a little bit."

DEDOES INDUSTRIES. Dedoes Industries will also be updating their aerator line with a new disk concept, heavy-duty tine aerator for 1987. The aerator is designed to meet the industry's demand for a more durable aerator, according to General Manager Gary Becker. "We have some being tested in the field now and have had some really good response," says Becker. It is a tractor-mounted unit that will hook up to just about anything, according to Becker. The aerator will be available in 36- to 72-inch swath widths. The machine will aerate on a 6-inch-square tine pattern. "It is a coring-type aerator with a 3/4-inch tine which will penetrate about 3 inches," says Becker. "It will work like our present model H with a weight tray on top."

DEERE AND COMPANY. The big news

from John Deere is their entry into the golf course market with 12 new golf course machines. The products include a walk-behind greensmower, three-gang and five-gang hydraulic reel mowers, 20 and 24 horsepower diesel turf mowers, a boom mower, a utility vehicle with sprayer, spreader, and utility bed attachments, and one pull-type and four three-point hitch aerators.

The John Deere 90 Boom Mower has applications for mowing maintenance firms that service utility turf areas that are

The Ryan Lawnaire IV walk-behind aerator has some important changes for 1987. The unit originally had a metal drum to which water could be added for extra weight. For 1987, the drum will be polyurethane.

difficult or dangerous to mow. The tractor-mounted boom mower lets the operator manipulate a 9-foot double-action breakaway boom and 30-inch precision flail mower from the tractor seat. The cutterhead contains 48 "Y" shaped flail blades for a fine quality cut and can be rotated 220 degrees.

Deere's new aerators also may have applications for lawn service operations. The aerators feature tines that are slightly twisted to shatter soil in three directions at high speeds. The model 260S works a 60-inch path with 24 6-1/2-inch tines. Model 280S works an 82-inch path with 36 1/2-inch tines. Both are mounted on a category I or II three-point hitch and include storage stand and weight tray.

DENVER LEASING. Denver Leasing will be debuting its all-new down-sized tanker truck at the Professional Lawn Care Association of America's Trade Show in

Baltimore, Maryland on November 17-20. The unit is a 2-ton, 1,350-gallon tanker truck with a dry storage area in the back, according to company President Bob Smith. The truck's very short wheel base gives it unusually short overall dimensions.

"We use an elliptical tank which really gives you a short unit," says Smith. "The overall length will be shorter than the standard 600-gallon units. It is designed for maneuverability on city streets in suburban operations."

Denver Leasing also has a low-volume unit and is continuing to work on a chemical injection system prototype.

DEUTZ-ALLIS CORPORATION. A mower designed for homeowner use with commercial mowing applications? That's what Deutz-Allis is touting for its new Vanguard front-cut mower. The rear-steering mower comes in both hydrostatic drive and five speed gearbox models with a choice of 36- or 42-inch cutting decks. The unit is powered by a Briggs and Stratton I/C engine, according to Sam Smith, Manager of Lawn and Garden Operations. The five speed transmission features a Peerless heavy-duty transaxle and the hydrostatic drive features an Eaton Hydrodrive unit.

"It is not designed like a commercial unit, but it is also not priced like a commercial unit," says Smith. "We are saying to the lawn care people, 'Here is a unit you can use for mowing, but it can also be used for spreading fertilizer and spraying.'" The rear of the mower features space that can be used for a vacuum attachment, a twin bagging catcher, a dump cart, and sprayer and seeder/fertilizer spreader attachments available from an allied manufacturer. Smith claims the mower can be purchased for as much as half the price of some commercial units.

A second tractor, model 5215 HST, is more commercial in construction and application. This compact tractor features a hydrostatic drive and a PTO in the 15 horsepower range. Smith says this unit has features and attachments which differentiate it from the competition. The features include a three speed range and a cruise control for long stretches.

This tractor is unusual in that it can be



set up with front-, center-, or rear-mounted mower decks. "They can have a 60-inch, three-point hitch, rear mower; a center-mounted 60-inch mower between



the wheels of the tractor; or a front-mounted 60-inch mower that does not leave wheel marks," says Smith. "At the same time, a loader can be attached to the tractor." Smith anticipates adequate supplies of both new mowers in dealers' hands by January 1.

EARTHWAY PRODUCTS. The new Ev-N-Spred rotary spreader from Earthway Products has just rolled off the production line. Product Manager Dennis Thornton says the spreader has a 100-pound capacity hopper. It has 11-inch diameter pneumatic tires, an enclosed gear box,



and is available with either stainless steel or painted steel frame. The unit comes standard with a side deflector and a rain cover. There are two sets of ball bearings on each side with lubrication points.

EXCEL INDUSTRIES, INC. Excel Industries will not be releasing any new products for 1987, according to Sales Manager David Welfelt. The last two years saw a number of new product introductions for Excel, so the only new items for next year might be some new engine options for late 1987 or early 1988. Welfelt hints at the possibility of new engine options for the 60-inch rotary mower class in late 1987.

Excel will continue to build on its Hustler 251 mower that was introduced



about a year ago. The 251 is a 50-inch rotary mower with an 18 horsepower engine and a very unique direct-feed grass catcher system, according to Welfelt. "About six months ago we came out with the Hustler 262, which is a 60-inch deck machine, also with an 18 horsepower engine that does take quite a variety of attachments," says Welfelt. "We will be building on that product this year too."

EXMARK MANUFACTURING. Like Excel, Exmark Manufacturing will not have any

BALANCE™ LIQUID FERTILIZER

FOR TURF AND LANDSCAPE PROFESSIONALS

Does Your Present Fertilizer Meet The Balance Challenge?

BALANCE . . .

- is a true solution (will not settle or separate out)
- has a near neutral pH and low salt index
- is compatible with a wide range of pesticides
- is made with the highest quality raw materials
- is competitively priced
- **BALANCE** Liquid Fertilizer is available in three standard formulations: 16-2-2, 15-3-3 and 15-5-5. Custom blending of your individual formulation is also available to meet your needs. This includes the addition of secondary nutrients such as iron, copper, manganese, magnesium and zinc. All formulations are available for delivery in 5 gallon, 55 gallon and truck-load lots of 2-5,000 gallons. Customer pick-up is also available in any quantity at our manufacturing facilities in Red Oak, Iowa and Marion, Ohio.

BALANCE customers are also provided with optional services from our soil and tissue labs.

Quality, Consistency, Dependability. That's the **BALANCE** promise to you!

For Further Information Contact: David Elliott



NA-CHURS PLANT FOOD COMPANY

1-800-848-8281

421 Leader Street
Marion, Ohio 43302

In Ohio:
1-614-382-5701

new products for 1987, but we can expect some improvements to their line. "We have a new re-designed front caster assembly on our intermediate mowers that allows the operator to change the height of cut by removing a locking pin and changing spacers," says President Bob Martin. "We are using a new 12 horsepower Briggs and Stratton engine in place of the 11 horsepower engine. We have a new re-designed power rake that will be in full compliance with the changing safety specifications. We will also be offering a new 21-inch mower with a 4 horsepower, two-cycle, Briggs and Stratton engine.

FELDMANN MANUFACTURING. Improved horsepower is on line from Feldmann Manufacturing for 1987. In addition to the model 70 Earth Auger, Feldmann will now introduce the model 80. This new auger is much like the model 70, except that it features a TC 300 Tecumseh engine, according to President Myrtle Feldmann. That gives an engine size boost from 33 cc to 49 cc. For the larger 8-inch diameter drilling assembly, the new engine allows the auger to cut much faster.

Currently, the model 1700 aerator/scarifier has a 2-horsepower Briggs and Stratton engine. The model 1800 has a 3-horsepower Briggs and Stratton and the model 2200 has a Briggs and Stratton I/C engine. "We have just recently added the 3-1/2 horsepower Honda engine with the oil alert in the model 2300," reports Feldmann. "We have also added a quick-release weight bar to the 2300 which the lawn maintenance people are enthralled with and an easily-replaced rear axle."

FORD TRACTOR. Turf professionals can anticipate a number of new things from Ford Tractor in 1987, according to Fran Engelhardt, Consumer Product Manager. "We have a new 14-horsepower diesel lawn and garden tractor with a 48-inch deck," says Engelhardt. He says it is a cross between a commercial and a homeowner mower in that a homeowner could use it for large expanses of grass even though it is a commercial-quality mower.

"We want to build upon our commercial equipment reputation," states Engelhardt. "We are particularly strong in the light compact tractor market with mid-mounted mowers and rear-finish mowers. We are going to focus more in that area with additional models."

GRAHAM LAWN CARE EQUIPMENT, INC. Max Graham, President of Graham Lawn Care Equipment, Inc., anticipates building more multiple-tank spray rigs for his customers in 1987. He

sees an increase in the use of split tanks with two and three compartments. "In the past we have had a lot of single compartments," says Graham. "It seems like most companies are asking for two or more compartments and the capability of spraying high- and low-volume from the same equipment. Some are gradually switching over to low-volume equipment,

soon be available in addition to the standard 18 horsepower Briggs and Stratton engine. "We will also have a 21 horsepower unit this year with the Kubota water-cooled engine," reports Bressie.

GRAVELY INTERNATIONAL CORPORATION. Changes for 1987 Gravely products will come in the form of design and

Improved horsepower is on line from Feldmann Manufacturing for 1987. In addition to the model 70 Earth Auger, Feldmann will now introduce the model 80. This new auger is much like the model 70, except that it features a TC 300 Tecumseh engine.

but in a lot of cases they can't go all the way with low-volume, so the equipment we are building has the capability of going both ways."

GRASSHOPPER. There won't be anything new from the ground up, so to speak, from Grasshopper next year, but some engine changes are on tap. An optional engine will be offered for the 18 horsepower unit for 1987, according to Rick Bressie, Director of Communication. A Kohler 18 horsepower engine will

engine modifications. "We have developed a new 36-inch mower attachment with grass catching capabilities for our two-wheeled tractors that is very well suited to the commercial cutter or landscape contractor," says Advertising Manager Theresa Lowry.

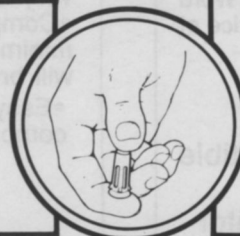
The Pro series of intermediate commercial walk-behind mowers will feature a new engine that will be available next year. "In the past we have only had an 11 and 16 horsepower Briggs and Stratton and an 11 horsepower Honda," says

ONE INSECTICIDE PRODUCT THAT CAN
HANDLE MOST OF YOUR TREE PESTS...

ACECAP[®] 97

EASY
TO
APPLY

APHIDS, BAGWORMS, BRONZE
BIRCH BORER, BUDWORMS,
CALIFORNIA OAKWORM,
EASTERN TENT CATERPILLER



PREPARED
DOSAGE —
CARTRIDGE
IMPLANTS

NO CHEMICALS
TO MIX OR
SPRAY

ELM LEAF BEETLE, GYPSY MOTH LARVAE, LEAF MINERS
MAPLEWORM, MIMOSA WEBWORM, NANTUCKET PINE TIP
MOTH LARVAE, PINE NEEDLEMINER, SCALE (CRAWLERS),
SPRUCE BUDWORM, THIRIPS, ZIMMERMAN PINE MOTH,
PLUS MORE.

ENCAPSULATED IMPLANTS THAT WORK
SYSTEMICALLY INSIDE THE TREE!

FOR FURTHER INFORMATION
& THE NAME OF YOUR
NEAREST DISTRIBUTOR...
CONTACT...



Creative Sales, Inc.
Fremont, NE 68025 U.S.A.
(402) 727-4800

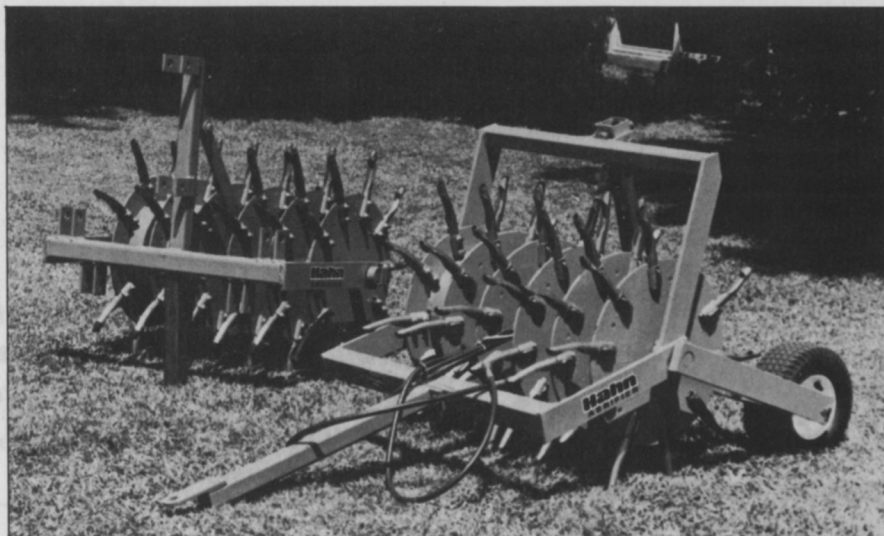
Circle 93 on reader service card

Lowry. "Next year we will have a 12-1/2 horsepower Kawasaki engine available."

"The Pro series now has 'operator presence' as a safety feature," says Lowry. "We did not have that last year." In addition, the Pro series grass catcher has been changed to a lighter nylon-mesh type of catcher that has a capacity of three bushels. A new re-designed sulky is also available and there are now "pulley cleaner fingers" that prevent grass buildup in the pulley area, according to Lowry.

GREAT NORTHERN EQUIPMENT. The only addition to Great Northern Equipment Company's product line in 1987 will be a slide-in, skid-mounted spray rig, according to Vice President Floyd Pettit. The unit's tank will hold either 200 or 300 gallons depending on final design changes. It will feature a diaphragm pump and hose reel.

HAHN, INC. Hahn has two new aerators for this market. "Our two newest aerators are tractor-drawn, but they are small enough that they are very applicable for the professional lawn care people," says Doris Lindsey, Advertising Manager. "In the past, we have always manufactured, and still do, a 6-foot



aerator which doesn't go through a garden gate too well." One of the new aerators has a three-point suspension to mount on to a tractor with a three-point hitch. The other one has its own wheels and hydraulics and is a pull-behind which taps into the towing vehicle's hydraulics. An optional hydraulic package can also be attached.

HONDA. The biggest change for next year in Honda's commercial small engine line

will be an oil alert in the 8-1/2 and 11 horsepower engines. Honda will be the first in the industry to offer this feature, according to Rob Clum, National Sales Manager, Engines. "It is a beeper that goes off," explains Clum. "That is available on all our horizontal shaft engines, but on the vertical shafts that is kind of a revolutionary thing."

INGRAM KUT-MOR COMPANY. Ingram has a couple surprises in store for us in

FREE COMPUTERS

Introductory offer expires Feb. 28th

When you purchase our complete Lawn Care System, including Word Processing for our regular price of

\$4,895.00

you get **free**

- 1) 20 Mb Hard Disk
- 2) 640 K IBM Compatible Computer
- 3) Monochrome Monitor

We guarantee this system will increase your sales and profits and yet it is simple enough a child could use it.

Ask about our money back guarantee.

REAL GREEN PROFESSIONAL SERVICES
2775 Haggerty Rd., Walled Lk., MI 48088
Call Today (313) 669-1118

LOOKING FOR ADDED PROFITS?

THE **Feldmann** AERATOR/SCARIFIER IS A PRODUCT FOR PROFITS.

- It is ideal for aerating to grow beautiful turf.
- It is an ideal soil scarifier for over-seeding.
- It is low in maintenance, very durable.
- Competitively priced, a minimum investment which will bring added profits.
- Easy to operate; compact, maneuverable.



Call or write for details:
on the POWER LAWN
AERATOR/SCARIFIER.

Feldmann
Engineering & Manufacturing Co., Inc.
P.O. Box 153, Sheboygan Falls, WI 53085
Telephone 414/467-6167

1987. New for 1987 will be a smaller water-cooled unit with a 24 horsepower Perkins engine, according to President Wesley Ingram. This riding mower will differ from existing models in its shorter overall length.

The other new product is a completely self-contained, tow-behind rotary mower with a 12 horsepower Briggs and Stratton engine. Ingram says the unit can be pulled with any type of tractor. It has its own engine, battery, and electric clutch to engage the blades. Ingram has devised a marketing strategy for this machine. "In most of the smaller consumer garden tractors, the decks go out before the drive unit," notes Ingram. "So if you have an old garden tractor, but the drive is still good, you could pull this tow-behind and get the same efficiency. Or if you have a consumer garden tractor that only has a 36- or 42-inch cut, now you can take a 62-inch cutting unit behind it. It will cut as fast as you can pull it."

IMLER INDUSTRIES, INC. Imler Industries won't scrap its original measuring wheel, but Vice President Pat Imler tells us a new measuring wheel is in the works for 1987. "We are coming out with a similar model that will fold in half for easier storage," says Imler. "It will be made of all the same heavy-duty materials."

JACOBSEN. New from Jacobsen, Division of Textron, Inc., is the DW 220 diesel out-front rotary mower. The machine is designed for use with either a 60- or 72-inch out-front mower or a fine-cut flail. "The fine-cut flail is getting a lot of interest because it not only gives you



a fine finished cut, which is comparable or better than rotaries, but you also have the additional advantage of not having to worry about thrown projectiles," says Jim Burns, Advertising Manager. "People find that valuable for mowing in places with a lot of bystanders."

The commercial turf market is now being offered a slitseeder from Jacobsen. "The 524-100 Seeder is a walk-behind, self-propelled, slit-seeder," says Burns. The unit has a 21-inch seeding swath and plants on 3-inch centers. "It can be used as a aerator as well as a seeder," says Burns, "because it has two different sections. The first section is an aerator with powered blade. That is followed by the slit-seeder which has disks which open the soil and drop the seed into the slot." The aerator has interchangeable blades for spiking, renovating, or verticutting.

F.D. KEES MANUFACTURING COMPANY. George Schaefer, Chairman and CEO of F.D. Kees is reluctant to talk about some new aerators the company



will debut next year, but he would like to mention some new refinements for their existing mower line. Schaefer is undecided whether he will go with a 12 horsepower Kawasaki, Briggs and Stratton, or Tecumseh engine for the new engine in the company's intermediate walk-behind mower line. Regardless of the brand, Schaefer says it will be a two-cycle engine.

Schaefer reports that his company is also working on a quick height adjustment for the 21-inch push mowers. The magnesium/aluminum alloy decks will remain standard on the 21-inch.

LANDOLL CORPORATION. About three years ago, Landoll Corporation developed a ground-loading flat bed for 1- and 2-ton trucks that were used to carry automobiles. The company has now modified that original design for use in the mowing maintenance industry. The unit is designed to go to the field, ground-load sizeable equipment and go to the job site, according to Jim Ladner, Sales Coordinator.



"We feel that with changing equipment, quick maneuverability of equipment is going to be important," says Ladner. "We have modified it, shortened it, and designed it to haul 25 to 35 horsepower tractors and lawn mowing equipment. It eliminates pulling trailers." The unit is a real advantage in states where trailers are not allowed on highways. By converting a 1-ton truck into a complete equipment hauling vehicle, Ladner says professionals can also eliminate the expense of insuring and licensing a trailer.

LAWN BOY. Lawn Boy is tightening its hold on the commercial market with two new 21-inch commercial mowers for 1987. Pat McGhee, Lawn Boy Advertising Manager says one mower will be a push mower and the other will be self-propelled. The mowers will have 4 horsepower I/C engines. "They will probably be hitting the market in late December or January," says McGhee. "We had commercial mowers in the past and we enjoy a large market share in that particular segment, but when compliance came in, we made all of our lawn mowers compliant. These are non-compliant."

LAWN MASTERS, INC. The Westmac from Lawn Masters now features closed-spoon tines as opposed to the original open-spoon tines. "In using closed spoons, you are putting more steel into the ground than you would with an open spoon," says Jim Gourley, President of Lawn Masters. "So you have to have more weight." To solve the problem, the new tines have been mounted in a heavier casting assembly to improve penetration and produce good cores. "Even though there is more weight to it, the way we have designed it, it is a little easier to maneuver than the one with the open spoons," claims Gourley.

Unfortunately, the closed-spoon machine is a little slower than its mate. Gourley estimates that his machine produces 55 holes per square yard, as opposed to his open-spoon aerator assembly which leaves 65 holes per square yard. The closed-spoon aerator does 33,000 square feet per hour, while the open-spoon aerator can do an acre an hour. The aerating swath width is 23 inches. The new closed-spoon assembly can be

retrofitted onto any existing Westmac aerator.

LESCO. The LESCO sprayer line will be both improved and expanded for 1987. The LESCO sprayer will feature a new frame, better performance, and increased agitation, according to Bob Coyner, Product Manager for Spreaders and Sprayers. "We will also announce an ornamental and tree root feeder, along with a quality, proven, root-feeding fertilizer," says Coyner. "The root feeder and fertilizer will be compatible with any sprayer with 150 psi and mechanical agitation."

LIQUI-LAND CORPORATION. For 1987, Liqui-Land will introduce a low-volume injection spray unit designed with the growing need for safe application methods in mind. Updated features will include a new electric pumping system, modified ChemLawn injection gun, and dual hose. A fiberglass shroud will enclose the injection tanks and working components of the unit, adding a streamlined, professional appearance. The complete slide-out pickup mount unit can be shipped anywhere in the United States and Canada, according to the company.

NATIONAL MOWER COMPANY. A new triplex mower and a new walk-behind mower will be added to National Mower's lineup for 1987. The new 76-inch triplex mower will be powered by an 11 horsepower electric start Briggs and Stratton I/C, according to Sales Manager John Kinkead. The triplex will have six-bladed reels which are 7 inches in diameter. "We introduced it this year, but it will be on the market next year," notes Kinkead.

The new walk-behind mower will feature either a 30-inch reel mower, a 26-inch verticut attachment, or a brush. Lawn service professionals can expect improvements to the rest of the existing National Mower line.

NEW ENGLAND GREEN, INC. A five-piece fiberglass spray rig bed is on the drawing board for release next year from New England Green. The new bed will be lighter, more durable, and cosmetically more pleasing, according to New England Green President Mike McKee. Work is currently being done to make the fiberglass surface safer by either incorporating sand in the fiberglass or painting the fiberglass with sand-impregnated paint. "Guys are standing on their beds occasionally to fill the tank, so they need a non-skid surface," says McKee.

As with the standard hardwood beds, the fiberglass bed will be cut away so the tank can be recessed to lower the center of gravity. In addition to the improved bed, New England Green will also offer a new low-volume spray rig with ample bed space to accommodate storage of granular materials. But the company won't be producing rigs for mini trucks. "We are still very much believers in the 1-ton cab and chassis," says McKee. "Some of the smaller trucks are potentially very heavily taxed with the loads they are carrying."

McKee believes low-volume spray rigs like his new unit will help the industry become more discriminating users of pesticides. "It is a responsible approach to increased regulation and the higher visibility that the industry has achieved," says McKee.

OLATHE MANUFACTURING. Olathe has a new thatcher/seeder, hopes to have a new aerator, and has been working with Toro on some new attachments for their equipment. As a member of the Toro organization, Olathe has produced a thatcher/seeder combination for Toro's new aerator, a blower attachment for Toro's intermediate walk-behind mowers and their 117 mowers, and a snow blade for

SOFTLAWN

SINGLE USER LAWN CARE SOFTWARE SYSTEM

- Customer Master
- Invoicing
- Receivables
- Inventory
- Production Reporting
- Prepayment Letters
- Easy Back-up
- Affordable

THE LAWN CARE SOFTWARE
YOU NEED
FOR A SMALL COMPANY

IBCS INC.
P.O. Box 831, Troy, Ohio 45373
(513) 339-8811

ALL THE EXCITEMENT OF
BALTIMORE'S
INNER HARBOR . . .
AND A GREAT REGIONAL
TRADE SHOW!

The Baltimore Convention Center
**MID-ATLANTIC
NURSERYMEN'S
TRADE SHOW, INC.**
JANUARY 12-14, 1987

Over 350 Exhibit Spaces
For registration or exhibit details, contact:
Mid-Atlantic Nurserymen's Trade Show, Inc.
P.O. Box 314, Perry Hall, MD 21128
Phone: (301) 256-6474

Toro's intermediate walk-behind mowers, according to Steve Rogers, President of Olathe Manufacturing.

Despite all the work on the new Toro implements, Olathe has managed to find time to produce a 5 horsepower Thatch and Seed, a thatcher/seeder combination which Rogers says his company has tested all summer and fall. "Nobody has anything quite like it," says Rogers. Olathe is currently working on a walk-behind aerator that will hopefully be released in the spring.

PARKER SWEEPER COMPANY. The newly introduced Parker Sweeper Conestoga Adaption Kit makes the Conestoga Trail Vac suitable for front deck commercial mowers. The kit features 12 feet of large capacity 8-inch hose, an additional support arm, and an elbow joint. Further developments for 1987 include the preassembled Tine-A-Matic Trailing Dethatcher.

The all-new, self-propelled Scavenger I/C features the elimination of the collector bag platform and the addition of a self-supporting bag. "1986 was a good year for us," says President Richard W. Parker. "Our expectations of a continuation of this upward trend combined with our improved products make us very opti-

mistic about the outlook for 1987."

PERMA-GREEN SUPREME, INC. Tom Jessen, President of Perma-Green Supreme has a number of tricks up his sleeve for 1987, but one of the biggest changes in his low-volume spray rigs will be a re-designed injection gun he calls the "Target Pistol." The gun is all-modular construction so internal components can be replaced without throwing the whole gun away. The new concept features two equally-sized hoses coming to dual triggers on the "Target Pistol" which the operator can use to switch between two pre-mixed, ready-to-spray solutions. "This gives us an extraordinarily simple system with a high degree of reliability without the complexity of calibration experienced with the injection principle," says Jessen.

"We also have a new form of agitation that I don't believe anybody else has been working with yet," claims Jessen. The system uses a small air compressor to supply compressed air as an agitation medium. He says agitation has been a problem in low-volume spray rigs, but this new system does a good job of keeping materials like wettable powders in solution. The compressed air agitator will be standard equipment on all low-volume

rigs for 1987, but operators can still order mechanical agitation as an option.

PROFESSIONAL TURF EQUIPMENT. "We are coming out with a 100-gallon, low-volume type of skid-mount rig for the lawn care operator," says Butch Hoye, Manufacturing Manager at Professional Turf Equipment. The company will also produce 200-gallon and 200-gallon compartmentalized units. "Everyone is getting money-conscious and the low-volume concept is always going to be here," says Hoye.

RANSOMES, INC. A triplex reel mower and two new rotary mowers are in the works from Ransomes, Inc. for 1987. One of the rotaries is a three-wheel up-front model and the other is a four-wheel up-front model, according to David Legg, Marketing Services Manager. The four-wheeled version of Ransomes' 18 horsepower, twin cylinder mower with a 61-inch deck should soon be released to the company's distributors, according to Legg.

The triplex reel mower for 1987 will have a mechanical drive and an 8 horsepower engine. The mower's tentative title is the NT 18, which stands for narrow triplex 18.

ORDER YOUR PLCAA BUSINESS AIDS TODAY!

CODE OF ETHICS OF THE PROFESSIONAL LAWN CARE ASSOCIATION OF AMERICA

This Code of Ethics is adopted by the Professional Lawn Care Association of America to promote and maintain high standards of public service and conduct in order that lawn care professionals be regarded as a profession, that the public may have no reasonable cause for complaint, and that the profession of lawn care may best serve the public interest.

As a member we agree to abide by the following Code:

• To understand and adhere to recognized practices and management, as well as support and advance lawn care research, technology, and education.



SYMBOL OF GOOD PRACTICE

2-color PLCAA logo, 1-10 are \$2.00 each, 11 or more are \$1.25 each

- _____ Truck / Vehicle Decal \$ _____
- _____ Embroidered Uniform Patches \$ _____
- Shipping & Handling - \$2.00 per order \$ _____



TOTAL FOR ALL ITEMS ORDERED

Orders must be prepaid, OR add COD charges \$ 2.00
TOTAL ENCLOSED (U.S. Funds) \$ _____

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE: _____

PLCAA Member Send Me Membership Information
All orders must be accompanied by check or money orders in U.S. funds, made payable to "PLCAA."

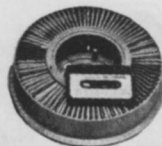
Mail to:



Professional Lawn Care Association of America
1225 Johnson Ferry Road, N.E., Suite B-220
Marietta, GA 30067 (404) 977-5222

CUSTOMER MAILING INSERTS

- _____ Code of Ethics 2¢ each \$ _____
- 2-color statement of PLCAA's Code of Ethics
- _____ Product Safety 5¢ each \$ _____
- 4-color statement about products used
- Shipping & Handling - \$1.00 per order \$ _____



STAFF TRAINING AIDS

Training programs complete with slides, narrated tape and script. \$35.00 each for PLCAA members, \$70.00 each for non-members.

- _____ Destructive Turf Insects - Northern \$ _____
- _____ Destructive Turf Insects - Southern \$ _____
- _____ Destructive Turf Insects - US \$ _____
- _____ Weed Identification & Control \$ _____
- _____ Turf Disease Identification & Control \$ _____
- Shipping & Handling - \$3.00 per set \$ _____

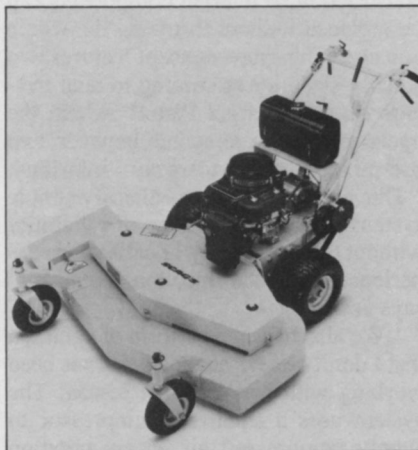
"We are spending more money on engineering than we have ever done in our company's history," says Legg. "We always have at least three or four major projects which will result in a new piece of equipment. One of the most exciting things we have done this year is introduce the Kawasaki engine onto our line of walk-behind mid-size mowers."

SALSCO, INC. The machine that graces our cover this month, the SS-35-20 Slicer Seeder, is the latest innovation from Salsco, Inc. President Sal Rizzo says a couple things set his machine apart from the competition. First, the SS-35-20 slices and seeds on 2-inch centers. Rizzo says other machines work on 3-inch centers. That eliminates the need for cross-cutting when seeding a lawn. "It also has the ability to slice and seed in a 25-inch radius," says Rizzo. "The other two machines on the market have to go straight."

The finished job is Rizzo's best sales tool. "If you do a lawn with one pass over, it works a lot better than doing it with a machine that seeds on 3-inch centers," says Rizzo. "But when you cross-cut it with our machine on 2-inch centers, when the lawn comes up it looks full. You have to stand on top of it and

look straight down to see the spaces."

SCAG POWER EQUIPMENT. Scag Power Equipment has just introduced a new line of 36- to 48-inch deck mid-size mowers. "It is a very simple design that allows the operator the convenience of replacing the pulley," says Jim Kee, Vice President of Manufacturing. "You can take the pulley



off without using a pulley-puller. It is designed to give the user a machine that cuts well and has no down-time."

SENSATION/GILSON BROTHERS. Sensation will bring out four new models for

1987, two of which will be the first Sensation riding mowers. The riders will feature 48- and 61-inch out-front rotary decks, according to Dean Ziegenbein, Product Manager, Sensation/Gilson Brothers. They will be three-wheel in design with rear-wheel steering. They feature 18 horsepower Briggs and Stratton I/C engines, Peerless heavy-duty transaxles, and deluxe padded seats with armrests. The other two new products we will be 21-inch push mowers with Honda engines. One is 4 horsepower and the other 5-1/2 horsepower, both with overhead valves, according to Ziegenbein.

SNAPPER POWER EQUIPMENT. Snapper will continue to offer its 21-inch commercial mower, according to Dave Bernhardt, Sales Promotion Manager. It has a 5 horsepower engine, a three bushel catcher, and a dethatching/bagging attachment. The newest commercial product for Snapper is a backpack blower.

TERRACARE PRODUCTS COMPANY. Bill Milward, President of Terracare Products Company, could only say that he is working on a walking aerator and a riding aerator that he plans to have ready for the PLCAA show in Baltimore. He says the

Lawn Care Management System

A Complete Software Solution for Chemical Lawn and Tree Care Companies

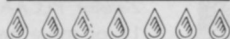
See a demonstration at the PLCAA Trade Show in Baltimore or the Ohio Turfgrass Conference in Columbus.

PRACTICAL SOLUTIONS, INC.
500 West Wilson Bridge Road
Worthington, Ohio 43085
(614) 436-9066



You've heard we're the best!

LIQUI



LAND CORPORATION

Low Volume Injection Spray Unit

STOP BY OUR EXHIBIT PLCAA/BALTIMORE



(616) 684-8400

123 MARMONT

P.O. BOX 547

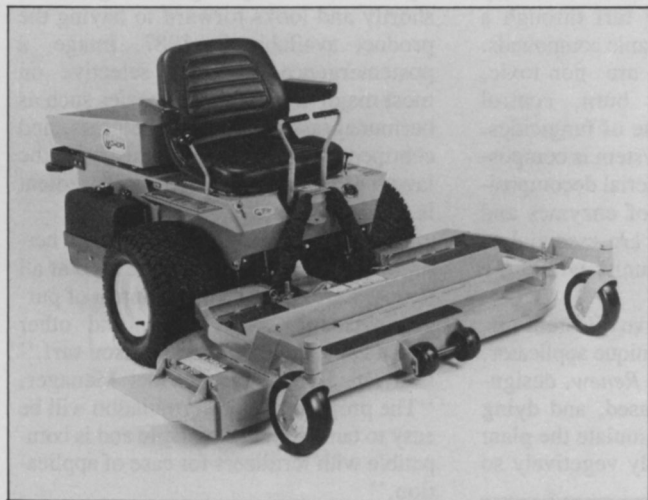
NILES, MI 49120

machines will be drum-type aerators similar to their existing line and will be designed specifically for the lawn care operator.

THE TORO COMPANY. Toro has had great success with its new mid-size 112 mower with a Kawasaki engine, but Dennis Brown, Manager of Commercial Mowing Equipment, says now the company has just begun marketing its new 88-inch triplex deck for the big 300 series Groundsmasters. "Our largest deck on our big units were 72 inches, now we are going up to 88 inches with what we call 'triplex,' which is two small wings which mount on the big deck and hydraulically fold in and out for the customer to get in and out of narrow places," says Brown. "That is a five spindle rotary unit that fits all existing Groundmaster 300 units." Brown estimates the unit will be available in May.

TURFCO MANUFACTURING, INC. Turfco's Edge-R-Rite edger will have a new Melonited cutting arm in an effort to strengthen this crucial mechanism, according to George Kinkead, Sales/Advertising Manager. "That steel treatment makes the cutting arm last much longer," says Kinkead. "It is a process similar to case-hardening, but it is much stronger." As always, the edger can utilize three different blades: a disk blade for sidewalks, an "L" blade for edging gardens or flower beds, and a "V" blade for digging a small trench along the sidewalk.

WALKER MANUFACTURING. Walker has been producing and promoting one basic model for six years, the model M 3642 featuring an 11 horsepower Briggs and Stratton I/C engine. But in 1987 the company will offer a new model, according to Bob Walker, President of Walker Manufacturing. The new model C 3642 mower will be basically the same as the M 3642, but it will feature a 16 horsepower Magnum Kohler engine. The original was designed for both large home owner and commer-



cial applications, but mowing maintenance professionals have told Walker they want more cutting power in heavy grass. So in addition to a stronger engine, the new mower will feature heavier belts and an electric blade clutch.

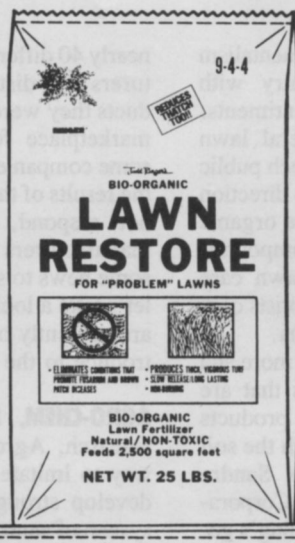
In addition, the blower on the grass catching system will feature boosted performance to improve clog resistance. "We are also offering an optional 54-inch side-discharge deck," says Walker. "Since we have a more powerful version now, it allows us to go to a bigger deck." — *Tim Weidner*

The author is Managing Editor of ALA magazine.

Although we have spotlighted many companies and their new offerings for 1987, we should note that space restrictions prevent us from attempting to include every new product available to the lawn service industry in 1987.

DON'T LOOSE THE ACCOUNT... SOLVE THE PROBLEM!!

USE Judd Ringer's LAWN RESTORE®



Lawn disease and problem lawns are your worst enemy as far as losing valuable accounts. With Ringer's **LAWN RESTORE®** You can save those accounts and attract many new ones.

Over 300 lawn service companies used **LAWN RESTORE®** this year with spectacular results. The university tests are proving more conclusively every year that **LAWN RESTORE®** will, in fact:

- **Prevent and control the conditions causing lawn disease.**
- **Reduce thatch build-up.**
- **Keep your lawns greener much longer.**
- **Is safe for use around children, pets, and lakes.**

LAWN RESTORE® is NOT snake oil!! It is a proven, well tested product THAT **WORKS!!**

Next year will be a critical year for you and your lawn care business.

Contact your distributor or
DAVID RIFFEY,
RINGER CORPORATION
9959 Valley View Road
Eden Prairie, MN 55344
Phone: (612) 941-4180

Or see us at the PLCAA show—Booth 904.

CHEMICAL PREVIEW '87

What's new in herbicides, fungicides, insecticides, and fertilizers? Turf chemical manufacturers and distributors present current offerings and introduce their 1987 line of lawn care chemical products.

Today's wave of environmentalism has flooded our country with many anti-chemical sentiments. And according to several lawn care chemical manufacturers, such public chemophobia has influenced the direction of turf chemical research. More organic and biologically-engineered compounds are being introduced to the lawn care marketplace each year, and scientists continue to pine away in this arena.

"The industry's going to look more and more to the types of products that are more environmentally safe — products that will not leach easily through the soil and this type of thing," says Sandra Nelson, President of Liqui-Land Corporation, Niles, Michigan. "Everything's going to have to be more fine tuned."

In addition, many of today's turf care products are coming out with lower application rates of concentrated chemical and higher LD₅₀ values. Even established turf care products are coming out with new labels that register their usage at lower application rates.

"Turf chemical research is going to be aimed at pesticides that require lower dosages and higher LD₅₀s," explains Hal Paul, Marketing Product Manager of the Specialty Products Group of Mobay Chemical Corporation. "With the EPA registration, we're going to see that a lot of the old, more toxic compounds are not going to be reregistered for whatever reasons. In fact" he says, "I just saw in the paper...that EPA banned diazinon for use on golf courses and sod farms. And I would say things like that are going to continue to happen."

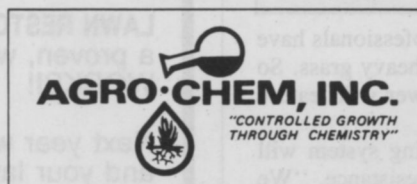
While new turf product research is responding to the public's fear of chemicals, many turf chemical manufacturers believe that the course of research was already heading in the direction of naturally-occurring and biologically-engineered compounds, an area where new, unique, and marketable opportunities exist.

American Lawn Applicator contacted

nearly 40 different turf chemical manufacturers and distributors to see what products they were planning to unveil to the marketplace for the new year. While some companies weren't ready to divulge the results of their research and others did not respond, over 30 turf chemical manufacturers and distributors did have some news to share with our readers. So let's take a look at the turf products they are currently offering or planning to introduce to the green industry in 1987.

AGRO-CHEM, INC. After 30 years of research, Agro-Chem has discovered a way to imitate Mother Nature and help develop strong, healthy turf through a system of natural and organic compounds. The products, which are non-toxic, odorless, and do not burn, control *Fusarium* without the use of fungicides. Instead, Agro-Chem's system is composed of by-products of bacterial decomposition and various types of enzymes and organic substances that are essential to developing greater immunity within the plant.

The system includes five different formulations, along with a unique applicator, including: *Strengthen & Renew*, designed for sick, weak, diseased, and dying lawns. Its ingredients stimulate the plant to heal itself and multiply vegetatively so



that it will fill in the bare spots without requiring reseeding or resodding; *Relief*, designed to help leach out toxic materials in the soil and replenish it with more desirable types of microorganisms in a catalytic, enzymatic form; *Nutra Aid*, designed to help water, nutrients, and air penetrate into tight, compacted soils, thus encouraging deeper penetration of roots;

Green Magic, designed to maintain a lawn strong and healthy after applications of *Strengthen & Renew*; *Vita Feed*, a combination of enzymatic and natural organic micro nutrients containing iron, copper, zinc, manganese, and sulfur; and *Nature's Touch Injector*, a means of injecting liquids into a water stream so that the products can be applied easily and effectively without the use of a pressure sprayer.

AMERICAN CYANAMID. Lawn care operators who are looking for a solution to the nutsedge dilemma should watch for the introduction of Image®. American Cyanamid is anticipating EPA registration shortly and looks forward to having the product available in 1987. Image, a postemergence herbicide selective on most major southern turf species such as bermudagrass, St. Augustine grass, and centipedegrass, is new chemistry to the lawn care industry. Its active ingredient is imidazolinone.

"Image is the only post-emergence herbicide we've seen that may be used at all temperatures for selective control of purple nutsedge, wild garlic, and other broadleaf weeds for warm season turf," said Dr. Bob Gray, Product Manager. "The proposed liquid formulation will be easy to tank mix, non-volatile and is compatible with fertilizers for ease of application."

Image controls purple and yellow nutsedge and annual sedges, in addition to wild garlic and onion. American Cyanamid will be introducing a similar product for cool-season turf in the future.

ANDERSONS. In 1987, The Andersons will have two new product offerings for the lawn care industry. Look for 28 percent Sprayable Team®, a liquid herbicide, and Fertilizer Plus Team®, a granular product. Many different fertilizer combinations will be available with the new fertilizer/herbicide product.

The Andersons has recently added a new product, N-Sure™, to its Li-

quaLine™ family of bulk liquid lawn fertilizers. N-Sure is a new, patented formulation with a slow release pattern, providing uniform application with reduced chance of burn. N-Sure, produced by Arcadian Corporation of Parsippany, New Jersey, is the newest product in The Andersons' LiquaLine liquid lawn fertilizers for the professional turf market.

BASF CORPORATION. Two new supplemental labels of Poast® postemergence herbicide are now available, offering uses for professional lawn care applicators. The product, primarily used on soybeans and sugar beets for control of annual and perennial grass weeds, is now registered for use on established centipedegrass in turf, lawns, and rights-of-way in all states except California. Poast does not control sedges or broadleaf weeds, and it should not be applied on any desirable turfgrass other than centipedegrass because other turf species may be seriously injured.

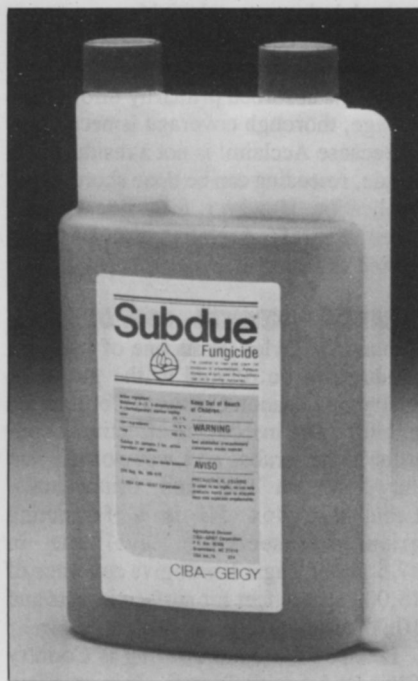
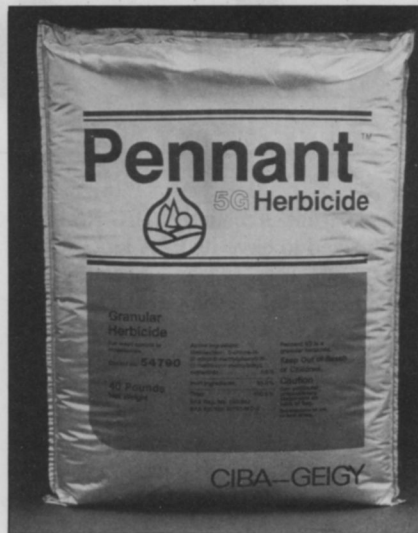
The second supplemental labeling of Poast — only available to those lawn care professionals operating in Alabama, Georgia, and Tennessee — is for suppression of seedhead growth in established tall fescue grown along roadside, rights-of-way, and in non-food crop alleyways. Discoloration of the fescue will occur in time after application. This discoloration of the leaf tissue may persist for two to eight weeks depending on environmental conditions.

CHEVRON CHEMICAL COMPANY. Chevron recently revised its recommendations for turf uses of Orthene® 75S Insecticide. While Orthene has been used largely in the agricultural market, Chevron is beginning to place greater emphasis on its uses in the lawn care industry.

The water-soluble product is broad-spectrum, controlling many of the common lawn pests. It has been federally approved for fire ant control and is pending federal EPA registration for mole cricket control.

Labeled for use on turf, trees, and ornamentals, Orthene is low in toxicity, easy to mix, and easy to use. Chevron is expecting to introduce a fire ant bait in mid-1987 and the company is working on new formulations, including a granular material of Orthene 75S for the lawn care industry.

CIBA-GIEGY CORPORATION. An extensive turf chemical research effort at Ciba-Geigy makes it possible for the company to be introducing several new lawn care products in 1987 — the first in a stream

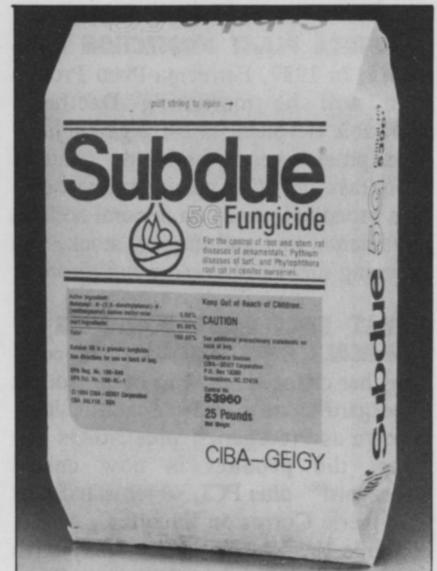


of many new products the company expects to deliver to the industry within the next five years. Among those slated for introduction in 1987 is Pace®, a preemergence herbicide for controlling broadleaf weeds and grasses in southern turfgrasses. The herbicide controls nutsedge and has long residual action.

Pennant® 5G is another preemergence herbicide for grass, broadleaf weeds, and ornamentals to be offered by Ciba-Geigy next year. It will be available first in a granular form, with a liquid formulation to follow. A third preemergence herbicide is also in the works for Ciba-Geigy. While its name has yet to be legally approved, the company hopes to have the product available in late '87. The herbicide will provide longer control of annual grasses, such as crabgrass and

goosegrass, than some of the current standards, according to Joe Prochaska, New Products Manager. It will be labeled for use on northern and southern turfgrasses, available in a granular form.

Triumph®, a new insecticide which offers quick knockdown on surface feeders and grubs with good residual control, is



still pending EPA registration. Ciba-Geigy is working hard to secure the product's EPA label sometime in 1987. Formulated exclusively for the professional turf market, Triumph has been in research for several years. It is new chemistry, containing the active ingredient isazofos. When introduced to the lawn care marketplace, Triumph will be available in a liquid formulation, and eventually in a granular form as well.

Ciba-Geigy will introduce a new granular formulation of Subdue®, its currently available fungicide, in 1987. The new lower concentration granule will be available in certain prepacks to broaden its spectrum of control.

And finally, a brand new fungicide to be introduced by Ciba-Geigy next year is Banner®. The new chemistry controls a fairly broad spectrum of fungus, and is especially effective on dollar spot and brown patch.

DOW CHEMICAL COMPANY. For more convenient large-volume spraying, Dow Chemical Company is introducing a new package size of its Dursban® 50WSP Insecticide. While the product was introduced last year in four 4-ounce bags within a 1-pound pouch, this year it is available in a 1-pound bag within a foil.

Also new from Dow in '87 is a postemergence herbicide, Turflon® II Amine. The product will allow lawn care

operators to control early emerging, hard-to-control weeds in the second round of spraying, thus reducing labor in round three.

ELANCO PRODUCTS COMPANY. EPA recently approved an addition to the label of Rubigan[®], Elanco's locally-systemic fungicide for warm- and cool-season turf. In addition to controlling dollar spot and most major turf diseases, Rubigan is now registered for control of *Fusarium* blight complex.

FERMENTA PLANT PROTECTION COMPANY. In 1987, Fermenta Plant Protection will be marketing Dacthal[®] Flowable Herbicide in 2-1/2-gallon jugs. The preemergence herbicide controls crabgrass and other annual grasses, certain broadleaf weeds on mineral soils in ornamental turf and nursery stock, and creeping speedwell (*Veronica filiformis*).

GREAT SALT LAKE MINERALS CHEMICALS CORPORATION. The company has changed the name of its product Freezgard[®] due to trademark difficulties. Known as Freezgard[®] plus No-Ox last year, the product is now called Freezgard[®] plus PCI, which stands for Polymeric Corrosion Inhibitor.

While Freezgard's identity may have changed slightly, the product itself remains the same — it's an anti-corrosive liquid deicer which is effective to -30 degrees Fahrenheit. For those lawn care operators who use their equipment for snow removal service in the winter months, the product provides easy cleanup and no pump damage.

HI-TECH INDUSTRIES. With over 350 different lawn care products on its shelves, Hi-Tech Industries is expanding its product offerings in 1987 by introducing new Hi-Tech labels and carrying a larger line of other chemical manufacturers' brands.

Among those products to be marketed by Hi-Tech are the following insecticides: Hi-Tech Diazinon 4E, Hi-Tech Diazinon AG 500, Hi-Tech Dursban 1.0 Granules, and Hi-Tech Dursban 2.5 Granules.

As for fungicides, Hi-Tech will offer: Hi-Tech Terrachlor PCNB 10G, Daconyl[®] 2787, and Chipco[®] 26019. Balan 2.5G and MSMA are the company's latest herbicide additions. Hi-Tech will also carry flowable charcoal, flowable gypsum, and flowable sulfur.

Three soil additives join Hi-Tech's product line-up — Hi-Tech 5% Chelated Iron and Soil Acidifier, PBI Gordon Bov-A-Mura[®], and PBI Gordon Ferramec[®].

Hi-Tech will also market tire seal, antifeeze, and a spray dye indicator.

HOECHST-ROUSSEL AGRI-VET COMPANY. Currently available under an experimen-

Acclaim![®]

1 EC HERBICIDE

tal use permit, Acclaim![®] 1EC Herbicide is expected to have its EPA label for the 1987 lawn care season. Acclaim! is a postemergence grass herbicide which selectively controls warm season annual grasses in cool season perennial turfgrasses, including sod farms, commercial and residential turf, and rights-of-way. It controls grasses such as smooth crabgrass, hairy crabgrass, barnyardgrass, foxtail species, panicum species, Johnsongrass, and goosegrass, but does not have any broadleaf weed activity.

Acclaim! is an emulsifiable concentrate formulation containing 1 pound of active ingredient, fenoxaprop-ethyl, per gallon. Since it is absorbed primarily through the foliage, thorough coverage is necessary.

Because Acclaim! is not a residual herbicide, reseeding can be done shortly after application. However, for residual grassy weed control, Acclaim! can be tank-mixed with preemergence herbicides.

LEBANON CHEMICAL CORPORATION. Lebanon[®] Dylox 5G is one of two new products to be offered to the green industry by Lebanon Chemical Corporation in 1987. The insecticide effectively controls white grubs, sod webworms, and cutworms on turf and ornamentals. Lebanon Dylox 5G is a fast-acting granular insecticide, available in 37.5-pound bags. It will give coverage of 15,000 square feet for surface insects and 10,000 square feet for grubs.

Lebanon's second offering is Country Club 19-4-6 with Team[®]. It is an effective combination fertilizer with preemergence control for annual grass weeds on established turf. Proper application two weeks prior to germination will give optimum weed control on northern and southern grasses. The fertilizer base, Country Club 19-4-6, has 25 percent organic nitrogen for longer feeding and premium growth and color.

LESCO, INC. Two new fertilizer/herbicide combinations will be offered by LESCO next year — Fertilizer plus Team[®] and Fertilizer with Balan[®] plus Surflan[®]. The company will also add two insecticides to its line-up: LESCO Sevin[®] Brand SL, a sprayable, broad spectrum insecticide for turf and ornamentals; and LESCO Dylox 5G, a granular turf insecticide which effectively controls soil and

surface insects.

Lawn care operators will also find a new fungicide in the company's new product offerings — LESCO PCNB 10% Granule. Labeled for use on turf and ornamentals, the fungicide is especially effective on snow mold, leafspot, and brown patch.

A brand new line of small particle, sulfur-coated, urea-based fertilizers will also make its debut in 1987. Known as Elite[®] fertilizers, the line will offer seven different nitrogen-phosphorus-potash base analyses, including: 31-0-0, 21-4-12, 15-0-30, 30-5-7, 21-0-16, 19-0-19, and 12-24-14.

Rounding out LESCO's gamut of new products is LESCO Tracker, a spray dye indicator that will prevent lawn care operators from overspraying and serve as an excellent training tool. The blue dye disappears in 48 hours after application.

LIQUI-LAND CORPORATION. For 1987, Liqui-Land will offer additional fertilizer formulations designed specifically for low-volume spraying. In addition, the company will continue offering custom-blended liquid fertilizers for both high- and low-volume spraying.

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT. In response to users and distributors who store Milorganite[®] Natural Organic Fertilizer outside, Milwaukee Metropolitan Sewerage District has changed from paper to plastic packaging of its product for easier, safer, and longer storage. The new plastic bags of Milorganite will cost the same as the paper-bag product and will be packaged in 40-pound bags, 50 on a stretch-wrap pallet.

MOBAY CHEMICAL CORPORATION. Mobay's most recent product introductions include Dylox[®] 80, a turf and ornamental insecticide for use against white grubs, sod webworms, and cut worms; and Dyrene[®] 4, a 4-pound per gallon, flowable fungicide for control of leaf spot. The company is currently working to obtain registration of a new insecticide, Tempo[®], a turf and ornamental product for control of sod webworms, chinch bugs, and all surface-feeding insects. The new pyrethroid material will be available in a 2-pound-per-gallon liquid formula-

tion. While EPA registration is expected late next year, it's unlikely that the product will be on the market until early 1988.

EPA has recently approved labels for two new formulations of Mobay's Bayleton® Turf Fungicide. The two new formulations are 1 percent and 0.5 percent granular. Bayleton is registered for a number of turf diseases, including dollar spot and summer patch.

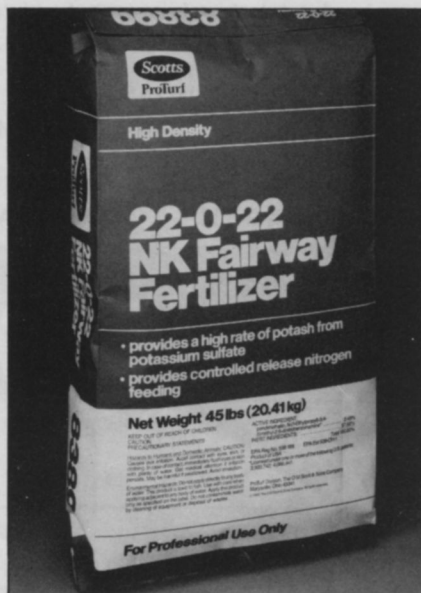
MOYER & SON. In 1987, Moyer & Son will be making dry fertilizers available for the first time. The new line, called Profit-Blend® Dry Fertilizers, will be custom-blended for the green industry.

The company will also offer MicroFlo®, a chelated iron, liquid micronutrient product.

NOR-AM CHEMICAL COMPANY. EPA recently approved new registrations for two existing Nor-Am products. The first, Progress®, has been approved to control *Poa annua* in Kentucky bluegrass, which has been established more than eight weeks, on golf courses and other commercially-maintained areas. Progress has been registered for a number of years for control of annual grasses and broadleaf weeds in established perennial ryegrass and overseeded bermudagrass turf. The new registration applies for all states except California.

Nor-Am's Nitroform® Slow Release Nitrogen will hit the market by fall of 1987, in time for the fall fertilizer season. The company has developed a new, larger particle size which will reduce segregation problems during the blending or application process.

O.M. SCOTT & SONS COMPANY. To help meet the nutrient needs of turfgrasses where phosphorus is not desired, O.M. Scott presents Pro Turf® NK Fairway



From mist to dust . . .

THREE WAYS TO SPRAY

Birchmeier Micronizer SP 71

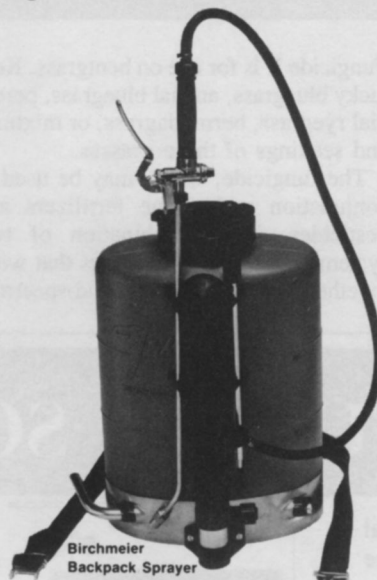
A robust gasoline powered sprayer ideal for large areas of application. The self-pressurizing tank provides constant flow in any position. The throw distance is up to 50 feet horizontally or 40 feet vertically. This machine easily converts to dispense granules or dust.



Birchmeier
Micronizer SP 71

Birchmeier Backpack Sprayer

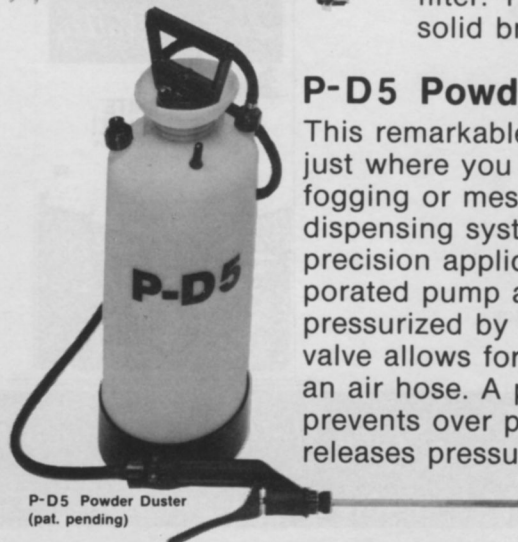
Here's the sprayer renowned world-wide for long service life. This sprayer is well balanced for operator comfort. The pump mechanism is located outside the tank and therefore not in contact with corrosive liquids for any length of time. The tank is hard polyethylene with a large opening with filter. The trigger control is solid brass.



Birchmeier
Backpack Sprayer

P-D5 Powder Duster

This remarkable sprayer puts dust just where you want it — no more fogging or mess. A unique dispensing system allows for precision application. An incorporated pump allows the tank to be pressurized by hand. A tire-type valve allows for pressurizing with an air hose. A pressure relief valve prevents over pressurizing and releases pressure prior to opening.



P-D5 Powder Duster
(pat. pending)

All Trebor polyethylene products have ultra-violet inhibitors for protection from prolonged exposure to sun light.

TREBOR CORPORATION

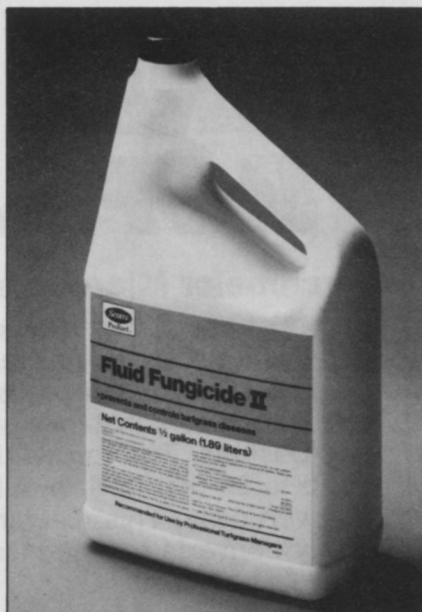
4045-A Jonesboro Road / Forest Park, GA 30050
(Outside Georgia) 1-800-331-1449 404/366-0957

fertilizer. A nitrogen/potassium/sulfur fertilizer, the product was developed for use on all turfgrasses. It provides quick green-up which lasts for two months when applied at the recommended rate along with sustained nitrogen release.

Its potassium content improves drought hardiness, reduces winter kill of bermudagrass, increases disease resistance and improves wear tolerance. In addition, NK Fairway Fertilizer is odorless and does not burn.

Also new from Scott's Pro Turf division, is a small particle fertilizer designed for even application and low rates. ProTurf® High Density (HD) Hi-Maintenance Turf Fertilizer delivers good distribution at rates less than 0.9 pound of nitrogen per 1,000 square feet. The new fertilizer provides a complete analysis of the essential nutrients for healthy, vigorous growth and can be used on all turfgrasses. In addition to being odorless and free-flowing, the fertilizer contains no chloride salts and has no inert carrier.

The newest addition to the ProTurf product line is Fluid Fungicide II, formulated for the prevention and control of pythium blight, pythium damping-off, brown patch, and dollar spot, including the benzimidazole-tolerant strain. Fluid



Fungicide II is for use on bentgrass, Kentucky bluegrass, annual bluegrass, perennial ryegrass, bermudagrass, or mixtures and seedings of these grasses.

The fungicide, which may be used in conjunction with some fertilizers and pesticides, is a combination of two systemically-active fungicides that work together to provide good broad-spectrum

control. It will not clog nozzles, filters or screens.

PBI GORDON CORPORATION. Having recently acquired the marketing rights for two plant growth regulator (PGR) products, PBI Gordon is now offering Embark® 2-S to the lawn care industry. Previously marketed by 3M Company, Embark® suppresses the growth of certain cool- and warm-season grasses for up to eight weeks. In addition, PBI Gordon recently introduced Atrimec® Plant Growth Regulator, an ornamental PGR previously marketed as Atrinal® by Maag Agrochemicals, Inc. Atrimec is a systemic plant growth regulator which was developed specifically to retard the growth of ornamentals and promote lateral branching.

In 1987, PBI Gordon will also offer several additional lawn care products, including Pestroy® 8-E and Pestroy® A4-E. Pestroy is a unique organophosphate tree and shrub insecticide. It has been used in foreign markets, but is first being introduced in the United States by PBI Gordon.

Other new product offerings from PBI include: Bactospeine®, a biological insecticide; Logic®, an insect growth regulator for fire ant control, primarily

The "NATURAL" SOLUTION!

Tell your customers you are using a natural organic based fertilizer and give them the "peace of mind" they want.

- High analysis
- Competitive price
- Never "sets up" in bags
- Natural organic based
- Quick green-up that lasts

The "peace of mind" fertilizer



Milorganite is the base of all the products; it's natural organic nitrogen and iron are proven performers for keeping turf green.

The other primary ingredients include long lasting NITROFORM nitrogen, and low salt sulfate of potash. These products are then screened and sized, this along with the high analysis means easy and uniform application.

DRY SPREADABLE GRANULES:

Crabgrass preventer . . . 20-2-5 + TEAM
 Summer formula 20-3-6 + IRON
 Fall formula 10-5-15 + IRON
 Tree & Shrub Planter 12-4-4 + VITERRA

Spring Valley Turf Products.

1891 Spring Valley RD., • Jackson, WI 53037 • 414-677-2273

PLCAA
 BOOTHS
 358-360

MILORGANITE PROFESSIONAL products are also available from:

Olsen Distributing • Barrington, IL • 312-381-9333

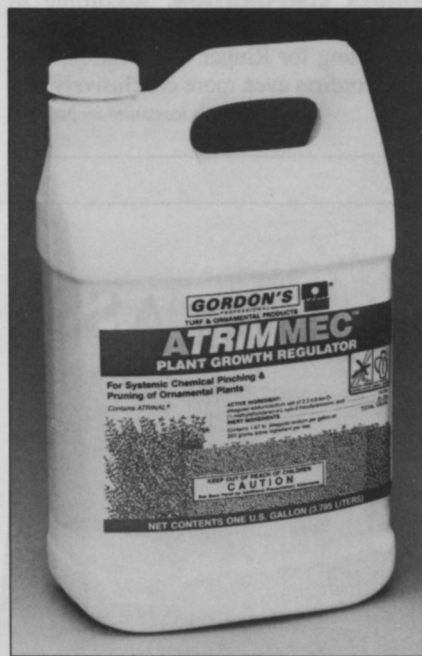
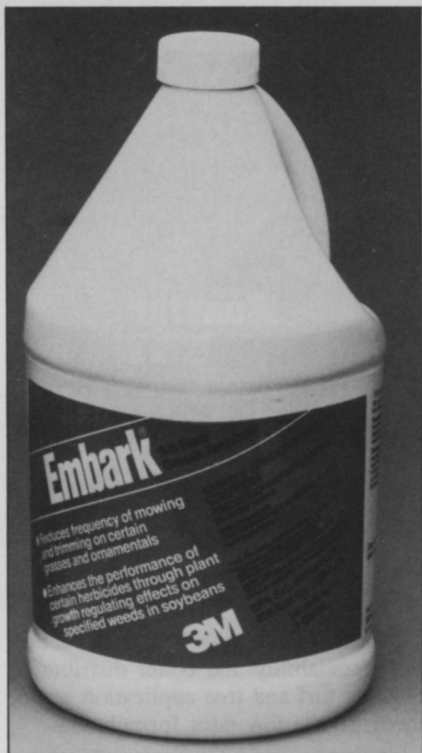
Landscape Supply • Chaska, MN • 612-448-3300

*Team and the diagonal color bar are trademarks of Elanco Products Company

*NITROFORM is a Registered Trademark of Nor-Am Corp.

*MILORGANITE is a Registered Trademark of Milwaukee Metropolitan Sewerage District

Gelscape is a reg. trademark of Viterra Corp.

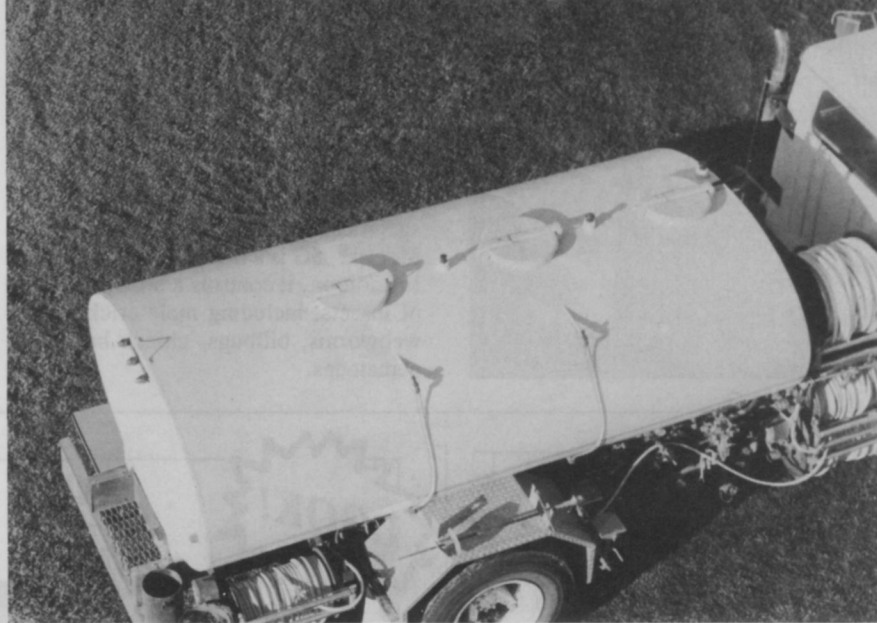


in the south; and Ferromec[®], available in three different formulations — Ferromec[®] AC, an amine compatible; Ferromec[®] M, a liquid iron, manganese complex; and Ferromec[®] MZ, a liquid iron, manganese, zinc complex.

REGAL CHEMICAL COMPANY. Four new products will be added to Regal Chemical Company's line-up in 1987. The first is MultiGreen[®], a true chelated iron nutrient supplement with minor elements. It will be available in 55-gallon drums.

Regal Crown is a growth stimulator hormone which enhances the development of healthy, hardy plants. The root developer can be sprayed over the top of

WE'VE GOT THE HEALTHIEST SELECTION OF SPRAY TRUCKS IN THE WORLD.



Denver Leasing and Professional Turf are parked on the same side of the fence. We've just merged to bring you the widest selection of lawn, tree, and pest control spray equipment in the world.

From small sprayers for your pick-up to 1300 hundred gallon stainless steel tank trucks, we've got everybody covered.

And since you know your turf, our engineers will design and build all of your equipment to your exact specifications.

We'll deliver your truck and make sure

it stays on the job. We'll train your employees to get the most out of your equipment. If there's a problem, we'll ship you the new part in less than 24 hours. We know your trucks belong in the field, not in the shop.

You can own or lease. We'll show you the advantages of both.

Give us a call at 1-800-237-7785 for our spray truck catalog.

Our trucks have helped make more lawns green, more trees grow, and more pests vanish than any other spray truck company.



In Colorado Call 422-7608

DENVER LEASING & MANUFACTURING

6803 Joyce Street, Golden, Colorado 80403

PROFESSIONAL TURF MANUFACTURING

1801 Industrial Park Road, Normal, Illinois 61761

the plant or used as a soil drench.

Regal's third new product is Dy-On®. This spray dye indicator is added to a lawn care operator's tank and used as a guide for spraying.

Finally, Regal will offer Regal Ronstar® Plus. The 10-10-10 base fertilizer contains minor nutrients plus Ronstar® for complete weed control.

RGB LABORATORIES, INC. RGB Labs has come up with a revised chelated-iron product. While the company introduced Agri-Plex Fe®, a 5 percent phosphorous,



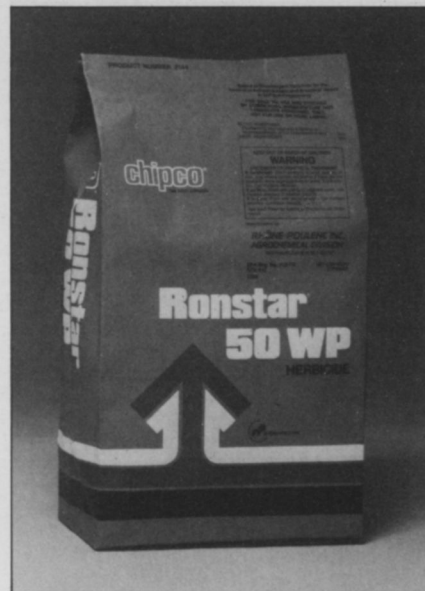
8 percent potash, and 8 percent chelated iron compound, last year, it's currently introducing Lawn-Plex®, an 8 percent chelated iron product with 8 percent sulfur.

Fully compatible with all tank-mix chemicals, Lawn-Plex® will buffer the tank mix material to around pH 7, even if the water used is alkaline. It has no odor, does not stain, and generates a green-up response within 24 to 28 hours.

RHONE-POULENC CHEMICAL COMPANY.

Chipco Aliette® a *Pytophthora*, *Pythium* fungicide, was recently introduced by Rhone-Poulenc. The long-residual fungicide provides 20 to 28 days of control on turf and is the only product available which offers *Pytophthora* control in ornamentals through foliar applications.

While Aliette® is the company's most recently-introduced lawn care product, Rhone-Poulenc is anticipating EPA registration of Chipco Mocap® 5G for the 1987 lawn care season. Designed specifically for the turf market, Chipco Mocap® 5G is a fast-acting grub control. In addition, it controls a broad spectrum of insects, including mole crickets, sod webworms, billbugs, chinch bugs, and nematodes.



Mocap's large granule size offers better spreadability and better distribution through turf and tree application equipment. It is a low odor formulation.

RINGER CORPORATION. According to Dave Riffey, Vice President of Sales and Marketing for Ringer Corporation, new tests confirm even more conclusively that

(continued on page 62)

FINALLY
THE PROVEN,
PROFITABLE
AND PAINLESS
WAY TO
COMPUTERIZE.

SEE MORE GREEN WITH
OUR AM+ LAWN CARE
MANAGEMENT SYSTEM.

QUINTESSENCE
COMPUTING

3001 Lake Austin Blvd.
Austin, Texas 78703
(512) 477-9038

LOOK!

MOLDED FIBERGLASS

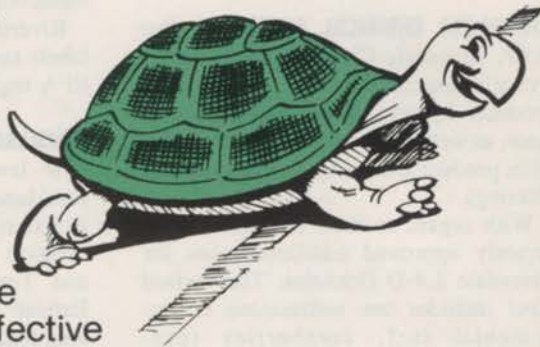
All One Piece
Compartmentalized
Lease Terms

PERMA-GREEN SUPREME
1-800-346-2001 219-769-1630
"See you in Baltimore."



Over the long run, the smart money is on Milorganite

The Natural Organic Fertilizer



The synthetically produced fertilizers are OK for awhile . . . for a quick spurt, but turfgrass professionals are discovering the hard way that the synthetics are not as effective over the long run as naturally organic Milorganite.

Liquid and dry synthetic fertilizers give a quick greening which also fades quickly, promote shallow roots, and are often detrimental to the soil's biological activity.

Milorganite has over 90 percent water insoluble nitrogen which will not burn and feeds turf for a long, long time. Milorganite requires no watering in and increases beneficial microorganism activity in the soil. In addition, it has been perceived to be antagonistic towards certain disease organisms.

Naturally organic Milorganite provides all the nutrients, including iron and other micronutrients, needed for healthy strong turf . . . just the way you want to keep it always, and that's the pay-off in the long run.

Start your turf today on its way to a longer prime of life with Milorganite.

★ THE MILORGANITE EXTRAS ★

SUPPLIES HUMUS: In addition to being the ideal fertilizer, Milorganite also adds large quantities of organic matter (humus) to the soil. Naturally organic Milorganite actually improves the plant growing capabilities of all soils and has been perceived to reduce disease incidence and the build-up of harmful thatch.

NO WATERING-IN REQUIRED: Naturally organic Milorganite does not require watering in, so lawns require less water in the heat of summer. Naturally organic Milorganite improves water holding capabilities of most soils for improved drought resistance.

NATURALLY RICH IN IRON AND CANNOT BURN.



1926 to 1986
Beautifying America naturally for sixty years

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
735 N. WATER ST., MILWAUKEE, WI 53202



CHEMICAL PREVIEW '87

(continued from page 60)

Lawn Restore® prevents and controls patch diseases. The product is a slow-release fertilizer that reduces thatch and solves other turf disease problems.

Lawn Restore® contains no chemicals. It is a natural product, consisting of actual soil organisms along with a mix of high protein organic material, such as bone meal and feather meal.

RIVERDALE CHEMICAL COMPANY. For 1987, Riverdale Chemical Company is trying to increase the appeal of existing products by adding additional uses to them, as well as trying to increase the size of its product arsenal by introducing new offerings.

With regard to their first goal, EPA recently approved additional uses for Riverdale 2,4-D Granules. The revised label includes use instructions on ornamental turf, cranberries (pre-emergence), lakes and ponds, and corn (pre-emergence). In addition, the company has received permission to add southern grass uses to its Triamine® line of weed and feed products. Weedestroy Triamine, tested at Texas A & M University, will now be available for use on St. Augustine

grass, and, in certain instances, centipedegrass.

As for new product offerings, Riverdale will be marketing the following products in 1987, among other yet to be announced: Casoron 4G Weed and Grass Killer, a 4 percent granular formulation of dichlobenil; Granular Vegetation Killer, containing 2 percent bromacil and 2 percent diuron; and KILLSALL Liquid, a non-selective weed and grass killer containing sodium chlorate and sodium metaborate.

Riverdale has upgraded many of its labels and plans to announce more new EPA registrations in the near future.

ROCKLAND CHEMICAL COMPANY. Three new lawn care products are among Rockland's 1987 product mix. The first is Extend®, a fertilizer/herbicide combination containing IBDU, Milorganite, and Team® preemergence herbicide. Extend® offers slow-release nitrogen for long feeding in addition to crabgrass control. The product will also be available as a straight fertilizer without Team®.

Rockland will also market its own label of Triamine® herbicide, a blend of 2,4-D, MCPT, and 2,4-DP — all in the amine form to eliminate volatility.

The company's third new product is

Rockland White Grub Control. It is a granular dylox on a corn cob base.

SOUTHERN MILL CREEK PRODUCTS. In 1987, Southern Mill Creek Products (SMCP) plans to offer Dursban 2.5 Granules under a SMCP label for insect control on home lawns, ornamentals, and recreational turf areas. Another new SMCP label, Lindane E-20, is also expected. It will be for use on lawns, fields, and ornamentals to control wood-infesting beetles.

While Southern Mill Creek has yet to receive EPA registrations for the products, the company expects to have approval in January.

SPRING VALLEY TURF PRODUCTS. Spring Valley's 34-2-7 Plus Team® Sprayable, a complete sprayable fertilizer with crabgrass control, is the company's premier product for 1987. It will give the applicator 1 pound of nitrogen and 2 pounds of Team per 1,000 square feet.

The company will also introduce Milorganite® Professional Fertilizer Plus Team® for granular application. The product is an organic-based fertilizer with urea and sulfated potash additives plus Team crabgrass control.

(continued on page 64)

NEW DRY-TO-LIQUID PRODUCTS

Eliminates Purchasing Liquid Concentrates...
Simply Pour Bag Into Your Spray Tank, Add
Water and Spray.

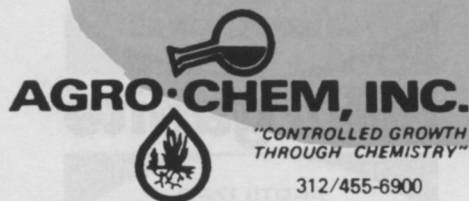
THE NATURAL/ORGANIC COMPLETE
LINE OF PRODUCTS DESIGNED TO:

1. SOLVE THESE PROBLEMS WITH
ENZYMATIC CONTROLS:

- Tight Soil • High Salts • Weak Lawns
- Cures and prevents Fusarium and other diseases
- Heals thin weak lawns without seeding
- Keeps lawns beautiful and healthy

2. Provides quick visual results with higher
profits for you!

3. You'll have satisfied customers that will
last and stay with your company!



312/455-6900

11150 W. Addison — Franklin Park, IL 60131

VISIT US AT

Baltimore
PLCAA/86
NOVEMBER 17-20, 1986



More people
have survived
cancer than
now live in
the City of
Los Angeles.

We are winning.

Please support the
AMERICAN CANCER SOCIETY

One of the strengths of Team™ is its weeks of control. One application puts an end to crabgrass and goosegrass for up to 20 weeks.

The control's not just longer, it's more effective, too. Research by leading universities shows that Team provides outstanding annual grass control all season long while being gentle to all turf species.

That's because of the way Team works. It stays put on cool season turf. Won't leach out, even in heavy rainfall.

And once activated, forms a vapor zone that keeps weeds from emerging for up to 20 weeks.

That's Team's most impressive strength. Its weeks of weed control.

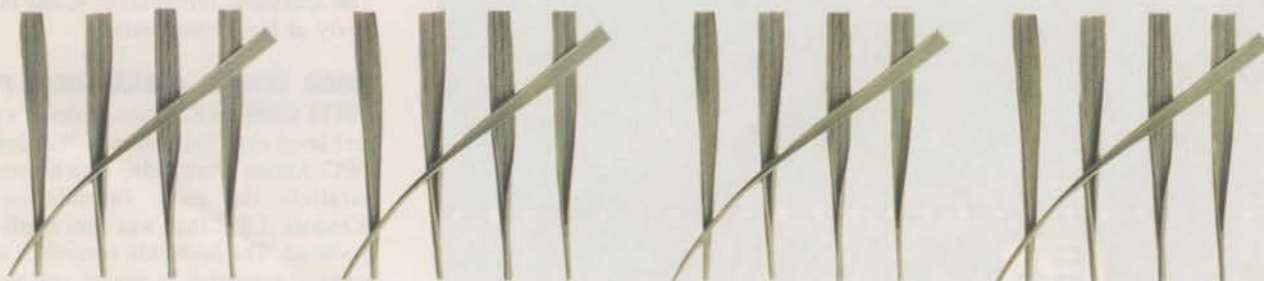
See your Elanco distributor. Or call toll-free: 1-800-ELANPRO. In Indiana, call collect: 317-261-6102.

Elanco Products Company
A Division of Eli Lilly and Company
Lilly Corporate Center
Dept. E-455, Indianapolis, IN 46285, U.S.A.
Team™ — (bifenox + trifluralin, Elanco Products Company)
Refer to the Team label for complete use directions.



**There's only
one thing
more impressive
than Team's
strengths.**

Its weeks.



A whole line of Spring Valley fertilizer/Team combination products will be hitting the lawn care marketplace in the coming year. The products will vary in their nitrogen content, containing anywhere from 1 pound to ½ pound, with the rate of Team remaining at 2 pounds per 1,000 square feet, so lawn care operators can pick the combination which best meets their needs.

STAUFFER CHEMICAL COMPANY. Short-Stop®, the company's grass growth regulator originally labeled for use in states east of the Mississippi River, is now

labeled throughout the United States for use on tall fescue in utility turf areas, such as on highway and power line rights-of-way, airports, industrial parks, schools, cemeteries, golf course roughs, public parks, and dam spillways. It is especially beneficial on steep grades along busy highways and other difficult-to-mow areas where safety is a concern.

Short-Stop® should be applied at the rate of 60 to 80 pounds per acre within four to six weeks after the first break of dormancy. It can be used around evergreens, deciduous trees, shrubs, and ground covers without injury. Mowing

either before or after application does not affect the product's performance, and it can be applied before or during rainfall without loss of effectiveness.

TYLER ENTERPRISE, INC. A recent addition to Tyler's line of turf products is soluble fine Sulphate of Potash in bags or bulk. The product is of consistently high quality with 0.14 percent insolubles. The



company also continues to offer a diverse selection of custom-formulated fertilizers and chemical control products to turf professionals, including its line of Greensward® Custom Formulated Fertilizers.

UAP SPECIAL PRODUCTS. Three new products under the Clean Crop® label will be marketed in 1987 by UAP Special Products. The first is Pendimethalin 60 WDG, a preemergence, water-dispersable granular herbicide. The long-residual herbicide is broad spectrum, controlling grassy weeds and some dicot weeds. Its water-dispersable characteristics provide easy handling.

PCNB 10% Granular Fungicide is another new offering from UAP. While effectively controlling soil-borne diseases, the fungicide is for use on lawns, garden crops, ornamental plantings, and other turf areas.

The third product UAP will market in 1987 is Iron-Soluble 18% Plus, a fast-acting, long-lasting nutrient which contains 18 percent iron, 1 percent chelated manganese, and 1 percent chelated zinc. The sprayable formulation works effectively at low dosage rates.

UNION CARBIDE AGRICULTURAL PRODUCTS COMPANY. Union Carbide's current lawn care promotion is Weedone® DPC Amine Herbicide, which roughly parallels the ester formulation of Weedone DPC that was previously introduced. The herbicide controls a wide range of perennial, bi-annual, and annual summer and winter broadleaf weeds.

Weedone DPC Amine is a combination

(continued on page 66)

NEW

from
Precision Tank & Equipment Co.
for the
Lawn Care Industry



Great Northern equipment, a leader in agricultural fertilizer application equipment for over 30 years — now brings the lawn care professional the NEW GN600.

Just look at these impressive GN600 features:

- 600 gal. stainless steel tank for 200,000 sq. ft. coverage.
- One ton Ford truck with 6.9 liter IH diesel engine.
- PTO driven with 2C95 Myers Pump.
- Stainless steel plumbing, sparge line and full sump.
- American Nordic reel with 500 ft. of ½" hose.
- Industry proven Chem-lawn Spray Gun with extra nozzles.

Other models - the GN1000, GN1200 and GN1600 offer the same top-of-the-line components with larger chassis and payloads. All the Great Northern systems are available for mounting on customer-owned chassis.

NEW — a Portable Slide-in Skid Unit.

<p>HOME OFFICE P.O. BOX D VIRGINIA, IL 62691 217-452-7228</p>	 <p>PRECISION TANK & EQUIPMENT CO.</p>	<p>ATHENS LOCATION R.R. 2 - BOX 42 ATHENS, IL 62613 217-636-7023</p>
---	--	--

Circle 33 on reader service card

We've Got Your Number!

And the **MOYER MAN**
will be calling soon!



Yes, the Moyer Man has your number in more ways than one. He'll be calling you to discuss Moyer's "Profit Blends," our complete range of liquid or dry fertilizers that may be just the right answer to help you maximize your company's profits!

Moyer can provide you with custom liquid blends with guaranteed analysis for your specific turf and tree needs. Our family includes TurFlo®, ArborFlo®, RootFlo®, Fol-R-Flo™, MicroFlo™, Formolene® and Fluf®.

The Moyer Man will make the numbers add up to more sales and more profits through our custom fertilization programs designed especially for you.

Moyer Announces NEW Series of DRY PROFIT BLENDS!

When the Moyer Man calls, ask him about our new dry blend products to add even more profits to your turf and tree application business. Now Moyer offers you the most complete range of liquid and dry fertilizer blends in the industry.

Wait for the Moyer Man to call . . . or send in this coupon today for more information on "Moyer's Profit Blends"! We've Got Your Number!

Moyer
& SON INC.

113 E. Reliance Rd. • Souderton, PA 18964
Call Collect (215) 723-6001

Circle 13 on reader service card



Formolene is a registered trademark of Hawkeye Chemical Co. - Fluf is a registered trademark of W.A. Cleary Chemical Corp. - TurFlo, RootFlo, ArborFlo, Fol-R-Flo, and MicroFlo are trademarks of Moyer & Son, Inc.

© Moyer & Son, Inc. 1986

I can't wait for the Moyer Man to call. Send me a complete packet of information on Moyer's Profit Blends today!

Name _____
Address _____
City _____ Phone _____ State _____ Zip _____

I'm interested in more information on:

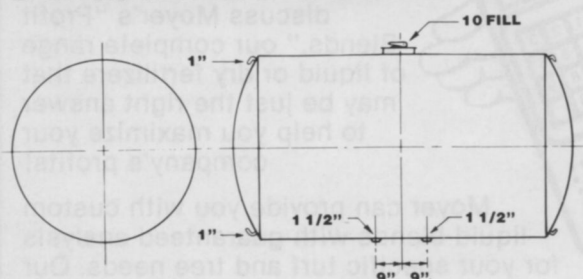
- TurFlo®
- ArborFlo®
- RootFlo®
- Fol-R-Flo®
- MicroFlo®
- Formolene®
- Fluf®
- Moyer's NEW Dry Blends



PRECISION TANK & EQUIPMENT CO.

DRAWER D. VIRGINIA, IL 62691/Ph: 217-452-7228

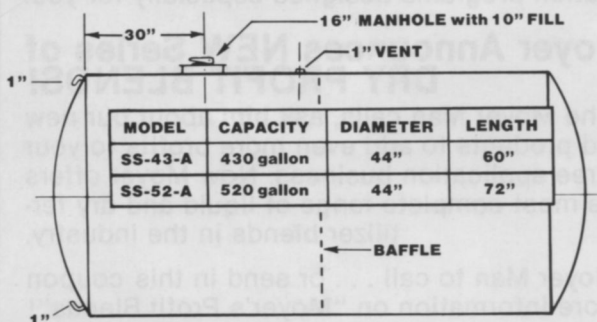
STAINLESS STEEL



SPECIFICATIONS:

430 to 520 GALLON CAPACITY

Constructed of type 304 stainless steel — equipped with standard openings as shown



SPECIFICATIONS:

830 to 1600 GALLON CAPACITY

NON-PRESSURE MILD STEEL TANKS

MODEL	CAPACITY	DIAMETER	LENGTH	GAUGE
NT-55	550 gallon	48"	72"	12
NT-75	750 gallon	56"	72"	10
NT-100	1,000 gallon	48"	128"	10
NT-120	1,200 gallon	56"	114"	10
NT-150	1,500 gallon	56"	144"	10
NT-200	2,000 gallon	64"	144"	3/16"

NON-PRESSURE MILD STEEL TANKS

SINGLE - DOUBLE & TRIPLE COMPARTMENT TANKS ARE AVAILABLE. SPECIAL DESIGN TANKS WILL BE QUOTED, SO PLEASE CALL!

Circle 32 on reader service card

CHEMICAL PREVIEW '87

(continued from page 64)

of 2,4-D and dichlorprop. It does not contain dicamba. As an amine, it's non-volatile and water soluble. It also has very little odor.

This product can now be used for post-emergent control of tough broadleaf weeds in turf at a lower rate of 3 to 4 pints per acre. The previous 4 to 6 pint per acre rate may still be used for control of certain resistant weeds.

This label change, recently accepted by the Environmental Protection Agency, allows turf management professionals more flexibility in rates when using Weedone DPC Amine herbicide to control annual and perennial broadleaf weeds in lawns and other ornamental turf areas such as golf courses or athletic fields.

Other product news from Union Carbide includes EPA approval of amendments to its label of Sevin® Brand SL Carbaryl Turf Insecticide. Lower dosage rates for the insecticide have been registered, allowing lawn care applicators to use varied rates according to specific pest infestations.

Prior to the label enhancements, Sevin brand SL carbaryl required treatments of 8 pounds or 8 quarts of active ingredient per acre. The recently-approved EPA label allows a lower application rate of 2 to 4 quarts per acre to be used for control over 20 insects, including armyworm, cutworm, and green June beetle grubs.

Chinch bugs and sod webworms, which are considered "moderately difficult to control," may be treated at a rate of 6 to 8 quarts per acre. Difficult-to-control pests, such as the white grub complex, European Crane Fly (for which the insecticide is newly labeled to control), and bluegrass billbug, can be controlled as the 8 quart per acre rate.

Sevin brand SL carbaryl insecticide controls over 100 insect pests that attack turf, trees, shrubs, flowers, and garden vegetables. The water-based formulation tank mixes most fungicides, miticides, and other insecticides. — Vivian F. Rose ■

The author is Assistant Editor of ALA magazine.

STATEMENT OF OWNERSHIP

Statement required by the Act of October 23, 1962. Section 4369, Title 39, United States Code, showing the ownership of *American Lawn Applicator*, published monthly at 4012 Bridge Avenue, Cleveland, Ohio 44113.

The name of the publisher is: Richard J.W. Foster, 4012 Bridge Avenue, Cleveland, Ohio 44113. The name of the editor is: Tim Weidner, 4012 Bridge Avenue, Cleveland, Ohio 44113.

The owners are: G.I.E., Incorporated Publishers, 4012 Bridge Avenue, Cleveland, Ohio 44113; Richard J.W. Foster, 390-46 Honeysuckle, Aurora, Ohio 44202; Nancy J. Foster, 390-46 Honeysuckle, Aurora, Ohio 44202; Maureen Mertz, 42480 Park Ridge Road, Novi, Michigan 48050.

The known bondholders, mortgages, and other security holders owning or holding one (1) percent or more of total amounts of bonds, mortgages or other securities are: Arthur Brown, 31505 Grand River Avenue, Suite 1, Farmington, Michigan 48024.

Average number of copies of each issue during preceding 12 months, and of single issue nearest to filing date, respectively, are as follows: Total number of copies printed (net press run) 13,201/15700; paid circulation sales through dealers and carriers, street vendors, and counter sales 0; mail subscriptions 2,942/3,438; free distribution by mail, carrier, or other means (samples, complimentary, or other free copies) 8,897/11,719; total distribution 11,839/15,157; copies not distributed (office use, left over, unaccounted, spoiled after printing) 1,362/543; return from news agents 0; and total 13,201/15,700.

I certify that the statements made by me above are correct and complete.

Richard J.W. Foster, Publisher

PRODUCTS

While turf regulators have won increasing acceptance throughout many parts of the country, they have not been widely available in the Pacific Northwest. But research conducted with Limit® turf regulator from **Monsanto** shows promising results for reducing grass growth in the particular growing and climatic conditions of Washington and Oregon.

Limit has been used successfully to curb cool-season grass growth in the Northeast and Midwest for close to two years. Now, the Wilbur-Ellis Company has begun distributing Limit on a test market basis in Washington and Oregon. Several trial plots designed to assess the turf regulator's performance on the region's prevalent turfgrass species and unique growing conditions, have been put out with cooperating golf courses, municipalities, and other customers, according to Mike Vandecoevering, a Wilbur-Ellis representative in Oregon.

"Turf regulators have been slow to enter this region," Vandecoevering says. "Our weather patterns and growing conditions are distinctly different than other northern states. We also have more perennial ryegrass and bentgrass here. So it's especially important to test and evaluate turf regulators to determine their performance in our situation."

Limit has shown the best results on Kentucky bluegrass and tall fescue, but further research is necessary on perennial ryegrass and other species. On Kentucky bluegrass, the product did not stop growth, but it did slow it down significantly. There was no visible discoloration and it did grow at a slower rate. Another benefit is the high safety margin of Limit. Since it is taken up by the roots, it is virtually inactive in plant foliage, so the chemical will not burn or injure leaf tissue — even when overlapped.

After initial test marketing this year, Limit is expected to be widely available in Washington and Oregon next season. **Circle 118 on reader card**

An expanded selection of printed forms and brochures designed for use by lawn service companies is now available from **LESCO, Inc.** The 1987 assortment includes three new self-mailers designed for mass mailing or door-to-door distribution to potential customers, an updated series of application followup cards suitable for use by a liquid or dry application service, a card designed to promote grub control



business, and a companion piece to inform the homeowner that a grub control application has been made. Other new pieces include mowing and watering information sheets and a southern version of the popular Lawn Analysis Form.

In addition to the numerous new items, the LESCO package includes more than 20 other popular promotional forms and brochures offered for the first time this past spring and fall. The assortment includes self-mailers, application followup cards, extra-service promotion pieces, record-keeping forms, as well as doorhanger poly bags and envelopes. Printed on top-quality paper stock, most LESCO brochures are printed in full color and can be ordered with or without personalized imprinting.

Circle 119 on reader card

The ProTank Electric Model TS100E Skid Spray System from **C&S Turf Care Equipment** provides the convenience of electric operation. The unit fits in any pickup or van with 1/2-ton payload capacity. Standard features include a 100-gallon Raven PCO tank with 10-inch fill well, 1/2-horsepower electric motor, Hypro Ni-resistant roller pump, rugged steel frame construction, jet agitation, and Hannay hose reel.

Also from C&S, the unique electric Twin Tank Model TT1050E features a self-contained dual tank sprayer designed for quick easy installation in most standard turf vehicles. Standard features include 50-gallon and 100-gallon Raven

PCO tanks, 12-volt electric motor, Hypro Ni-resistant roller pump, and welded steel frame construction.

Circle 116 on reader card

Snapper Power Equipment introduces Model 240SS to its line of commercial trimmers. Model 240SS features a powerful 24.1cc, 2-cycle engine with a die-cast steel connecting rod, chrome-plated cylinder, diaphragm carburetor, and a 20-ounce fuel tank. The drive shaft is solid steel with five rubber-mounted bushings. Other standard equipment includes the exclusive swivel mounted "J" handle, a quick-release single strap, and



an antivibration handle mount.

Snapper's commercial duty backpack blower offers many features to help you do more work, and do it faster. Model 415 is equipped with a powerful 40.6cc, 2-cycle engine. The multi-speed throttle provides a choice of air speeds. The heavily-padded, contoured frame and vibration-reducing shock absorbers increase operator comfort. The swivel elbow allows free movement from side to side and a twist lock flexible tube gives you control of air flow. Other features include an 80-ounce fuel tank and optional gutter cleaning kit.

Circle 121 on reader card

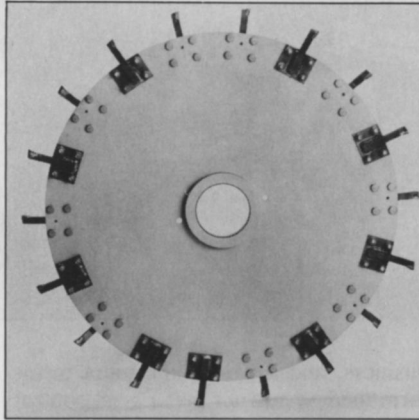
Na-Churs Plant Food Company, the nation's leading manufacturer of true solution fertilizers, has put together its 40 years in the liquid fertilizer business to develop the Balance® line of fertilizers for today's turf and landscape industry. Balance fertilizer is a true solution, it will not settle or separate out in storage. Balance fertilizer is manufactured with a near-neutral pH and low salt index, which reduces the risk of burn to turf.

Balance liquid fertilizer is available in three standard formulations: 16-2-2, 15-3-3, and 15-5-5. Custom blending of

your individual formulation is also available to meet your needs. This includes the addition of secondary nutrients such as iron, copper, magnesium, and zinc. All formulations are available in 5-gallon, 55-gallon, and truckload lots of 2 to 5,000 gallons. Customer pickup is also available in any quantity at our manufacturing facilities in Red Oak, Iowa and Marion, Ohio.

Circle 120 on reader card

Super Blade Plus, new from Kwik Trench, is a heavy-duty all-purpose digging blade with replaceable hardened steel



carbide-tipped teeth and a long service life guarantee to dig through hard pan, black gumbo, decomposed granite, dry packed clay, rocky areas, roots, and even frosted ground. Models in three different sizes dig 2- or 3-inch wide trenches and are adjustable to 8-, 10-, or 12-inch depths at 25 to 30 feet per minute. Installs easily with no modification on all Kwik Trench Diggers.

Circle 122 on reader card

Lawn and garden chemicals and pesticides are easier to dispense and handle, thanks to new plastic packaging being used by the Rockland Chemical Company of West Caldwell, New Jersey. The company is replacing its glass bottles and metal cans with lightweight plastic bottles made from a blend of polyethylene and "Selar" RB barrier resin from Du Pont Company. This structure can safely contain chemicals previously deemed unsuitable for plastic containers.

Known as the "Measure Up" bottle, the new container features a special calibrated dispensing chamber located beside the spout, in which the chemical can be isolated and measured before pour-

(continued on page 72)

LIQUI



LAND

CORPORATION
(616) 684-8400



123 MARMONT

P.O. BOX 547

NILES, MI 49120-0547

Circle 57 on reader service card

LIQUID FERTILIZER

COMPLETE BLENDS FOR HIGH & LOW VOLUME SPRAYING

STOP BY
OUR EXHIBIT —
PLCAA/BALTIMORE



NOW YOU CAN MAKE YOUR BUSINESS GROW— BY LEASING

Expand your business by leasing additional equipment. A low initial investment allows you to earn profits from the start without tying up valuable cash. Leasing makes it easy to acquire new equipment and make more than just your business grow!

FOR DETAILS CONTACT:

**Mike Bush
Bush and Cook
Leasing, Inc.**

1600 W Main St.
Wilmington, OH 45177

Toll Free 800-342-4784
In Ohio 513-382-5502

Circle 58 on reader service card

Don't Miss It!

**December 8-11, 1986
The Ohio Center
Columbus, Ohio**

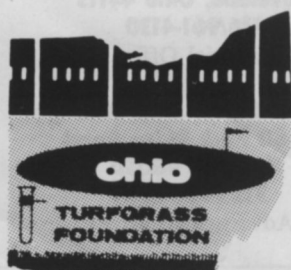
Make plans now to attend the **1986 Ohio Turfgrass Foundation Conference and Show**. Featuring more than 300 booths, the show is the industry's biggest and best regional event.

The conference includes in-depth lectures and workshops addressing a variety of subjects for those involved in golf course management, the lawn care industry, grounds maintenance or any other aspect of professional turf or ornamental management. Most technical sessions qualify for pesticide recertification credit and the Certified Pesticide Applicator's Exam will be given in conjunction with the conference. A one-day workshop on managerial productivity for GCSAA certification is scheduled for Monday, December 8.

Anyone involved in turfgrass or ornamental management is invited to attend the Ohio Turfgrass Foundation Conference and Show. For complete information and a conference program, contact:

**Dr. John Street
c/o Ohio Turfgrass Foundation
2021 Coffey Road
Columbus, OH 43210
(614) 422-2047**

OHIO



Ohio Turfgrass Foundation

PRODUCTS

(continued from page 68)

ing. "This measuring feature is not possible in metal or glass," says Jack Wittpenn, President of Rockland Chemical. "It adds a good deal of convenience — and safety — to the use of our products."

The bottles also resist corrosion and breakage. "This is a definite advantage over metal and glass," said Wittpenn, "especially given the special handling procedures our products require. Our 'Measure Up' containers won't shatter or corrode, so they're safer to keep around."

Among the products packaged by Rockland in its "Measure Up" containers in half-pint, pint, and quart sizes are its "Liquid Plant Food 12-6-6," "Dursban Ant and Insect Spray," "Three-Way Lawn Weed Killer," "Weed and Grass Killer," and "Premium Malathion."

Circle 160 on reader card

Exmark Manufacturing Company, Inc.'s 21-inch self-propelled mower offers durability and maneuverability. Computer engineered, the 21-inch mower combines a light, compact, rear-discharge design with a full 21-inch cutting width.

Powered by a 4 horsepower Briggs and Stratton engine, this mower provides optimum maneuverability in all types of terrain. The mower features differential action for easy turning and control on slopes



and hillsides. And these mowers have no reverse drag, so backing is easy.

The mower's close trimming edge and adjustable cutting height provide an expertly-manicured look every time. The optional rear-bagging catcher allows ample leg room for walking comfort. Finger tip controls and protective front deflectors make the mower safe and easy to operate. Exmark's 21-inch self-propelled mower is built tough for low-maintenance operation. The simplicity of the Exmark design allows minor repairs to be performed in the field by the operator, therefore reducing downtime and cutting maintenance costs.

Circle 159 on reader card

The TippyDump™ trailer from American Metal Fabrication features easy unloading, large volume and load capacity, and much less initial and yearly expense than a dump truck. Standard equipment on the trailer include torsional axles for smoother ride, less maintenance, and better handling. The dump box is stitch-welded and continuously caulked for smooth appearance. The box and trailer frame are acid etched, primed and painted with durable acrylic enamel,

CONTRIBUTING TECHNICAL AUTHORS

T. Abernethy, Ohio State University
James Beard, Texas A&M University
Prasanta C. Bhowmik, University of Mass.
Don Biasingame, Mississippi State University
Jacqueline Boucher, Ohio State University
Bruce Branham, Michigan State University
Cynthia L. Brown, Tru-Green Corporation
Edward A. Brown, University of Georgia
Stephen Brown, Village Green, Inc.
Nick E. Christians, Iowa State University
Patricia P. Cobb, Auburn University
H.L. Cromroy, University of Florida
Karl Danneberger, Michigan State University
Peter H. Dernoeden, University of Maryland
Glenn Dudderar, Michigan State University
Gary A. Dunn, Michigan State University
Thomas W. Fermanian, University of Illinois
Melissa Craven Fowler, Cornell University
Ray Freeborg, Purdue University
T.E. Freeman, University of Florida
Stephen G. Fushtey, Agriculture Canada
Robert Green, Oklahoma State University
Jean E. Haley, University of Illinois
John R. Hall, Virginia Polytechnic Inst.
Marc C. Hirrel, University of Illinois
Clinton F. Hodges, Iowa State University
Richard J. Hull, University of Rhode Island
Norman W. Hummel, Jr., Cornell University
Noel Jackson, University of Rhode Island
John A. Jagschitz, University of Rhode Island
B.J. Johnson, University of Georgia
Keith Karnok, University of Georgia
John E. Kaufmann, Monsanto Ag Company
Keith Kennedy, ChemLawn Corporation
James E. King, Purdue University
E.L. Knake, University of Illinois
K.N. Kombias, Louisiana State University
Lauren S. Lanphear, Forest City Tree Protection

Phillip Larsen, Ohio State University
Leon T. Lucas, North Carolina State University
Eugene W. Mayer, O.M. Scott and Sons
M.T. McElroy, Michigan State University
M.D. McGlamory, University of Illinois
Michael C. McKee, New England Green, Inc.
Landon C. Miller, Clemson University
William Mitchell, University of Delaware
James Nau, Ball Seed Company
Harry D. Niemczyk, Ohio State University
A.D. Oliver, Louisiana State University
Robert E. Partyka, Chemscape
Sandra Perry, Tru Green Corporation
A. Martin Petrovic, Cornell University
Daniel Potter, University of Kentucky
C.C. Powell, Ohio State University
Richard C. Rathjens, Davey Tree Expert Co.
Ellot C. Roberts, The Lawn Institute
W.H. Robinson, Virginia Polytech Inst.
Patricia L. Sanders, Penn State University
Wayne Schappelle, Deere and Company
E. (Dick) Schmidt, Virginia Polytech Inst.
Mark Sears, University of Guelph
D.E. Short, University of Florida
John F. Shoulders, Virginia Polytech Inst.
Malcolm Shurtliff, University of Illinois
Richard Smiley, Cornell University
Elton M. Smith, Ohio State University
Jana S. Stewart, University of Wisconsin
John R. Street, Ohio State University
Herbert T. Streu, Rutgers University
J.H. Strong, Strong Enterprises
Mike Tolley, Ohio State University
J.R. Vaccaro, Dow Chemical Company
Joseph M. Vargas, Michigan State University
T.L. Watschke, Penn State University
Gayle L. Wolf, University of Wisconsin

Richard J.W. Foster
Publisher

Maureen Mertz
Associate Publisher

Tim Weidner
Managing Editor

Vivian Rose
Julie November
Assistant Editors

Charlotte Goerss
Art Director

Fran Franzak
Reader Service

Rosalie Slusher
Circulation Manager

ALA
4012 Bridge Avenue
Cleveland, Ohio 44113
216/961-4130
Editorial Office

Maureen Mertz—Sales Manager
42480 Park Ridge Road
Novi, MI 48050
313/348-9636
Advertising Office

in standard color brown, with optional colors available.

The fenders with tread-plates are extended both front and back to protect lights from damage, falling debris, etc. There are rope hooks on all sides of the



dump box for tarping. Electric brakes are standard on all wheels, hydraulic brakes are optional. A manual winch is designed to assist and ease unloading.

Circle 112 on reader card

Banvel® herbicide products from Sandoz Crop Protection can be the cornerstone of your highway and roadside vegetation management programs. Banvel sharply reduces the cost of controlling vegetation when measured against mechanical mow-



ing or trimming. The product can root out weeds than can break up asphalt surfaces. Banvel gives complete kill so weeds don't quickly regrow.

It controls tall brush and weeds to improve motorist visibility and driver safety at intersections, railroad crossings, and other locations. Banvel kills noxious perennial broadleaves leaf-tip to root-tip. It will leave native grasses where desired for erosion control. There are extensive tank-mix possibilities and the product is environmentally sound when used as directed.

Circle 113 on reader card

International Seeds, Inc. has been granted trademark registration for three of its grass seed mixtures according to Product Manager Harry Stalford. They are Showboat® overseeding mixture, Companion® grass seed cover crop for orchards, and Celebrity® overseeding mixture.

Showboat is an economy mixture of Derby turf-type perennial ryegrass and Oregon annual ryegrass. Celebrity is a premium blend of Derby, Regal, and Gator, three of the finest turf-type ryegrasses available in the marketplace today, according to the producer. Generally, the ryegrasses in Showboat and Celebrity will germinate in a matter of 7 to 10 days or even less under ideal conditions. Companion is a mixture of Elka turf-type ryegrass and Ensylva creeping red fescue. Because neither grass is aggressive, they do not compete for

nutrients and moisture with the basic crop and their slow-growing properties means they require very little mowing.

Circle 114 on reader card

Midnight Kentucky bluegrass is a unique variety marketed by Turf-Seed, Inc., whose dark blue-green color, darkest of any other, is just one of its features, according to the producer. In the National Turfgrass Evaluation Program of 1982, as well as 1981, it rated the best bluegrass cultivar for turfgrass quality. In addition to its color, it also possesses a very dwarf



4-Gallon Timesaver

When you buy a commercial mower from Kees, you get a big, 4-gallon fuel tank, because at Kees, we know what you want from a mower. You want it to get you through tough mowing jobs quickly and efficiently. But stopping to gas up slows you down. So does mower downtime. That's why Kees mowers are built with superior materials and workmanship that gives you years of dependable, trouble-free service. All Kees heavy-duty commercial mowers feature sleek design, Ultra High-Lift blade and fully baffled underdeck for close-quarter mowing and efficient grass clipping discharge.

Kees mowers are built with the operator in mind, with easy-operating fingertip controls, quick cutting height adjustment. Options include easy-riding sulkies, large capacity grass catchers and electric-start engines (48" and 60" models).

There's a Kees Mower for every job. Choose the one that's right for you — 32", 36", 48" or the big new 60" model. But choose Kees, because we know what you want in a commercial mower.

**Built by
Professionals
...for
Professionals.**

KEES F. D. KEES MANUFACTURING CO.
Box 1153
Beatrice, Nebraska 68310



Circle 56 on reader service card

growing habit and a very high tiller density to withstand heavy traffic. It has good drought tolerance, strong overall disease resistance, especially against leaf spot, dollar spot, and stripe smut. It also shows good tolerance to close mowing.

CBS II Brand turf-type perennial ryegrass blend from Turf-Seed, combines three varieties: Citation II, Birdie II, and Omega II. This new generation of varieties with stem rust resistance has other features, such as lower maintenance, darker green color, better mowing, drought, and wear tolerance. It

has very fast establishment, fair to good shade and cold tolerance, and no thatch formation.

The new Citation II perennial ryegrass from Turf-Seed possesses darker green color and rust and wear resistance. Its outstanding features include excellent seedling vigor, fine texture, higher density, darker leaf orientation, dark blue-green color, high endophyte level, improved disease resistance, better heat and drought tolerance, and improved mowability. ■

Circle 115 on reader card

AD INDEX

Adelphi Kentucky Bluegrass.....	25
Agri-Fab.....	74
Agro-Chem.....	43,62
All Star Ryegrass.....	25
Bush and Cook.....	52
Classen.....	16
Colorway.....	37
Contel Cado.....	36
Creative Sales.....	47
Dedoes.....	26
Denver Leasing.....	59
Distribution Management Systems.....	26
Dow Manufacturing.....	75,77
Earthway.....	74
E.J. Crane.....	24
Elanco.....	63
Encap.....	29
Exmark.....	76
F.D. Kees Manufacturing.....	73
Feldman.....	48
Fermenta Plant Protection Co.....	78,79
Fortunate Enterprises.....	10
GNC Pump.....	23
Graham Lawn Care.....	28
Great Salt Lakes.....	21
Green Pro.....	18
Hi-Tech.....	22
Integrated Bar Code System Inc.....	50
Imler.....	24
Jacobson.....	19
J.J. Mauget.....	13
La Motte Chemical.....	10
Lawn Tech.....	30
Lebanon Chemical.....	15,33
LESCO.....	20,80
Liqua-Land.....	52,68
Mid-Atlantic.....	50
Milwaukee Sewage.....	61
Mini Dump.....	30
Modern Welding.....	32
Moyer and Sons.....	65
Nature's Plant Food.....	64
Nor-Am Chemical.....	6
Ohio Turf Show.....	71
Perma Green Supreme.....	32,60
Practical Solutions.....	68
Precision Tank.....	46,66
Quintessence Computing.....	60
Rainbow Computers.....	28
Real Green Professional Service.....	48
R.G.B. Labs.....	17
Ringer.....	53
Ryan.....	9
Salsco.....	2
Spring Valley.....	58
Stauffer.....	35,36,37,38,39
Toro.....	4,5
Trebor.....	57
Tuflex Manufacturing.....	27
Turfco.....	36
Walker Manufacturing.....	37

Agri-Fab

**INTRODUCES
NEW MODELS FOR 1986**



**MODEL
41-0187
BROADCAST
SPREADER**

**MODEL
41-0166
LAWN
AERATOR**



SEE US AT EXPO '86
BOOTH #1735

AGRI-FAB P.O. BOX 903
SULLIVAN IL 61951
(217) 726-4334

Circle 59 on reader service card

Exciting News for Turf Care Professionals!



**EV-N-SPRED™ is the
Professional Spreader
Built for Professionals!**



EV-N-SPRED's massive gears are enclosed to eliminate the dirt and grit that leads to premature gear wear out and failure. Plus, the gears are permanently lubricated and maintenance free. That's good news!

BUILT TOUGH! Strong 1" tubular stainless steel frame. Stainless steel axle

mounted in four large serviceable ball bearings. **BIG CAPACITY!** 3000 cubic inch hopper holds 100 lbs. of fertilizer with room to spare. **EASY TO OPERATE!** Extra large 11" diameter pneumatic tires (4.10/3.50-5) and convenient calibrated control handle. **MORE STANDARD FEATURES!** Broadcast deflector for controlled spreading along walks and shrubs plus a transparent vinyl rain cover are standard equipment.

**ACT
NOW!**
Immediate
deliveries
available

Please rush me more information on the new EV-N-SPRED Commercial Quality Spreader.

Name _____

Company _____

Address _____

City _____ State _____ Zip _____

I am a Wholesale Distributor Dealer Turf Care Professional

EarthWay Products, Inc., Dept. No. 6ALEPII, P.O. Box 547, Bristol, IN 48507, Ph. 219-848-7491

Circle 60 on reader service card

Wouldn't it be great
if your old standby
broadcast herbicide
could also handle
early-emerging HTCs*



*Hard-to-control weeds like oxalis, ground ivy, prostrate spurge and wild violet.

Circle 18 on reader service card

CLASSIFIED

COMPUTER SERVICES

LAWN CARE INDUSTRY SOFTWARE

Fortunate Enterprises, Inc.
3365 Oleander Drive
Spring Hill, FL 33526
904/596-6347 or 596-0863

201/953-0315 New Focus Infosystems
516/928-7161 Lukin Computers
301/864-1717 Howel Disinfectant
404/733-7702 Annis, Inc.
Nationwide network of service.

ACQUISITIONS

Wanted To Acquire—

Lawn care accounts in eastern half of U.S. being sought by established corporation. Willing to negotiate a fair market price. If interested, please call me directly:

Paul Anderegg
Vice President/Marketing
Tru Green Corporation
404/442-8700

Companies Wanted—

National company seeking expansion desires to purchase lawn care companies. Price negotiable. To be considered, please send information concerning the number of customers and revenue to: ALA magazine, Box 320, 4012 Bridge Avenue, Cleveland, Ohio 44113.

For Sale—

Landscape Maintenance Business — Prime Location — Scarborough, Maine Mall Area. Alone with \$40,000. 1987 contracts, 2 trucks, 10 mowers, and all equipment — for \$21,500. With residence, land, and perennial nursery \$75,000 — package \$98,000. Family corporation, with pension plan and tax advantages; and unsurpassed reputation in greater Portland (since 1971). Owner will stay (as desired) to orient through 6/30/87. 50 percent down on business; balance first half of 1987. CONTACT: Donald E. Bowie 207/883-8034, 193 Gorham Road, Scarborough, Maine 04074.

For Sale—

Small Midwest Lawn Care Company, near Dayton, Ohio, showing good return. Will sell with or without equipment. If interested, call 513/492-1241 evenings.

PERSONNEL WANTED

Tree And Shrub Care Manager—

Expanding lawn and tree care company has a new position in the recently opened San Antonio operations. Position requires a proven manager with minimum two to five years of experience in managing residential tree and shrub spraying; technical expertise in implementing a workable chemical program; and good financial knowledge of the tree spraying business. Competitive benefits and compensation. All replies are kept confidential. Send resumes to: Manager, Ever-Green Lawns, 7438 Reindeer Trail, San Antonio, Texas 78238 EOE.

Landscape Personnel—

Large successful landscape firm in Southwest U.S. is searching for landscape maintenance operators, managers, and/or business managers. Must be professional, knowledgeable, and experienced. A motivator and coordinator of people not afraid of hard work. Must also be a great manager, aggressive, and energetic. Excellent salary and benefits! ALA, Box 321, 4012 Bridge Avenue, Cleveland, Ohio 44113.

Rates: All classified advertising is 35 cents per word. For box numbers, add \$1 plus six words. 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. Submit ads to: ALA Magazine, 4012 Bridge Avenue, Cleveland, Ohio 44113.

COMING NEXT MONTH

In December we will report on the changing nature of the lawn service industry. We will explore the popularity of chemical application for the mowing/maintenance segment, the changing roles of the landscape segment, and the other ways the industry is changing. In a lighter vein, we will also share some "Lawn Care Nightmares" with some lawn care operators. Join us!

A cut above.

A professional cut.

The 48" Exmark mower's popular V-design deck makes this mower easy to handle and new adjustable pin casters allow quick height adjustments. The professional cut is turning heads across the nation.

A profitable cut.

Precision engineering, rigorous testing and exacting production procedures mean that all Exmark products, from the sleek 48" to the powerful Turf Rake, will give you years of profitable operation. Combine Exmark's quality and excellent pricing and you get lawn care equipment that's a cut above the competition.

For the dealer nearest you, call Exmark today: **402/223-4010.**

eXmark
MFG. CO. INC.
BOX 748, BEATRICE, NE 68310

*The mark of quality
in professional lawn care.*





Introducing your new old standby.

That old standby broadcast amine turf herbicide of yours has just been made obsolete with new TURFLON* II Amine Herbicide from Dow.

Stops HTCs in the broadcast round

You see, TURFLON II does everything your old standby does, and a whole lot more. Like control those hard-to-control weeds that can emerge early and sneak through your old standby. Weeds like oxalis, ground ivy, prostrate spurge and wild violet. Weeds that keep your phone ringing and your cash register quiet.

New turf chemistry

With TURFLON II you can stop those early-emerging, hard-to-control

weeds in their tracks and significantly reduce the need for spot treating later. TURFLON II does so much more than other broadcast herbicides because it contains triclopyr, the first new turf herbicide chemistry in 16 years.

Safety tested

The low volatility of the TURFLON II activated amine formulation gives you less odor to worry about. It has a proven safety record and won't migrate in the soil to the roots of ornamental plants.

So if you're tired of being let down in the broadcast round by your old standby, turn to TURFLON II this year.



TURFLON II
It's your new old standby.



*Trademark of the Dow Chemical Company

A preemergence do more than just

Sure, you can cut costs by using the new pendimethalin products. Then again, you get what you pay for. Like uncertain performance due to limited testing. Volatility. Photodecomposition. And possible turfgrass root injury.

But with Dacthal preemergence herbicide, you don't have any of those problems. Because Dacthal has a record of proven performance that spans more than 20 years.

In fact, Dacthal is the only preemergence herbicide that gives you all the advantages you need... all the advantages.

Dacthal. Unsurpassed control of crabgrass, spurge and 20 other weeds.

For over two decades, Dacthal has been the standard of excellence in crabgrass control.

When it comes to spurge, Dacthal is still the single most effective preemergent money can buy. The new pendimethalin products just don't match the spurge control you get from Dacthal when applied as directed on the product labels.

And while you're out there spraying Dacthal for crabgrass and spurge,

you'll also be effectively controlling over 20 other annual grasses and broadleaf weeds.

That's nearly twice the number of weeds the new pendimethalin products currently claim on their label.

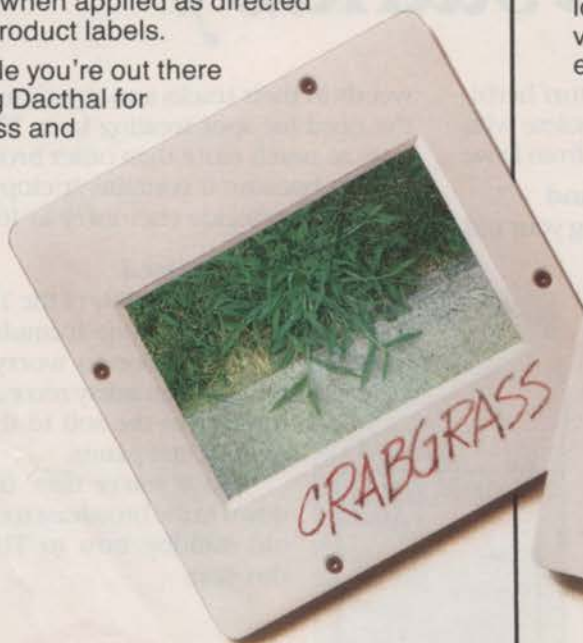
Dacthal. Virtually no volatility or photodecomposition.

Since Dacthal will not decompose when exposed to sunlight, the full amount of active ingredient gets to the soil for maximum weed prevention.



Pendimethalin is volatile and is subject to photodecomposition.

What's more, Dacthal is non-volatile so it always stays where it's sprayed. There is no lost residual activity. And no possible injury to valuable ornamentals or prized shrubs. Which explains why Dacthal can be used to control weeds on over 120 ornamental plantings.



herbicide should save you money.

Dacthal. The widest margin of turf tolerance.

Years of use by lawn care professionals as well as extensive research studies show that turf is exceptionally tolerant to Dacthal.

Here's what one such study found.

Effect of Preemergence Herbicides on Growth of A-20 Kentucky Bluegrass				
Herbicide	Rate (lbs.ai/A)	Roots (mg)	Shoots (mg)	Density (Shoots/Pot)
Dacthal® (Fermenta Plant Protection)	12	167.7	527.0	9.3
Balan® (Elanco)	2	20.8	23.5	0.8
Betasan® (Stauffer)	12	11.8	20.3	0.5
Ronstar® (Rhône-Poulenc)	2	5.3	17.5	0.3
Untreated	—	170.3	604.3	11.3

With Dacthal, there was no serious turf injury due to root inhibition. But research suggests that's not the case with other commonly used herbicides. And since the new pendimethalin products have had only limited testing, they may be risky too.

As we said in the beginning, you get what you pay for. It's that simple.

Pendimethalin products may save you money up front, but in terms of performance and reliability, they just may end up costing you your customers. And in today's market, that's too high a price to pay.

So this season, make Dacthal your preemergence herbicide. Because satisfied customers is what your business is all about.



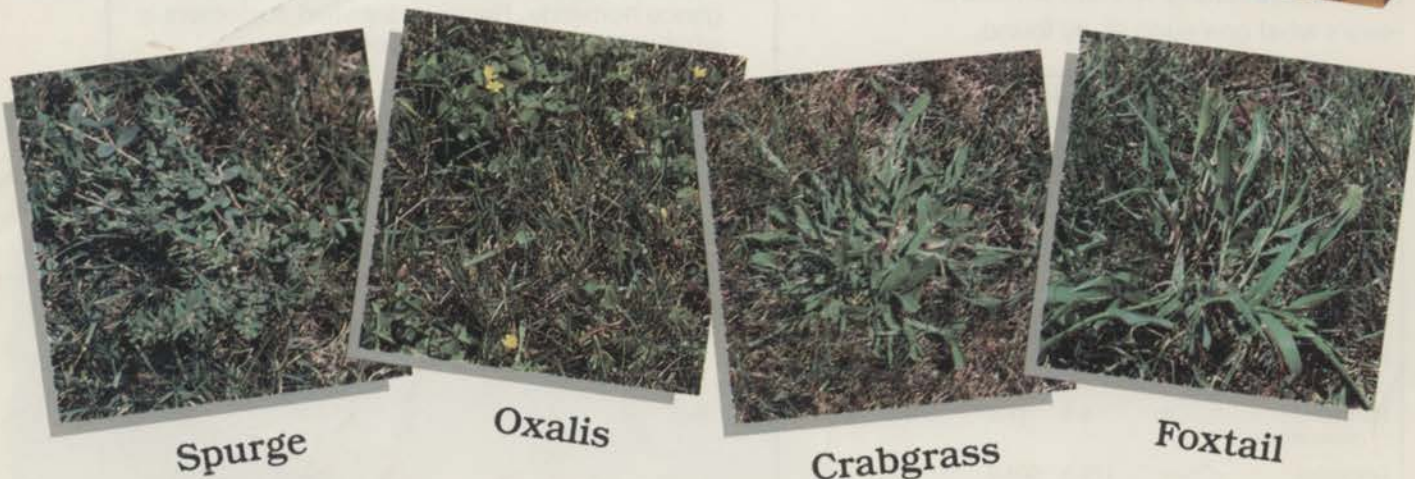
Always follow label directions carefully when using turf chemicals.



Dacthal® Preemergence
Herbicide

PROVEN IN '86!

The most effective spurge and oxalis control is also the most effective crabgrass and foxtail control.



Spurge

Oxalis

Crabgrass

Foxtail

Active Ingredient: Pendimethalin

LESCO PRE-M™ 60DG Herbicide captured a major share of the liquid turfgrass preemergent market its first year. The reason why is simple. The sprayable pendimethalin herbicide gives the lawn care operator everything he wants... and more.

More than just control of crabgrass and foxtail and other weedy grasses...it also takes care of tough broadleaves like germinating oxalis and spurge. Broader spectrum control means satisfied customers — fewer callbacks.

And control isn't the only thing PRE-M has to offer...there's also the convenience. The

economical, easy-to-use water dispersible granule formulation also means less bulk. At 2.5 pounds of PRE-M per acre, a 900-pound pallet of material treats 360 acres. Registered for use on the majority of northern and southern turfgrasses, LESCO PRE-M is spray tank compatible with most fertilizers and pesticides.

There's no reason to settle for just crabgrass control when LESCO PRE-M 60DG Herbicide offers so much more. Book your spring order today!

(800) 321-5325
NATIONWIDE

(800) 362-7413
IN OHIO

LESCO

LESCO, Inc., 20005 Lake Road, Rocky River, Ohio 44116 (216) 333-9250

Circle 14 on reader service card