

SERVING THE AMERICAN LAWN APPLICATOR AND MAINTENANCE PROFESSIONAL

# ALA

OCTOBER 1986 • \$1.25

## YOU AND YOUR BANKER

**PLCAA CONFERENCE  
PREVIEW**

**PLCAA ROOTS**

**NEW WEED  
CONTROL PRODUCTS**

**TURFGRASS NUTRIENT  
AND WATER USE EFFICIENCY**

**BULB TOLERANCE TO  
POSTEMERGENCE HERBICIDES**

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US GOLF ASSOCIATION - GREEN  
PO BOX 2105  
WEST CHESTER PA 19380

**PLCAA  
PRE-CONVENTION  
ISSUE**

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.

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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.

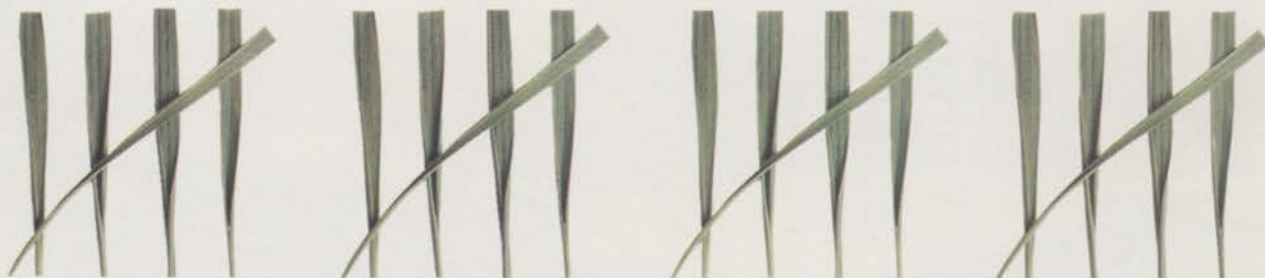
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Refer to the Team label for complete use directions.



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

## Its weeks.





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### COVER

Have you established a relationship with your banker? If you haven't, maybe it is time you did.

(Cover photo by Barney Taxel)

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

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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*

Groundsmaster®

riding mowers and two *new* Commercial mid-size walk mowers. The

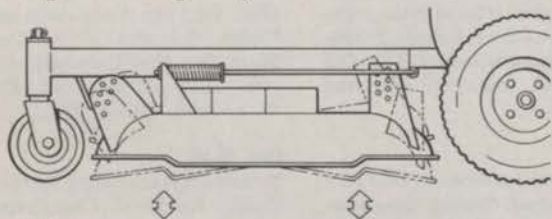
Groundsmaster 117 and 217-D riders are seventeen







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.

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- ☐ I'd like more information about Toro Commercial equipment. Please have a distributor or commercial dealer contact me.  
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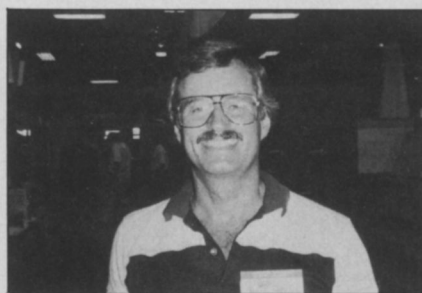


# VIEWS ACROSS THE TURF INDUSTRY

## WHY ARE YOU ATTENDING THE PLCAA SHOW THIS YEAR?



"At this point I am still trying to decide whether to go or not. The location is getting to me. It is less appealing for me. I have relatives down in Florida and that made it much easier for me to go down there in terms of cost, for one thing. The Baltimore area is also less appealing because I am looking at it as a vacation as well as seeing the conference. I just think Florida is a nice place to go at that time of year. For me it is a season-end and a time to escape and get away to relax. Things are just about finished up for me at that time of year. I play golf so that is another incentive to go further south." — **Mike Ylinen, Lawnscape, Eden Prairie, Minnesota**



"Last year was the first time I attended because I had just joined last summer. I learned a great deal at the convention down in Tampa. They had workshops that were excellent. I learned a great deal as well from the other business people who were down there. There were many problems that we all had in common. We made a lot of new friends, in fact, one of them just contacted me today from Chicago and asked me if I was going and where I was going to stay. So I am really looking forward to it. The seminars provide an excellent update on what is going on in the industry." — **Gerald Haney, The Yardworks, Inc., Avon Lake, Ohio**



"I go for a variety of reasons, mainly to see new equipment and suppliers. It is a good opportunity to meet all of them in one spot and compare them. I don't generally make transactions with the suppliers on the trade show floor, other than small items. For the most part, I am there to get information and contacts. I don't attend too many of the educational seminars, but some of my people do. I don't think it was a good idea to move the show to the East Coast. I would normally like to take a week off when I go and I'm not too wild about the weather at that time of year in Baltimore." — **Shawn Purcell, Executive Lawn Care, Inc., Hilliard, Ohio**

## CALENDAR

### Oct. 19-22

Florida Turfgrass Association Conference and Show, Curtis Hixson Convention Center and Hyatt Regency Hotel, Tampa, Florida. Contact: William E. Nass, Florida Turfgrass Association, Inc., 302 South Graham Avenue, Orlando, Florida 32803-6332; 305/898-6721.

### Oct. 24

Image Building and Marketing Workshop, Sheraton Airport Plaza Hotel, Charlotte, North Carolina. Contact: Associated Landscape Contractors of America, 405 North Washington Street, Suite 104, Falls Church, Virginia 22046; 703/241-4004.

### Oct. 23-24

Southwest Turfgrass Conference, Holy Cross Retreat, Las Cruces, New Mexico. Contact: Charles R. Glover, Extension Agronomist, New Mexico State University, College of Agriculture and Home Economics, Box 3AE, Las Cruces, New Mexico 88003.

### Nov. 2-6

Sixteenth Educational Conference of the National Institute on Park and Grounds Management, Louisville, Kentucky. Contact: National Institute,

Box 1936, Appleton, Wisconsin 54913; 414/733-2301.

### Nov. 9-12

PGMS and the Landscape Management Division of the Associated Landscape Contractors of America 1986 Annual Conferences, Marc Plaza Hotel, Milwaukee, Wisconsin. In conjunction with the conference, this "Green Team" will jointly sponsor a trade show at the Milwaukee Exposition and Convention Center. Contact: Professional Grounds Management Society, 3701 Old Court Road, Suite 15, Pikesville, Maryland 21208; 301/653-2742.

### 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. 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

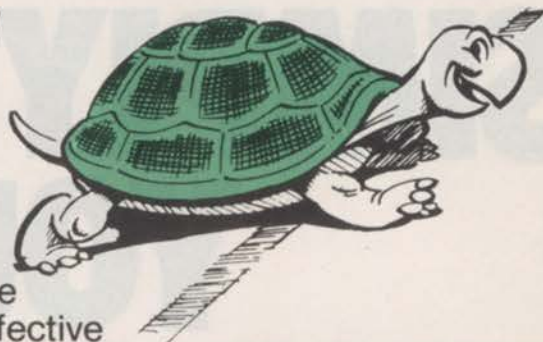
National Fertilizer Solutions Association Convention and Exhibition, New Orleans Convention Center, New Orleans, Louisiana. Contact: Bob Wanzel, NFSA, 10777 Sunset Office Drive, Suite 10, St. Louis, Missouri 63127; 314/821-0340.





# 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  
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This program includes a turf management calendar guide, brochures on turf diseases,  
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**Attn: Communications Dept.**

ALA

YES, I would like to be enrolled in NOR-AM's Total Turf Management Program. Please send me further information.

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**IMPORTANT:** Please remember always to read and follow carefully all label directions when applying any chemical.

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### **Turcam®**

An advanced broad-spectrum carbamate insecticide that controls white grubs, chinch bugs, sod webworms, mole crickets and many other turf and ornamental pests. Turcam is odorless, works well in spray equipment, won't tie up in thatch, won't damage turf or ornamentals, and should be your product of choice when long residual control is required.

### **Proxol®**

Economical Proxol 80SP Insecticide works fast on surface-feeding sod webworms, armyworms and cutworms, and readily penetrates thatch to control grubs. Proxol is easy to apply as a spray, has no unpleasant odor, and no long-term residual build-up in the soil.

### **Prograss®**

A selective herbicide that effectively controls annual bluegrass, crabgrass and other troublesome weed species.

### **Acti-dione®**

Broad-spectrum family of turf fungicides that provide four-season disease control. Acti-dione has proven to be effective without creating resistance problems.

Acti-dione TGF® can be tank-mixed with Bayleton® or Daconil® to complement or improve disease control with significant cost-per-acre savings.

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Specialized fungicide that controls pythium and phytophthora in turf and ornamental plants. Preventative control with Banol stops the spread of pythium by mowers, foot traffic and surface water; it also means fewer applications, lower rates and savings in labor, fuel and equipment.

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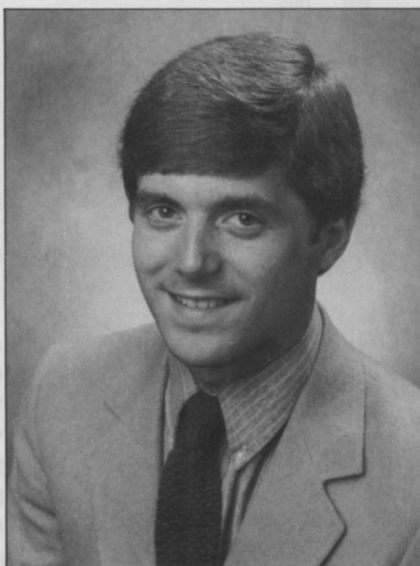
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# INSIDE STORY

**T**he relationship between lender and borrower has traditionally been almost adversarial in nature.

In this month's cover story, "You and Your Banker," we address the value of developing a relationship with your banker. We also discuss the process of preparing for a loan proposal with two banking experts: Bruce Lansaw, Senior Vice President of the First Huntington National Bank, Huntington, West Virginia, and Fernando Bensuaski of Bensuaski, Young, and Delana, Boise, Idaho.

We have devoted considerable coverage in this issue to the Professional Lawn Care Association of America Conference and Show in Baltimore, Maryland on November 17-20. Our pre-conference coverage features "Big Business in Baltimore" by Assistant Editor Vivian F. Rose. Rose covers all the conference highlights and touches on some points of interest that visitors to Baltimore may want to check out. There is also a brief diner's guide to several of Baltimore's finest restaurants. To assist prospective



trade show buyers, we have assembled a listing of exhibitors at the show which lists "show specials" and new products that will be featured at the booths.

In conjunction with all the pre-

conference coverage, we also did a little time travelling back to 1979 to reminisce about the origins of the PLCAA. We spoke with some key members of the association who had important roles in forming the PLCAA. We also spoke with Glenn Bostrom, President of Bostrom Management Corporation, Chicago, Illinois, who managed the association until 1983. For new members, this article will provide valuable insight into the history of their association.

Look for the nomination form on page 59 for our "Award for Professionalism" contest. We will be accepting nominations for this contest through December 31, 1986. We will announce the winner of the contest in our February, 1987 issue, so if you know of a lawn care company owner who deserves to be recognized, fill out the form!

*Tim Weidner*

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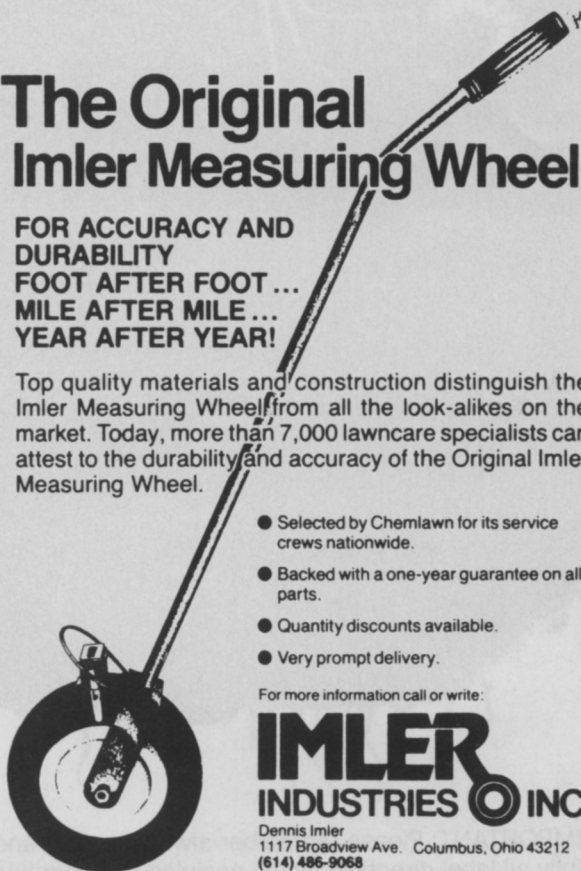
**FOR ACCURACY AND DURABILITY  
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Top quality materials and construction distinguish the Imler Measuring Wheel from all the look-alikes on the market. Today, more than 7,000 lawncare specialists can attest to the durability and accuracy of the Original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

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# LETTERS

## MOWING EXPERTISE

I read with interest your "growing with mowing" article in the June 1986 *ALA*. There are always other perspectives. Our company was founded some years ago for the purpose of cutting turfgrass. Mowing remains our largest activity. We believe that we have developed a high degree of efficiency and expertise in the area of mowing. From a mowing base, we have expanded into all other areas of turf and ornamental care.

It seems to me that any other entry into total service lawn care is the back door approach. The mowing company gets first chance at all other work. If the customer relationship is sound and the mowing has been timely and well-done, he can name his price.

Mowing turfgrass alone is a high-volume, low-profit enterprise at best. The better commercial equipment never performs as well as the manufacturer suggests it will. Forty to 50 hours per week for 30 consecutive weeks is demanding. The following are practices we feel are essential for success.

- We have a self-contained repair capability. We cannot pay outside shop prices or absorb the time it takes to get equipment returned.

- Dealer-oriented equipment is usually avoided. Dealers are homeowner-oriented. They increase the cost for commercial people without providing benefits. We are responsible for keeping the parts we need on our shelf. Our mechanic can repair our equipment on a priority basis every time. There are manufacturers out there willing to sell direct to a first class commercial user.

- Many applicants are interviewed in the process of obtaining one good employee. When we find the right man for our crew, we try to develop him as a permanent employee. He is encouraged and given some unique responsibilities. We gradually move his salary upward so that compensation is at a satisfactory level for him.

- We have developed a seven day work week to better utilize equipment and avoid the weather delays. Our people are let off on a rotating basis. Only key people are given overtime and then in an emergency situation.

To be successful one has to mass produce and yet manage each landscape as if it were the only account. We provide supervision on all jobs. The supervisor

usually operates a commercial cutter when time permits. He assists crew members and discusses the job to be done with them. He is available to meet the person in charge of the landscape and does so at every opportunity. Customer relations and selling future work or new projects are one and the same.

There are a host of dos and don'ts too numerous to mention. But you will notice I began and concluded the description of our operation with the customer/provider relationship. This is the key to success. When the bond and mutual trust becomes strong enough, cut rate competitors can't threaten your accounts. Be a unique provider, willing to go the extra mile when necessary. Sell the idea that you are worth a larger fee and then prove it. We have had several clients arrange for us to continue our services uninterrupted in the event of their death. We are developing long range plans with some commercial people that extend into the 1990s.

Our mowing gross reaches the six

figure level. On a percentage basis we have learned to live with about 20 percent real profit. When we provide companion services the rate of return increases. One time and/or occasional work is priced much higher. We already have the customer and his confidence. Results are more important than cost.

We see many people enter and then leave the mowing field. Most start up with false expectations, whether they are already in lawn care or not. Mowing is not for everyone. You must like machines and people. You will be spending a lot of time with both. ■

*J. Harold Smith  
Smith's Lawn Care  
Bowling Green, Kentucky*

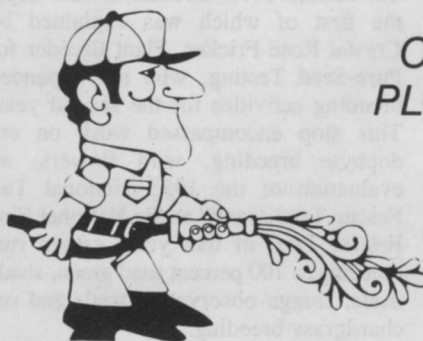
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# NEWS IN BRIEF

## CHILD DIES FOLLOWING ALLEGED PESTICIDE EXPOSURE

Desiree Purdy, a 16-month-old child, died in August in the Detroit suburb of Taylor, Michigan, following an alleged exposure to lawn care pesticides. Purdy's father, Charles Purdy, says the child was left alone for three minutes on the lawn of their apartment complex. He doesn't know if she ate any grass, but he says she was clutching grass in her hand and he thinks the lawn was treated with a "weed killer." Three hours later the child died.

Scott Management, owners of the Woodbrook I apartment complex where the Purdys live, handle the lawn maintenance in-house and had been spraying the lawn shortly before the incident. Management executives were not available for comment, but workers on the property told local television news media that they had been spraying there for years with no problems. During a brief television interview, Charles Purdy told the interviewer that he had seen the recent ABC "20/20" program segment on the dangers of lawn chemicals.

Another resident of the apartment complex told the interviewer that her children suffered fevers of 102 degrees on the day the lawn was sprayed. Their body temperatures returned to normal later that evening. The Wayne County coroner's office was still awaiting the results of the autopsy on the Purdy child at press time.



Channel 7 news in Detroit, Michigan reported on the death of Desiree Purdy (below left), allegedly caused by lawn pesticides.



Beard, Professor of Plant Physiology at Texas A&M University. Rose outlined the results of the Tall Fescue Seed Yield Trials. He was followed by Stanley on the Forage Yield Trial and Low Maintenance Turf Trials. Beard reported on the topic of overseeding dormant bermudagrass with perennial ryegrass.

Meyer was in charge of the program at the third stop. This included tall fescue breeding, mixtures with tall fescues, perennial ryegrass breeding, and evaluation of the new National Kentucky Bluegrass Trials. There was also a presentation of new bluegrass varieties, composite bluegrass breeding and Penncross stolon beds.

Other features of the Field Day included a delicious Oregon-style barbecue and athletic events. The Fifth Annual Turf Day will take place on June 18, 1987, in Hubbard, Oregon.

## PANORAMIC PROMOTES TRACTOR SAFETY

*The Right Approach* is a leaflet produced by the Panoramic Corporation to promote turf tractor safety. The leaflet was originally produced by Panoramic for use in their safety program and is now available in both Spanish and English. Copies of this brochure are available at no charge by sending a self-addressed-stamped-envelope to the Panoramic Corporation, 122 North Eisenhower Lane, Lombard, Illinois 60148.

## TURF-SEED HOLDS 4TH ANNUAL FIELD DAY

Turf-Seed, Inc./Pure-Seed Testing recently held its Fourth Annual Turf Field Day

in Hubbard, Oregon. The event, hosted by Dr. Bill Meyer, Research Director for Pure-Seed Testing, was the most successful in the series, attracting more than 400 participants from United States turfgrass interests, as well as from abroad. The extensive tour included several stops, the first of which was explained by Crystal Rose-Fricker, Plant Breeder for Pure-Seed Testing, who has expanded breeding activities for the second year. This stop encompassed work on endophyte breeding, wild flowers, an evaluation of the 1983 National Tall Fescue Trial as well as the National Fine Fescue Trial of that year, crown rust breeding, a 100 percent sand green, shade trials, forage observation trial, and orchardgrass breeding.

The second stop was covered by Bill Rose, President of Turf-Seed; Tom Stanley, Sales Manager; and Dr. James

## LEBANON PURCHASES TIDEWATER AGRICORP

Lebanon Chemical Corporation announced the purchase of Tidewater Agricorp, Inc. of Chesapeake, Virginia. The acquisition represents a significant expansion of Lebanon Chemical's liquid fertilizer line. Considered one of the largest East Coast liquid fertilizer companies,

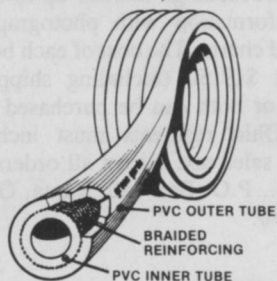
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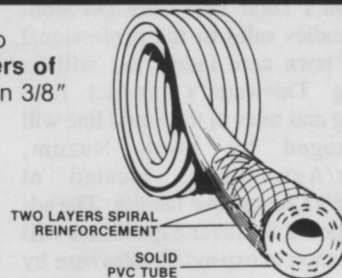


# You Can Depend on the **green garde®** High Performance Spray Team

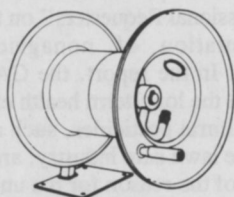
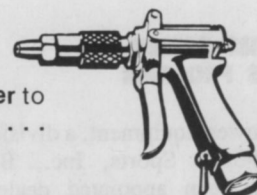
**NEW! 4-SPIRAL WHITE HOSE** . . . a unique 600 PSI hose designed to withstand the rigors of the spray industry. **Solid PVC Tube** with **two layers of criss-cross spiral reinforcement** . . . **nothing like it anywhere!** Available in 3/8" and 1/2" ID, 300 and 400 foot continuous lengths.



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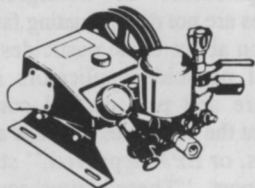
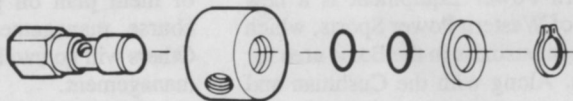


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## NEWS

(continued from page 14)

Tidewater has 20 fertilizer outlets in the coastal regions of Virginia and North Carolina. Last year, Tidewater's liquid fertilizer retail sales totalled several million dollars.

Lebanon's Total Turf Care Division, which handles sales to the professional golf and lawn care industries, will be marketing Tidewater's product line. Marketing and sales of the liquid line will be managed by Mark Nuzum, Manager/Agronomist, located at Tidewater's Chesapeake facility. The addition of liquid fertilizer capabilities will allow Lebanon to expand its sales base by both bringing in new customers and by providing additional service to its current customers.

### OMC NAMES DEALER, SPONSORS PROGRAM

Western Power Equipment, a division of Western Power Sports, Inc., Boise, Idaho, has been appointed dealer in western Idaho and eastern Oregon for OMC Lincoln, a division of Outboard Marine Corporation. Western Power Equipment will handle the Cushman® line of gas- and electric-powered vehicles for industrial and commercial use, Cushman Front Line® mowers and turf equipment, and the Ryan® line of specialized turf maintenance equipment.

Western Power Equipment is a new division of Western Power Sports, which has been in business in the Boise area for 26 years. Along with the Cushman and

Ryan lines, Western Power Equipment will handle several other lines of outdoor power equipment. Jim Brandt is President of the company. Bart Daly is Division Manager and Sales Manager at Western Power Equipment. The company has 10 employees and offers full service facilities as well as equipment sales.

Ohio State University's Agricultural Technical Institute at Wooster has been awarded free use of a Cushman Turf-Truckster™ vehicle on an annual replacement basis. The Turf-Truckster will be used by ATI for the school's turfgrass management program, which is directed by Michael M. Fulton. The equipment was provided under a special College and University Turf Equipment Program instituted two years ago by OMC Lincoln. The award was arranged through Baker Vehicle Systems, Macedonia, Ohio, the Cushman dealer in that area.

According to Fulton, ATI's turfgrass management program is the third largest at the institute, with some 55 students enrolled in the two-year curriculum. ATI has an enrollment of 625 students, and offers 17 programs of study, all related to agriculture or food distribution and marketing. Graduates receive an Associate of Applied Sciences degree from Ohio State University.

"This new piece of equipment will enable us to increase our level of hands-on training and experience for students," says Fulton. "Nearly 80 percent of our turfgrass management students have some previous golf course experience, and most of them plan on going back into golf course management after graduation. Others will go into landscape or lawn care management."

### CHEMLAWN PUBLISHES SYMPOSIA PROCEEDINGS

Proceedings for the last two Symposia on Turfgrasses sponsored by ChemLawn Services Corporation are available. The publication of papers from the 1981 Symposium on Turfgrass Weeds is titled *Advances in Turfgrass Weed Control*. Proceedings from the 1982 Symposium on Turfgrass Fertility is titled *Advances in Turfgrass Fertility*.

These proceedings include up-to-date (1986) information with photographs, tables, and charts. The cost of each book (paper) is \$19.50 (including shipping charges), or both can be purchased for \$36.50. Ohio residents must include necessary sales tax. Direct all orders to H.G., Inc., P.O. Box 640, Piqua, Ohio 45356-9990.

### GAO REPORT SHEDS DOUBT ON LAWN CHEMICALS

In April, the United States General Accounting Office (GAO) issued a "Report to Congressional Requesters" on the risks and regulation of nonagricultural pesticides. In the report, the GAO concluded that the long-term health effects of nonagricultural pesticides, such as those used by the lawn care industry, are uncertain. Part of the reason for the uncertainty, says the GAO, is because these pesticides have not been reassessed in accordance with current standards.

The GAO also concluded that the Environmental Protection Agency (EPA) has a long way to go in its chronic toxicity testing of nonagricultural pesticides and the applicators of nonagricultural pesticides are not disseminating factual information about those pesticides. "Professional pesticide applicators such as lawn care and pest control companies claim that the pesticides they use are safe, harmless, or EPA-approved," states the GAO report. "These claims could persuade the public to purchase a service they would not otherwise use, or discourage them from taking reasonable precautions to avoid exposure."

### 3PF STATE REGULATORY UPDATE

According to the recent "State by State Report" issued by the Pesticide Public Policy Foundation (3PF), the Massachusetts State Department of Food and Agriculture has recently concluded a

(continued on page 18)



Western's staff includes (left to right): Bart Daly, Division Manager; Lonnie McGillivray, Service Technician; Mike Decker, Sales Representative; Steve Dorsey, warehouse; and Kevin Loy, Parts Manager.





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## NEWS

(continued from page 16)

series of three hearings on proposed regulations regarding commercial lawn care practices. As proposed by the Department, the regulations would require: Development of a consumer information sheet, optional prenotification, information provided to a customer following application, and posting after application.

In Minnesota, the State Department of Agriculture is currently preparing amendments to the state's pesticide control law. The amendments are expected to be introduced during the 1987 legislative session. The initial areas for amendment include: Establish/clarify preemption over local government regulation, require all commercial applicators to become individually licensed, and establish drift or overspray as prima facie evidence of risk or injury.

In the state of Washington, KIRO television, a CBS affiliate station, recently concluded a five-part series on pesticides. The program addressed commercial lawn care practices, general pesticide safety, and health questions and common pesticides found in homeowner products.

The program advocated reduced pesticide use, notification practices, and posting requirements. The program was aired in the Seattle area from July 21 to July 25. David Dietz, 3PF Program Director, was an invited guest on behalf of the user industry.

## NANCY REAGAN AWARDS LANDSCAPER

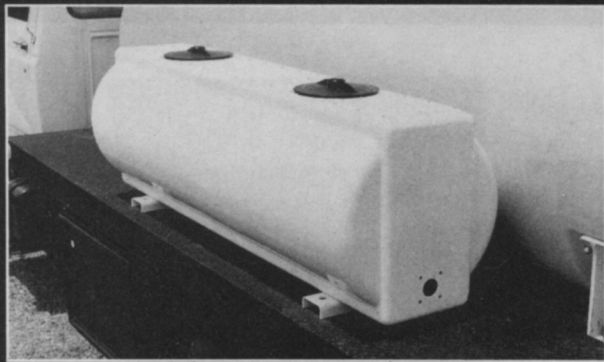
Landscaping at the Hewlett Packard Corporate Offices at Palo Alto, California, were one of 18 environmental enhance-

(continued on page 20)



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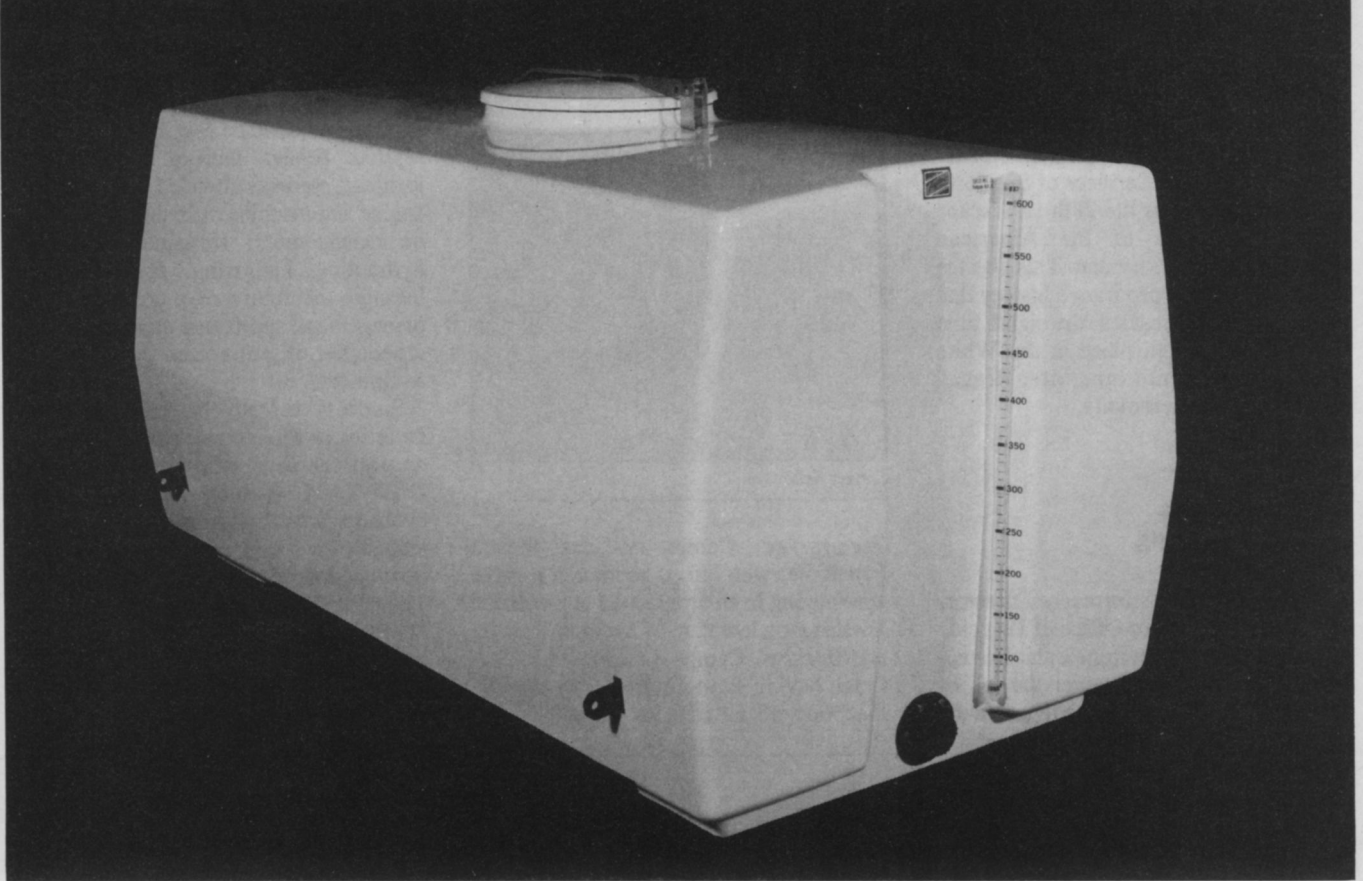
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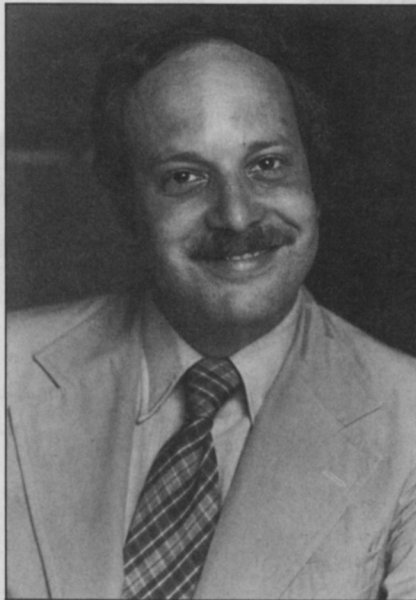
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## NEWS

(continued from page 18)

ment projects honored by First Lady Nancy Reagan in formal ceremonies and a reception at the White House in May. Receiving an award along with the American Association of Nurserymen, the project's sponsor, were landscape architect MPA Design of San Francisco and the landscape management contractor Industrial Landscape Services of San Jose.

The occasion was the 28th Landscape Awards Program of the American Association of Nurserymen. This was the twelfth time in the program's history that a First Lady has presided, the eighth time the event has taken place at the White House, and the third time Mrs. Reagan has chaired the ceremony.



Steven Schatzow

### CAMPT REPLACES SCHATZOW AT EPA

Douglas D. Campt, formerly Director, Registration Division, Office of Pesticide Programs (OPP), Environmental Protection Agency, has taken over the job of OPP Director, according to a report in the

*Treeworker*. Campt replaces Steven Schatzow, who left to become a partner specializing in environmental law with the Washington law firm of Morgan, Lewis, and Bockius. Campt is a career EPA official, having served in the OPP since the inception of the EPA in 1970.

### JACOBSEN SPONSORS STUDENT SEMINAR

Thirty eight college students from all over the United States recently attended a College Student Seminar at Jacobsen Division of Textron, Inc. headquarters in Racine, Wisconsin. The students were chosen from applicants who are studying Turfgrass Maintenance and Management or related fields. During the five-day seminar, students attended workshops on engine and machine maintenance; lectures on management; equipment selection; hydraulics; budgeting, financing, and leasing; the future of municipality turf management; sports turf management; and scheduling of golf course personnel and equipment.

Students toured the Jacobsen plant facilities in Racine and participated in a demonstration of the company's CAD/CAM (computer-aided design) system which showed how new technology speeds the development of new products in the turf care industry. They also saw a demonstration of Jacobsen's REACT system which is a computer-link system between Jacobsen and its distributors for fast, easy ordering of replacement parts. ■



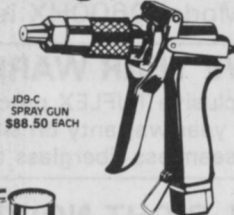
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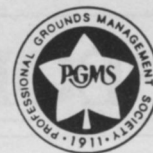
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# PEOPLE

**L**ebanon Chemical Corporation has announced several recent staff changes and promotions. **J. Mark Nuzum** has been promoted to Manager/Agronomist of the liquid turf fertilizer line of Lebanon Chemical's subsidiary, Tidewater Agricorp, Inc., Chesapeake, Virginia. In his new position, Nuzum is responsible for sales and marketing of liquid turf products throughout the mid-atlantic and southeastern states.

Prior to his current position, Nuzum had been Manager of the Commercial Division of Tidewater from 1982. Before his association with Tidewater, Nuzum was Manager of Technical Services with Rollins Care, a division of Rollins, Inc., Atlanta, Georgia. He earned a bachelor of science degree in agriculture with a concentration in soil science from West Virginia University and a bachelor of science in biology from Shepherd College, Shepherdstown, West Virginia.

**Kevin C. Hoffman** has been named Market Development Coordinator at



*Accepting the membership into Jacobsen's "Golden Reel Club", is Robert G. Johnson (right), President of Illinois Lawn Equipment. Presenting the award is George Cornell of the G.L. Cornell Company, Gaithersburg, Maryland. Cornell is a senior member of the "Golden Reel Club."*

Lebanon's headquarters in Lebanon, Pennsylvania. He is responsible for the development of programs and products for the lawn care market and for major private label accounts. He reports to Paul Mengle, Manager of Marketing and Sales. Prior to his appointment, Hoffman was a sales manager with the turf and garden division of Todd Farm Equip-

ment, Inc., Chesapeake, Virginia.

**Timothy C. Layman** was named Sales Representative with Lebanon's Division 34, which covers the New England and New York regions. He reports to Division Manager, Harry Mathis. In his new position, Layman will be responsible for servicing accounts in the Hudson River, New York area and northern New Jersey.

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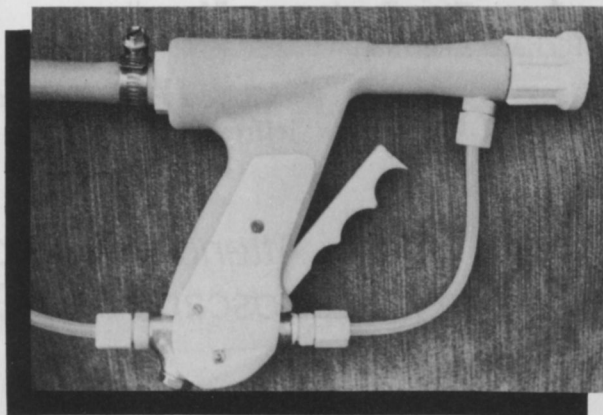
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# PLCAA UPDATE

**P**rofessional Lawn Care Association of America (PLCAA) has two new manuals available in its Management Monograph Series: "A Lawn Care Professional's Guide to Effective Yellow Pages Advertising" and "Practical Business Law for the Lawn Care Businessman." Two earlier manuals in the series were, "A Lawn Care Company's Guide to Right-to-Know Legislation" by Richard I. Lehr and "A Lawn Care Company's Guide to a Successful Loan Presentation" by Ed Wandtke and Rudd McGary.

"A Lawn Care Professional's Guide to Effective Yellow Pages Advertising" is authored by Edward G. Blackman, Executive Director of the American Association of Yellow Pages Publishers. The guide contains chapters on "Industry Trends," "Designing the Ad," "Cooperative Advertising," "Tracking Results," and "Maximizing Your Investment," to name a few. In the introduction to the guide, the author describes the Yellow Pages as a good investment for

PLCAA members.

"Used as either the mainstay of an advertising effort or just one element of an overall advertising program, the Yellow Pages are important because they are the one medium people turn to when they have already decided to make a purchase. Because the directories are available 24 hours a day, 365 days a year, they are a cost-effective advertising medium. Unlike newspapers, magazines, and direct-mail pieces, the directories aren't discarded," writes Blackman.

At the back of the guide is a helpful worksheet which explains how to create an effective Yellow Pages ad. The worksheet also discusses how to have a successful meeting with your Yellow Pages sales representative and how to make your Yellow Pages ad work for you in other advertising media.

"Practical Business Law for the Lawn Care Businessman" is authored by Richard I. Lehr, attorney with the law firm of Sirote, Permutt, Friend, Friedman, Held, and Apolinsky, P.C. This

manual contains chapters on "Partnership or Corporation: Which Structure is Best for You?," "Consumer Credit Protection," "Employees: Hiring Assets, Terminating Liabilities," "Business and Personal Tax Planning," and "Securing the Services of Professionals."

In his introduction to the manual, the author explains that it was written to assist lawn care employers with some of the practical business and personal legal matters they may face on a day-to-day basis. "Remember that in addition to federal environmental, employment, and tax laws, each state has its own version of statutes covering the same subjects," writes Lehr. "The information provided in this monograph is intended to be a general overview of the subject matter, and it should not be considered by readers as a definitive statement of the law in their state."

For information about obtaining a copy of these monographs, write the PLCAA, 1225 Johnson Ferry Road, N.E., Suite B-220, Marietta, Georgia 30067. ■

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**A.** By now you have received a list of manufacturers who should be able to help you out. *ALA* also took the liberty of sending a copy of your letter out to them. We hope that by this time you have been in touch with each other and that your problem has been solved.— *Gordon LaFontaine, Lawn Equipment Corporation, Novi, Michigan*

**Q.** I would like to modify a piece of equipment that I have purchased.

These modifications would not affect the engine or ask the machine to perform any task it was not designed to do. What are the ramifications if I modify this equipment? — *W. Rose, Ohio*

**A.** Once you have made any alterations to the manufacturer's equipment as delivered, you have relieved the manufacturer and distributor of any liability and placed that responsibility on your insurance company. Therefore, modifications on equipment are not recommended. — *Gordon LaFontaine*

**Q.** I know that aerification is good for my customers' lawns, but do I have to do all of them before I apply my preemergent in the spring? — *Bob Arnoff, Ohio*

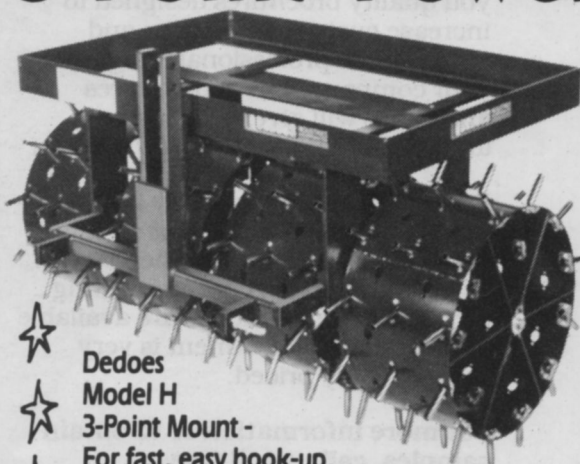
**A.** No! University studies have shown and lawn applicators have reported, that there is no increase in crabgrass when coring (aerification) is done after preemergence herbicide applications as

compared to coring done before applications or no coring at all. — *J.M. Vargas, Professor of Botany and Plant Pathology, Michigan State University, East Lansing, Michigan*

## 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.** ■

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# NEW WEED CONTROL PRODUCTS

*New weed control products are making the lawn care professional's job easier and are producing better results.*

**T**here are several new developments in weed control programs that will be of value to landscape maintenance companies and lawn care operators. Today, more than ever before, our industry is realizing the benefits of our growth through the demand it has created for new products and the willingness of major chemical companies and formulators to fulfill this need (Table 1).

**ANNUAL GRASS PREEMERGENTS.** Turfgrass managers can now choose from a number of products — granular and liquid — to meet their business needs. This year you were able to choose from among several new pre-

emergence herbicides.

Pendimethalin is the newest herbicide registered for turfgrass weed control. It is available as a sprayable formulation from LESCO, Inc. as LESCO Pre-M 60 DG® and from O.M. Scott and Sons as Weedgrass Control 60 WDG® or as a granular formulation from Scotts as Turf Weedgrass Control 1.7 G®. University trials comparing preemergence activity of pendimethalin to other preemergence herbicides indicate it will control crabgrass, foxtail, goosegrass, barnyardgrass, fall panicum, and annual bluegrass in established lawn turfs when used according to label directions. It will also control prostrate spurge, yellow woodsorrel, chickweed, henbit, and hop clover.

Other developments in preemergence herbicides for 1986 involve new formulations of previously registered products. This includes: Balan 60 DF® and Team 2G®, XL®, and Surflan 4AS® from Elanco Products.

**ANNUAL GRASS POSTEMERGENTS.** There are few herbicides registered for selective control of grassy weeds in lawn turfs and these include the organic arsenicals such as MSMA, DSMA, MAMA, and AMA. Their use can result in unacceptable injury of bentgrass, annual bluegrass, and fine fescue. Postemergent control of crabgrass with organic arsenicals usually requires two to three sequential applications at seven- to 10-day intervals. For many landscape and lawn care operations, this procedure is not economically feasible.

There are two new herbicides being developed that look promising. Acclaim 1 EC® from Hoechst Roussel and Tridiphane® from Dow Chemical that selectively control annual grassy weeds, except annual bluegrass growing in cool-season lawn turfs.

Acclaim is registered for experimental use only in the United States. Commercial registration is anticipated for 1987. Acclaim controls crabgrass, foxtail, barnyardgrass, and goosegrass with a single, properly-timed application. Best control is achieved when Acclaim is applied to young, actively growing weedy grasses that have less than four tillers present at time of treatment. Applications applied to mature weeds or to weeds that are not actively growing may require sequential applications for complete control. If applied too early in the season, Acclaim will not prevent reinfestation from seed, since it does not have soil residual activity required to control weed seed emergence.



Yellow woodsorrel





*Wild violets*

Tridiphane controls seedling grassy weeds as they emerge, but will not control tillered crabgrass unless sequential applications are made. Tridiphane has soil residual activity which controls seedling weed emergence for about four weeks following an application. Tridiphane may be available on a limited basis in 1987.

**PERENNIAL GRASS POSTEMERGENTS.** There is a need in our industry for a method to selectively control unwanted grassy weeds such as bentgrass, tall fescue, quackgrass, dallisgrass, and nimblewill in established cool-season lawns. To date, there is no herbicide registered for this purpose. Many investigators have pursued this area of study, but have yet to find a suitable chemical for this purpose. Spot spraying unwanted patches with Round-Up® herbicide is still the most frequently recommended procedure.

**DICOT WEED POSTEMERGENTS.** The discovery of 2,4-D in the 1940s was a major breakthrough in lawn weed control and is widely used in herbicide mixtures today. Since then, other herbicides have been discovered and added to the list of herbicides used for broadleaf weed control.

Premixing 2,4-D with mecoprop and/or dicamba



*Close-up of a lawn where crabgrass and spurge are common service call complaints.*

broadens the spectrum of weed control and has been the basis for weed control programs in turf. Despite the success of two- and three-way herbicide mixtures, there are many weed species that are not controlled. Weeds including ground ivy, violets, prostrate spurge, and yellow woodsorrel have been difficult to control with the above

mixture of herbicides.

Super Trimec® and Turflon D® are new products that will control many difficult weed species. Super Trimec from PBI/Gordon is a low-volatile ester premix that contains 2 pounds 2,4-D; 2 pounds dichlorprop; and 0.5 pounds dicamba per gallon. It controls winter annuals including henbit, chickweed, and corn speedwell, as well as summer weeds such as spurge, woodsorrel, and ground ivy. Turflon D from Dow Chemical Company is a low-volatile ester premix containing 2 pounds 2,4-D plus 1 pound triclopyr per gallon. Triclopyr is very active on many weed species that are not controlled by 2,4-D; such as wild violets, ground ivy, and woodsorrel. Dow has recently introduced an amine formulation of triclopyr called Turflon II Amine® which contains 2.78 pounds of 2,4-D plus 1.11 pounds of triclopyr per gallon. When applying either of these products, use with caution on sensitive grasses since they can discolor bentgrass, annual bluegrass, fine fescue, and rough bluegrass.

Bromoxynil is a contact herbicide often used for control of annual broadleaf weeds in newly established lawns since it does not injure seedling grasses. Many lawn care operators have reported good control of summer broadleaf weeds with Buctril® or Brominal®. However, control of perennial weeds has not been com-

plete unless it is applied with a systemic herbicide such as 2,4-D. The label for Buctril from Rhone-Poulenc has been modified to allow for tank mixing with 2,4-D, mecoprop, and dicamba to provide better control of perennial weeds in established lawns.

**CONCLUSION.** The above discussion should help acquaint you with some of the new herbicide developments that have occurred over the past two years. Before selecting a herbicide, be sure you unders-

tand their characteristics. Herbicides vary in their spectrum of weed control and turfgrass selectivity. Always read the directions on the label before making an application. Consult your county extension office or state extension specialist for recommendations on weed control in your area. — K.A. Hurto ■

*The author is Senior Research Scientist, Chemical Research and Development, ChemLawn Services Corporation, Columbus, Ohio.*

Preemergence Herbicides	Company
Pre-M 60DG®	Lesco, Inc.
Surflan AS®	Elanco Products Company
Team 2G®	Elanco Products Company
Weedgrass Control 60WDG®	O. M. Scott & Sons
Postemergence Grass Herbicides	
Acclaim! 1EC®	Hoechst-Roussel Agri-Vet Company
Postemergence Broadleaf Herbicides	
Super Trimec®	PBI/Gordon
Turflon D®	Dow Chemical Company
Turflon II Amine®	Dow Chemical Company
Weedone DPC Amine®	Union Carbide Agricultural Products Corporation
Weedestroy Triamine®	Riverside Chemical Company

Table 1. New herbicide products introduced in 1986 for use by lawn care companies.

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# TURFGRASS NUTRIENT AND WATER USE EFFICIENCY

*Maintaining quality turf requires a realization that different turfgrass species have different nutrient and water use requirements.*

In recent years, considerable concern has emerged over the cost of maintaining quality lawn turf. Not the dollar cost, but the costs involved in the use of scarce resources such as water and energy and the perceived costs to the environment in the form of ground and surface water pollution by nitrate and pesticides. These concerns have come to rest at the doors of lawn care companies in the form of restrictive local ordinances, limits on domestic uses of pesticides and fertilizers, and calls for environmental impact statements from lawn care firms.

Golf course and park managers have also felt the pressure of public concern. A recent study conducted on Long Island, New York (Flipse and Bonner, 1985) found that the elevated nitrate levels present in the ground water under a golf course and a potato farm were of fertilizer origins. Using the abundance of a naturally-occurring heavy isotope of nitrogen ( $^{15}\text{N}$ ), they could distinguish between nitrate originating from human or animal wastes and that derived from fertilizer. Other research in Michigan (Rieke and Ellis, 1974) has demonstrated that nitrate will leach from lawn turf if heavy fertilizer applications are followed by excessive rain. They concluded that careful use of nitrogen fertilizer and water can reduce nitrate leaching from turf to levels which would pose no threat to ground water quality.

The responses to these challenges generally fall into three categories: utilizing alternative ground covers, reducing the rates of materials used, or improving the nutrient and water-use efficiency of turfgrasses. In those locations where water is chronically unavailable, the use of alternative vegetation and greatly restricted sod areas may be inevitable. In most urban and suburban communities, however, much can be done to improve the efficiency of turfgrass management practices, thereby reducing water and nutrient use and the potential for en-

vironmental deterioration. In this discussion, we will concentrate on the means by which turfgrasses can be adapted and managed to minimize their use of water and fertilizer elements.

## **EFFICIENT NUTRIENT MANAGEMENT.**

Already, much progress has been made in reducing the fertilizer rates used for lawn care. A decade or two ago, nitrogen was commonly used at 8 or more pounds per thousand square feet per season. Today most lawn care companies use between 3 and 4 pounds of nitrogen; some use even less. This reduced nutrient use is a consequence of better timing of fertilizer applications, the use of slow-release nitrogen forms, and the introduction of grass cultivars better able to respond to fertilizer materials. The question we

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*The question we should ask ourselves is: Can fertilizer rates be reduced further while maintaining quality lawn turf? The answer is, "Yes."*

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should ask ourselves is: Can fertilizer rates be reduced further while maintaining quality lawn turf? The answer probably is, "Yes."

One factor which distinguishes lawn turf from other crops is the way nutrient use efficiency is defined. For food crops, plant response to fertilizer or to any input is judged on the basis of yield obtained per unit of nutrient element applied. An upper limit undoubtedly exists at which a crop plant absorbs all the fertilizer nutrient applied and produces the maximum yield that is theoretically possible through the use of that nutrient. It is unlikely that such efficiency will be

achieved for any crop in the foreseeable future, but that is the goal for crop nutritionists. Such a standard for nutrient use efficiency is not valid for lawn turf because no harvested yield is involved. If clippings are not removed, no plant nutrients need be lost from the plant-soil system. The fact that fertilizer must be used in order to maintain quality turf, simply reflects the fact that nutrient losses do occur under current lawn management practices. Because the theoretical maximum efficiency of nutrient use by turf should involve little or no fertilizer use at all, there seems to be little improvement as yet.

In future articles, I will discuss the results of some current research into the identification of turfgrass characteristics which contribute to improved nutrient use efficiency. For now, I can only outline the sorts of plant characteristics which might make turfgrasses more efficient.

Since increasing nutrient use efficiency by lawn turf mostly involves reducing nutrient losses, efforts to improve efficiency should concentrate on those management and plant features which minimize loss. Some of these management practices which reduce nutrient loss are obvious and are already employed by most good lawn managers. They include:

1. Apply fertilizer only when the plant roots can absorb it. In the northern states, turfgrass roots are most likely to absorb nutrients during mid-spring and fall.
2. Use no more fertilizer in a single application than plant roots can absorb. In most lawn situations, use no more than 1-1/2 pounds/1,000 square feet on cool-season grasses.
3. Maintain soil pH in the 6.0 to 6.5 range. Neutral or slightly acidic soil pHs will be optimum for root growth of most grasses and will stimulate the soil microflora.
4. Retain clippings on the lawn. Clippings will decompose and recycle nutrients to the turf. If grass is mowed at





*The Joseph R. Gardiner residence, Wyoming, Rhode Island.*

the proper frequency, there should be no reason to remove clippings. Grass clippings do not contribute to thatch accumulation.

5. Promote deep rooting. Cutting at a height of not less than 2 inches will stimulate deeper root growth of most cool-season turfgrasses. Maintaining favorable soil aeration and depth also will contribute to deep rooting, but that can best be considered when a lawn is being established.

6. Control lawn pests, especially those which weaken the plant roots. Bare soil and damaged or inhibited roots cannot recover nutrients effectively.

7. Apply a balanced fertilizer rather than nitrogen alone. Nitrogen stimulates shoot growth at the expense of root development and can predispose grasses to infection by some pathogenic organisms. A balanced fertilizer reduces these nitrogen effects.

8. Use water so as to limit leaching of nutrients beneath the root zone. This involves applying irrigation water to bring the soil to field capacity but not beyond.

There are probably other lawn manage-

ment practices which will contribute to reducing nutrient losses from turf, but the above practices carry the greatest significance. It should be noted that many practices which have no direct nutritional objectives e.g., pest control and mowing schedules, can play an important role in the capacity of lawn grasses to retain nutrient elements.

**NUTRIENT EFFICIENT GRASSES.** Grass properties which contribute to increased nutrient use efficiency are not so obvious, but they may offer the greatest potential for reducing the losses of nutrients and the needs of lawn grasses for fertilizer. Again, these efficiency characteristics can be divided into those that improve the ability of a plant to mine the soil for nutrients, thereby preventing losses and those which determine the nutritional requirements of a plant. While less is known about these aspects of turfgrass nutrition than is known about management practices, our current understanding of nutritional physiology allows us to identify some promising areas for study.

Among those plant characteristics

which contribute to greater nutrient acquisition from the soil, we can consider:

1. The rate of root growth or root tip extension influences nutrient acquisition. This determines the rate at which a plant invades new soil and comes in contact with nutrients in the soil solution. Barber and his associates (Barber 1984) found this plant characteristic to predict best the uptake of potassium by soybean plants.

2. The distance between roots makes a difference. The more fibrous root systems will have less distance between individual roots and will be better able to remove nutrients from the soil solution because roots will contact more soil solution. This feature is of great significance in the uptake of nutrients which are less mobile in the soil, e.g., phosphorus.

3. There is an affinity between nutrient ions and the carrier proteins which transport these ions into root cells. Frequently designated as  $K_s$  or  $K_m$ , this parameter is equal to the soil solution concentration of a particular ion which will permit half the maximum rate of uptake. A low  $K_m$  value indicates a strong affinity between a nutrient ion and its root cell transporter.



The Km value also governs the minimum concentration of the soil solution from which a root can obtain the nutrient. This parameter is especially important in low fertility soils and for those nutrients whose release from the solid to the solution phases of the soil is a function of the soil solution concentration.

4. Root depth is important. The potential for nutrient leaching below the root zone decreases as the depth of rooting increases. The longer soil solution remains under the influence of plant roots, the greater the opportunity for nutrients to be absorbed by the plant. Because rainfall events vary in intensity, nutrient leaching will occur more frequently from a shallow root system than from a deep root system.

5. Energy is allocated to the roots. Plants which partition more of their photosynthetic product to roots will have larger, more active nutrient-absorbing surfaces than will plants which allocate more energy to shoot growth. Because extensive shoot growth is not a highly desirable property in a lawn grass, there are no adverse consequences associated with having greater percentages of available energy dedicated to root growth and function. Our research has shown that Kentucky bluegrass cultivars differ significantly in the amount of photosynthate allocated to roots (Mehall et. al. 1984).

6. Duration of root function has an influence on nutrient uptake. Cool-season perennial grasses have root systems which possess the potential for absorbing nutrients throughout the year. Consequently, turfgrass species or cultivars of a species which maintain root function during periods of drought, high or low temperatures, and competition with weeds, will provide less opportunity for soluble nutrients to be leached from the soil. This factor may be more related to management practices than to inherent growth patterns of turfgrasses, but stress tolerance clearly is related to efficient nutrient absorption by plant roots.

7. Nutrient absorption is affected by soil microflora relationships. It has been established that plant nutrient recovery is materially influenced by root associations with microorganisms. Rhizosphere and mycorrhizal relationships have been credited with markedly increasing plant acquisition of most plant nutrients, especially those present in low soil solution concentrations, e.g., phosphorous, nitrogen, and some micronutrients. While selecting and breeding soil microorganisms for improved plant associations is not without its special problems (Clarkson 1985), plants which release organic substrates from their roots and thereby encourage rhizosphere activity, may be more efficient in reducing nutrient losses from the soil. The ability of forest trees to survive on highly-leached tropical rain

forest soils depends absolutely upon the efficiency of nutrient recovery by mycorrhizal fungi (Went and Stark, 1968).

Other plant properties might contribute to greater nutrient recovery and thereby reduce losses, but these seven probably are the most significant. Any characteristic which enables the grass to lower the nutrient content of the soil solution more rapidly will reduce the quantity of nutrient which is free to leach below the root zone. Plants having these characteristics will be more efficient in their use of fertilizer nutrients.

**METABOLIC NUTRIENT EFFICIENCY.** Internal plant characteristics which contribute to increased efficiency in nutrient utilization are more difficult to identify. Here we must understand exactly how plants use nutrients in their various metabolic processes. The net effect of greater efficiency at the metabolic level will be reduced nutrient requirements for optimum growth. Lawn grasses selected

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*The net effect of greater efficiency at the metabolic level will be reduced nutrient requirements for optimum growth.*

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for these characteristics will use nutrient elements more efficiently once they are obtained from the soil, so all the management and acquisition factors already mentioned will be independent of metabolic efficiency. In other words, grasses highly effective in obtaining nutrients from the soil may be relatively inefficient in their metabolic use of those nutrients. Consequently, the most nutrient-efficient lawn grass will be the one which not only acquires nutrient elements effectively from low-fertility soils, but uses those elements efficiently in supporting plant growth.

With the exception of nitrogen, sulfur, and, to a limited extent, phosphorus, most mineral nutrients serve a catalytic function, i.e., they are not consumed in the synthesis of proteins or other structural and storage components of plant tissues. Most nutrients cycle within the plant and within metabolic pathways so a single atom is utilized many times. Consequently, the amount of an element needed for optimum plant growth may be small if it is turned over rapidly so it can perform its function repeatedly within a period of time. Several factors may contribute to the efficiency of nutrient use within turfgrass plants:

1. It may be affected by the efficiency

of transport from roots to shoots. Many micronutrient elements are transported not as free ions, but as organic chelates which move within the xylem from roots to leaves. Plants differ in their rate of chelate synthesis and discharge into the conducting vessels of the xylem in the roots and this is influenced by the amount of nutrient available (Brown and Chaney, 1971). This interaction between the rate of nutrient uptake by roots and the efficiency by which it is transported to shoots, may affect the general nutrient use efficiency of the plant.

2. The affinity of enzyme proteins for their activating metallic ions is another factor in nutrient use efficiency. This encompasses a great many specific enzymes and sites of nutrient function, but in general, if a metal co-factor or activator has a high affinity for the protein comprising an enzyme, less of that metal will be needed in the cell sap to insure that all enzyme molecules have their metal quota for maximum activity. Plant variation at this level is not well-documented, but is suspected in some cases. Emanuel Epstein believed this to be a likely explanation for a potassium inefficient mutant of tomato (1978).

3. Efficiency of nutrient use is also affected by senescence economy of leaves and roots. When short-lived organs (leaves, fine roots, and flowers) of a perennial plant age and begin to die, they mobilize most nutrients and transport them to more permanent organs (crowns, stem bases, and growing points). In this way, nutrients are conserved within the plant and are not subject to loss which can occur if they are returned to the soil. Most wild plants which grow in sites of low fertility practice this senescence economy to a great extent. Plants which have evolved under high fertility conditions are less likely to do so. Unfortunately, most of our improved turfgrasses were selected under optimum growing conditions and thus may exhibit little senescence economy. Potential for improvement here may be great.

4. Restricted nutrient transport to leaf blades also is a nutrient use efficiency factor. This is an efficiency factor which is unique to turfgrasses because they are subject to frequent partial defoliation i.e., mowing. Grasses which retain nutrient elements in leaf blades only to the extent needed for leaf function, while translocating most to meristematic areas which are not normally subject to removal during mowing, will be more efficient in their allocation and retention of plant nutrients. A preliminary study indicated that Kentucky bluegrass cultivars differed significantly in their phosphorus and potassium allocation to leaf blades (Mehall et. al. 1983).

(continued on page 62)



# BULB TOLERANCE TO POSTEMERGENCE HERBICIDES

*Crocus, daffodil, hyacinth, and tulip bulbs exhibit varying tolerances to postemergence, broadleaf weed control herbicides.*

It is a common practice in many regions of the northern United States to plant spring-blooming species in lawns. Crocus, tulip, daffodil, and hyacinth bulbs can be planted into turfgrass areas to bloom and mature in the spring before regular mowing of the grass is required. In more southern zones of the cool-season region, it may be necessary to mow around the foliage of these bulb species until they have begun to senesce. Yet, this planting method, known as "naturalizing," can be quite successful and seems to be growing in popularity (Figure 1).

The naturalizing of spring-blooming bulbs into turfgrass areas may present the lawn care specialist with a problem concerning the use of herbicides. Herbicides used for the

control of broadleaf weeds in lawns are known to be detrimental to many landscape plants and there have been a number of cases in the last few years where lawn care companies have been blamed for damage to bulb species.

There is little information in the existing literature on the effects of herbicides on spring-blooming species. Most of the information available relates to the use of pre-emergence herbicides in the production of bulbs (1,2,3,4). The objectives of the studies described in this article were to determine tolerance of spring-blooming species to fall applications of postemergence, broadleaf weed control herbicides used in lawn care programs and to determine response of these species to direct contact with the herbicides.



Figure 1. Daffodils and tulips "naturalized" in a Kentucky bluegrass lawn.





Figure 2. Normal flowering in field plots treated in the fall with Trimec® and the highest rate of dicamba.



On November 6, 1979, 21 field plots were established in a mature lawn of Kentucky bluegrass at the Iowa State University Horticulture Research Station. The soil on the site has a pH of 7.4 and an organic matter content of 2.3 percent. Five bulbs each of crocus (*Crocus vernus* L.) "White Crocus," tulip (*Tulipa* L.) "Flying Dutchman," daffodil (*Narcissus* L.) "Cavaliero," and hyacinth (*Hyacinthus orientalis* L.) "Carnegie" were placed in four rows of five bulbs each with a 2-inch diameter by a 10-inch-long bulb planting tool. Crocus bulbs were planted at a depth of 3 inches, tulips at 5 inches, hyacinths at 6 inches, and daffodils at 8 inches.

Sod plugs were replaced after each bulb was planted. Herbicide treatments were applied on November 9, 1979, with an air-powered, backpack boom sprayer. Treatments included a nontreated control, 2,4-D at 2 pounds active ingredient per acre (ai/acre); dicamba at 0.5, 1.0, and 2.0 pounds ai/acre; MCPP at 1.0 pound ai/acre; and Trimec® (a combination of 2.2 pounds per gallon 2,4-D, 1.1 pounds per gallon MCPP, and 0.2-pound per gallon dicamba) at 2 pounds ai/acre. There were 1.8 inches of rain recorded at the site within 14 days after application. Plots were arranged in three rows of seven plots each and the study was replicated three times.

No detrimental effects of the herbicide treatments on any of the four species were observed in the field test. All bulbs flowered normally and there was no epinasty

of flower stalks or distortion of leaves. Roots also appeared normal when the bulbs were removed (Figure 2).

Bulbs of each species were also planted in plastic pots containing the same soil as the field study on November 19, 1979, such that the tips of the bulbs were exposed to the surface. The same herbicide rates as used in the field study were applied to the surface of the pots with a mist applicator on November 21, 1979, and the pots were placed in a cooler at 48 degrees Fahrenheit. On February 2, 1980, the pots were removed from the cooler, placed on a greenhouse bench, and maintained at 60 degrees.

In the greenhouse, where the herbicides were applied directly to bulb tips, there were many observable effects on growth and development. Hyacinths were unaffected by 2,4-D, but bulbs treated with MCPP produced plants that were stunted (Table 1) and produced abnormal blooms. Trimec resulted in abnormal growth with multiple stems. Dicamba had no effect at the 0.5 pounds ai/acre rate, but resulted in abnormal growth at the 1.0-pound ai/acre rate, and severe distortion of growth at the 2 pounds ai/acre rate, including an elongation of stems (Table 1).

Tulips were the species least affected by the herbicide treatments. Only dicamba at 1.0 and 2.0 pounds ai/acre resulted in any detrimental effects. These slight distortions of growth, although readily visible, were not severe enough to prevent flowering.



Above, Figure 3. Distortion of above-ground daffodil growth with increasing rates of dicamba. Below, Figure 4. Root inhibition with increasing rates of dicamba in the greenhouse study.





Daffodils were unaffected by 2,4-D and MCPP. Trimec elongated the plants (Table 1), but the blooms were normal. Dicamba stunted the plants severely at the 1.0-pound ai/acre rate and inhibited blooming and severely distorted and elongated plants at 2.0 pounds ai/acre (Table 1, Figure 3).

Crocuses were the most affected of the four species. The 2,4-D resulted in abnormal growth and inhibition of flowering. The MCPP had no effect. Trimec did not stop flowering, but did result in some distortion of growth. Dicamba inhibited flowering at the 0.5 pounds ai/acre rate. At the 1.0 and 2.0 pounds ai/acre rates plants were stunted (Figure 2) and flowering was inhibited.

When greenhouse plants were harvested, all species treated with dicamba at 1.0 and 2.0 pounds ai/acre had poorly developed root systems (Figure 4). Roots from other treatments appeared comparable to those of controls.

The four herbicides used in this study, when applied to lawns in the fall where bulbs have been planted at the recommended depth, should have no effect on spring blooming. However, the results of the greenhouse study indicate that the herbicides used in this trial may cause distortion, inhibition of flowering, and root

Herbicide Treatment	Rate lb ai/acre	Hyacinths	Tulips	Daffodils	Crocus
Control	—	4.3z	6.4	10.1	4.4
2,4-D	2.0	3.5	6.0	10.2	3.8
MCPP	1.0	1.9	8.1	10.4	4.3
Trimec®	2.0	2.8	8.1	12.9	3.4
Dicamba	0.5	3.5	6.9	10.6	5.2
	1.0	4.7	5.6	5.0	2.0
	2.0	6.4	8.4	12.4	3.0

Table 1. Effects of herbicides on plant height of the four species in the greenhouse trial 28 days after removal from the cooler. \*LSD 0.05 for the comparison of herbicide means within a species = 1.7.

pruning of the species studied if the materials come in contact with the bulbs. Where direct contact with plants might occur, such as when spring herbicide applications are made to lawns, it is also likely that damage would result, and every attempt should be made to avoid contact with these species. — Nick E. Christians and Leo R. LaSota ■

The authors are Associate Professors of Horticulture at Iowa State University, Ames, Iowa, and the University of Maryland, College Park, Maryland, respectively.

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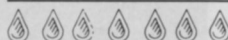
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Betasan® (Stauffer)	12	11.8	20.3	0.5
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# YOU AND YOUR BANKER

*Do you feel threatened by the prospect of applying for a bank loan? If so, maybe you need to do some more preparation before you see your banker.*

**Y**our palms are cold and clammy. Beads of perspiration stand out on your forehead. These symptoms could be caused by an ailment or a stressful situation. Applying for a bank loan could be one such stressful situation. Much of the stress can be removed from this situation by careful preparation prior to meeting with the loan officer.

Actually, the best time to prepare yourself for a loan proposal is long before you need the money. If possible, you should establish a relationship with the loan officer at a particular bank when setting up a checking account or some other routine banking procedure, according to Fernando Bensuaski of Bensuaski, Young, and Delana, Boise, Idaho. Introduce yourself to the loan officer, invite him to your place of business, and give him some financial statements. Then keep the loan officer apprised of your company's progress by stopping by the bank periodically. That way, Bensuaski says you can gain your banker's confidence.

"It is always more difficult for anyone to turn a loan down if you know the people," says Bensuaski. "So if you have a relationship, you are going to have a more friendly audience and an audience that



will have a tendency to interpret the facts in your favor."

As in any relationship, Bruce Lansaw, Senior Vice President at The First Huntington National Bank in Huntington, West Virginia, reminds us that each party should scrutinize the other. "You need to evaluate the bank's reputation," says

Lansaw. He says it is a good idea to talk with other businessmen who bank in the community and ask them about how their bank has treated them and whether their bank is reasonable or not. "Is their opinion based on a specific relationship with an individual at the bank," asks Lansaw, "or do they feel the bank has an institutional commitment." After you have checked out the bank's reputation, Lansaw says it might be a good idea to talk to more than one bank. Your local chamber of commerce may also be of some help, according to Lansaw. They may be reluctant to advise you to go to one bank or another, but the chamber of commerce might be willing to recommend some banks that deal in small business loans.

If you are presently banking at a particular lending institution where you have a considerable banking history and you are happy with their service, Lansaw says you will have a built-in advantage when submitting a loan proposal there. Lower interest rates on loans at other banks may look tempting, but Lansaw says you should beware of added costs built into them. Some low-interest loans can cost you more in the long-run because of the way the loan is structured

*(continued on page 41)*



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## YOU AND YOUR BANKER

(continued from page 38)

or because of initial fees or fees charged during the course of the loan.

Bensuaski says lending rates are generally competitive and vary little from bank to bank. He says it is more important to find a bank that understands small business. "Finding a loan officer who understands what business is all about is more important than anything," says Bensuaski. "At first you won't know who they are, so you will have to go to several banks. If you are pressed for time, go to all of them at the same time." For home financing, the bank with the lowest lending rate is probably the best bank, but Bensuaski says for business financing you should go to the bank that can provide the best support.

Once you have found the bank you want to deal with, you should know up front what the loan officer will expect from you. First of all, you should submit a general description of your business. Describe the type of service you provide your customers. Lansaw says you should outline the history of your business. If it is an existing business, how do you intend to operate it? What form of business ownership will you (or do you) have — a proprietorship, a partnership, or a corporation? What is the educational and professional background of the company's management team?

Lansaw says the loan officer will want to know how much of your own money you intend to contribute to the deal. Do you have any collateral to put up for the loan? If it is an existing business, you should provide past financial statements that corroborate what you have claimed in your background information on your company. This information will tell the banker if you have been making money and there is cash flow sufficient to repay the loan. You should also explain in writing exactly how you intend to spend the loaned money, according to Lansaw.

A personal financial statement will also be required. "In most cases, personal guarantees are required of the business owners," says Lansaw. "If it is an established business, there are some independent credit reporting sources that can be checked, such as Dunn and Bradstreet, but it is extremely helpful to have some references." Bensuaski notes that banks will also require information on how the loan will be repaid and what alternate sources of repayment are available if your primary source falls through.

It is very important that your loan proposal contain all the essential information, but Bensuaski says it is also important that you stage your proposal like a salesman selling a product. How you will "sell"

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your loan proposal depends on why you need the money, the form of the loan, and the disposition of the lending institution. "We have presented the same loan situation to different lenders and prepared different packages because we knew one of the lenders liked to see one thing emphasized and the other one liked to see something else emphasized," says Bensusanski.

Lansaw, on the other hand, says his bank is more concerned with the substance of the loan than the form of the loan. "It does not turn us off if somebody comes walking in and says, 'I am in a capital-intensive business and I need to buy a new truck. My bank is not being reasonable, in my opinion, about how they want to do this thing. Here is what I want to do. What is the best way to go about it?'"

Lansaw realizes that people in such a service-intensive industry are busy when they are on the job and busy planning their business strategy when they are off the job. "How many of them are going to want to sit down and go through this drill on their own?" asks Lansaw. However, Lansaw admits that a polished loan presentation will make a good impression when trying to establish a business relationship with a bank.



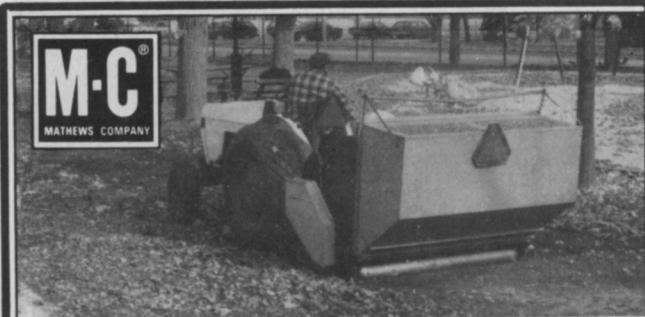
Fernando Bensusanski

Once you have secured the loan, the lending banker should remain a part of your business life. You will file an annual financial report with the loan officer and that report should be accompanied by a narrative which contains your business plan for 1985, how the year turned out, and your projections for the 1986 season. Lansaw says you should close the narrative with an offer to go over any unclear details of the report with the loan officer.

Any substantial change in the financial condition of your company should also be brought to the banker's attention, according to Lansaw. "Nothing is more embarrassing to a loan officer than to establish a significant relationship and then end up with egg on their face because they weren't aware of some serious deteriorating conditions in a company," says Lansaw. "The bank is a lot more amenable to working with you if they are aware there are some problems. The bank may be in a situation to offer some suggestions based upon having seen the same circumstances among other business loan customers."

A certain amount of on-going dialogue is necessary between the business owner and the banker. "Bankers are somewhat sensitive to the business market in this regard because, generally speaking, our small business customers want us to be conversant about their industry and the particular problems and circumstances of their industry," says Lansaw.

"In our bank, we try to develop some degree of specialization within industries. If you have someone apply for a loan of some substance in an industry you are not familiar with, you are going to spend more time underwriting that thing than if you have already developed the expertise



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and know some of the pitfalls in lending to that industry. I suspect that some banks may have some particular expertise in lending to lawn care companies."

If your loan proposal is rejected by a bank, don't despair. It is time to analyze your proposal and identify the weaknesses that influenced the rejection. Proposals are often rejected because they are poorly thought-out or are unrealistic, according to Lansaw. You may also be rejected because of the way you run your company. Remember that bankers are members of your community and may be aware of your business practices. "A particular director may say, 'I had this service and it didn't work. I gave them the benefit of the doubt. I have talked to 12 other people who have had the same problem, so the company must be losing customers left and right.' That would be some input that a loan officer would listen to," says Lansaw.

Bensuaski cites some other reasons a loan proposal might be rejected. The company might be asking for more money than they can reasonably expect to pay back. They are trying to grow faster than their management ability will let them. They are trying to borrow money without having any capital invested in the deal at all. In this case, the bank would experience too much risk.

More often than not, the applicant has probably fallen short in some way. Mistakes are easy to make and some common shortcomings include, insufficient downpayment, poor organization, or a lack of profitability, according to Bensuaski. "You need to find the reason and then find a way to circumvent those reasons or defend them," says Bensuaski. "You can either go back to the same lender with a different situation, or go to a new lender and don't repeat the same mistakes you made with the first lender."

The same lender who turned you down once could reconsider your loan proposal if you rectify the problems cited by the lender. Perhaps your application was turned down because you had insufficient funds invested in the deal. If you come up with more cash through relatives or some other source, the bank will probably make the loan. "The problem you run into in going back to the same lender is if the lender turns down the loan for some very fuzzy reasons, like inadequate management or you are growing too fast, those are pretty tough to go back on," says Bensuaski.

Borrowing money for a small business need doesn't have to be a stressful situation. The key to defusing the situation is adequate preparation before you go to the bank for the loan. — *Tim Weidner* ■

*The author is Managing Editor of ALA magazine.*

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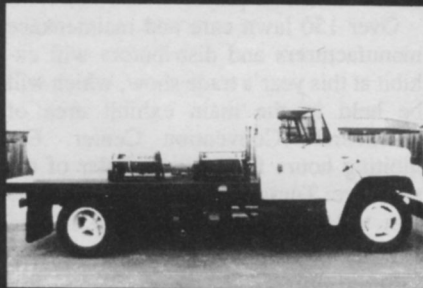
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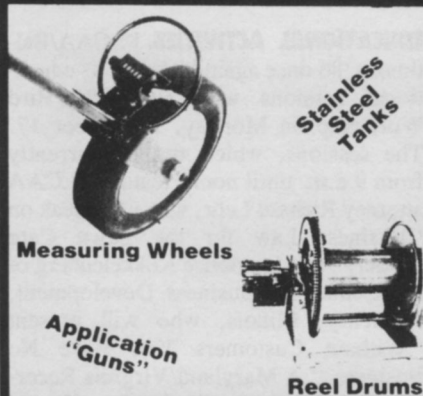
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# BIG BUSINESS IN BALTIMORE

*It's off to the East Coast for four days of industry exhibits, educational sessions, and business meetings that will provide you with information on how to strengthen your lawn care operation in the coming year.*

**B**altimore is urban renaissance at its finest. It's rich in American history, yet full of contemporary style. It's a blend of ethnic communities — exciting, traditional, charming, dazzling. And best of all, it's the site of the Professional Lawn Care Association of America's (PLCAA) Seventh Annual Conference and Show, which runs November 17-20.

Located in a fertile East Coast lawn care market, Baltimore should attract a large number of industry professionals to this year's PLCAA show. "We're looking for a good crowd," says Jim Brooks, PLCAA Executive Vice President. "We had about 1,200 qualified buyers last year and I'm hoping for at least 1,500 qualified buyers this year."

The association would also like to attract a lot of non-members to its conference. "We're hoping very much that we can get a great number of non-PLCAA members to come, observe, and get a better feel for what this organization is and how it can be helpful to them," says Brooks.

Attendance, however, is not the only aspect of the convention that's growing. This year's trade show is about 22 percent larger than last year's exhibit, according to Brooks. "We've got a lot of new, first-time manufacturers and suppliers," he says.

To give lawn care operators the opportunity to fully appreciate the expanded exhibit, PLCAA has decided to open the trade show floor on Monday afternoon, a day earlier than previous conferences. The exhibit hall will be open for four hours following the Early Bird Workshops, from 1:30 to 5:30 p.m., exclusive to any educational sessions or other scheduled PLCAA events.

"You can only go around a trade show floor so fast," Brooks explains. "Back

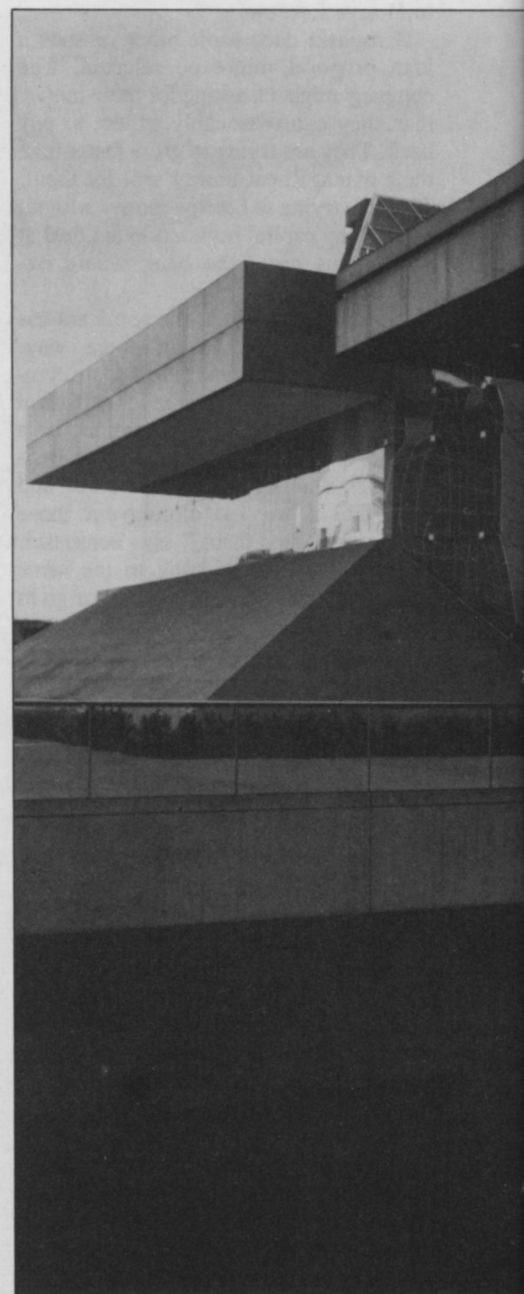
in the old Indianapolis days, three or four years ago, you could whiz around the trade show in nothing flat." Today, he says, attendees need more time in order to see all the displays.

Over 150 lawn care and maintenance manufacturers and distributors will exhibit at this year's trade show, which will be held in the main exhibit area of Baltimore's Convention Center. Exhibiting hours for the remainder of the show are: Tuesday, November 18, 10:30 a.m. to 1:30 p.m. and 3:30 to 6 p.m.; and Wednesday, November 19, 9 a.m. to 5 p.m.

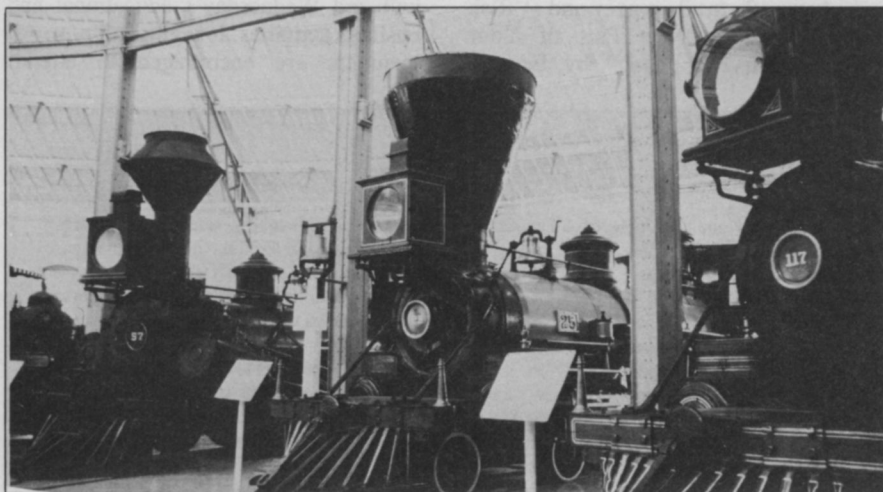
On Thursday, November 20, many of the exhibitors will set up their spray trucks, mowers, aerators, thatchers, spreaders, and specialty vehicles at Carroll Park in downtown Baltimore for the show's Outdoor Equipment Demonstration, which will be held from 9 a.m. until noon. "Lawn care operators will gain some hands-on experience and really be able to view the equipment in operation," explains Brooks. "You can't dig holes on a concrete trade show floor. This outdoor demonstration will give attendees one more look at equipment before making a decision to buy."

**EDUCATIONAL ACTIVITIES.** PLCAA/Baltimore '86 once again kicks off its educational sessions with an Early Bird Workshop on Monday, November 17. The sessions, which run concurrently from 9 a.m. until noon, feature PLCAA attorney Richard Lehr, who will speak on "Business Law for the Lawn Care Owner;" and Lawrence Kokkelenberg of the Center for Business Development, McHenry, Illinois, who will present "Without Customers You Have No Business." A Maryland/Virginia Recertification Seminar will also be offered.

Tuesday's educational line-up begins







(left) The B&O Railroad Museum is a must-see for all train lovers. (bottom left) The Baltimore Convention Center Complex reflects the buildings of downtown Baltimore.



with the conference's keynote address given by Dr. Charles Garfield, author of *Peak Performers — The New Heroes of American Business*. You won't want to miss this opening session at 9 a.m. on November 18 as Garfield is recognized as the world's leading authority on maximizing human performance. Over 18 years, in America's longest business study of its kind, Garfield identified the skills and strategies of more than 1,500 high achievers, comparing those in business to their counterparts in science, sports, and the arts. Find out how peak performers, whether in management, sales, marketing, or technical positions, are made — not born — in this inspiring speech.

Tuesday afternoon, from 1:30 to 2:30 p.m., Dr. Elizabeth Whelan of the American Council on Science and Health, New York, New York, will present, "Of Ants and Elephants: Trivial Pursuits of the Extreme Environmentalists," to conference attendees. Whelan is author of the book, *Toxic Terror*. Following her presentation, from 2:30 to 3:30 p.m., Ford Rowan of Rowan and Blewitt, Washington, D.C., will address lawn care businessmen on "Countering Media Bias Against Lawn Care Chemicals." A former NBC News correspondent, Rowan is currently a lawyer, consultant, journalist, and university professor.

Tom Jadin, of the Winnebago Mental Health Clinic in Oshkosh, Wisconsin, opens the educational sessions on Wednesday, along with Dr. Jack Hall of the Virginia Polytechnic Institute and State University, Blacksburg, Virginia. Jadin will present "Team Building" from 9 to 10 a.m., concurrently with Hall's address on "Agronomic Compromises in Lawn Care Programming."

"New Technology: Low Volume Spraying" by Tom Jessen of Perma-Green Supreme, Merrillville, Indiana, follows the opening sessions from 10 to 10:30 a.m. From 10:30 to 11 a.m., Dick Hanson of Growmark, Bloomington, Illinois, presents "Recycling: A Future Imperative."

Richard Smith of the Toro Company, Minneapolis, Minnesota, will present "Mowing Equipment Maintenance: Three Case Histories for Success" from 10 to 11 a.m. He will be followed by a session titled, "Meeting of Lawn Care Companies: What We Must Do To Protect Our Industry," given by Jim Wilkin-

son, Old Fox Lawn Care, East Providence, Rhode Island; PLCAA President James Marria, Perma-Green Lawn Company, Boise, Idaho; and Jim Brooks.

After lunch on Wednesday, conference goers return to the classroom for two

more dynamic educational sessions: "Reducing Your Workload Through Delegation," by Lawrence Kokkelenberg, 2 to 3 p.m.; and "Risk Management: A New Part of Your Business Survival Plan," by Edward

Junia, The Andersons, Maumee, Ohio, 3 to 4 p.m.

The annual PLCAA Business Meeting will end Wednesday's educational and business activities. It begins at 5 p.m. All members are encouraged to attend.

## WALKING THE FLOOR

**T**he trade show at this year's Professional Lawn Care Association of America Conference and Show in Baltimore, Maryland on November 17-20 will feature more exhibitors than any other show to date. Jim Brooks, PLCAA Executive Vice President, says this year's trade show is about 22 percent larger than last year's show. Over 150 manufacturers and distributors will be displaying their wares at the Baltimore Convention Center.

Every year many exhibitors feature "show specials" or spotlight new products that will be available for this buying season. Since there will be more exhibitors at this year's show, lawn care businessmen can expect to find more equipment and chemical bargains than ever before. We have compiled a listing of the trade show items that conference goers should keep an eye out for in Baltimore. While this listing contains all of the show specials and new products that we were aware of at press time, a few great deals may have been slipped in at the last minute, so scan every booth!

**Aero-Motive**, booth 924.

**Agro Chem, Inc.**, booth 1114.

**Agrotec, Inc.**, booth 1120: This company has a new lawn care spray rig for 3/4- and 1-ton pickups which has a 150 or 200 gallon dual tank and flush system.

**ALA Magazine**, booth 619: We are sponsoring a contest in which an "Award for Professionalism" will be presented. Pick up nomination forms at our booth.

**Americalist/Division of Haines**, booth 143.

**American Arborist Supplies, Inc.**, booth 922.

**American Association of Yellow Pages**, booth 254.

**American Pelletizing Corporation**, booth 145.

**Andersons, The**, booth Island X: This company is introducing some new products into their Li-quaLine™ system, including N-Sure™ slow-release fertilizer.

**Aquashade, Inc.**, booth 264.

**Aquatrols Corporation of America**, booth 231.

**B&W Sales and Marketing (Encap)**, booth 1118.

**Baker Company, The J.E.**, booth 459.

**Billy Goat Industries, Inc.**, booth 1100, 1102: This company will feature a new tailgate-mounted TR500 Truck Loader for transferring and mulching leaves from curb to pickup truck.

**Brian R. White Company, Inc.**, booth 453.

**Broyhill Company, The**, booth 1000A, 1000B

**C&S Turfcare Equipment, Inc.**, booth Island BB

**Cado Computer Systems**, booth 1122

**Center for Business Development**, booth 357

**Chempath, Inc.**, booth 356: This company will

be giving away one free case of "The Grid System" with each five ordered.

**Chevron Chemical Company**, booth 1000.

**Ciba-Geigy**, booth Island O: Updated information on diazinon will be available as well as technical information on Banner®.

**Classen Manufacturing**, booth 618, 719: This company will be featuring their new plug aerator which offers more holes per square foot. They will also be offering 5 percent price discounts during the show.

**Cleary Chemical Corporation, W.A.**, booth 418, 420.

**Color Way, Inc.**, booth 926: The company is featuring a new full color brochure designed with your own personal photography. Also, several other brochures have been added to their line.

**Cordage Packaging**, booth 1017.

**Cummings and Bricker, Inc.**, booth 820, 921.

**Cushman/Ryan/OMC Lincoln**, booth Island N: The company will be introducing the new Ryan Mataway Overseeder, a new slitseeder with a 19-inch swath, adjustable depth control, and variable spacing.

**Denver Leasing and Manufacturing**, Island J, M: The company will be introducing a new short-wheel base 2-ton truck with an overall length under 20 feet.

**Dirt and Chips, Inc.**, booth 149.

**Distribution Management**, booth 612, 713: This company will be giving a free Okidata printer to anyone who purchases their CLC 1 lawn care software during the show. Also featured will be their updated version of CLC 1.

**Doggett Corporation**, booth 353.

**Douglass Screen Printers, Inc.**, booth 1104.

**Dow Chemical U.S.A.**, booth Island A: The company is introducing its new Turflon II Amine® broadleaf herbicide and Dursban® WSP.

**DuPont Agricultural Products**, booth 252.

**Durand Wayland, Inc.**, booth 262.

**Earthway Products, Inc.**, booth 1108: This company is featuring a new broadcast spreader with 100-pound capacity.

**Elanco Products Company**, booth Island C: The company will be offering show specials on Surflon® preemergent herbicide for warm-season turf and Team® preemergent herbicide for cool-season turf.

**Encap Products Company**, booth 601, 603: Green Garde is introducing the new Spiral-4 hose with 600 psi; also new hose reels, hose reel swivels, fittings, clamps, and clamp tools.

**Estech Branded Fertilizers, Inc.**, booth 113.

**Exmark Manufacturing Company**, booth 233, 235: The company is offering new features on its 32-inch commercial mower and a new "V" design deck on its 48-inch commercial mower.

**F.D. Kees Manufacturing Company**, booth Island V: This company will be featuring two new engines on their 21-inch mower. Both engines are two-cycle, 4 horsepower and are manufactured by Briggs and Stratton and Tecumseh.

**Feldmann Engineering and Manufacturing**, booth 147: Look for their new one-man earth auger with the Tecumseh TC 300 engine and improvements to their walk-behind aerator which includes a heavier frame and pneumatic tires.

**Fermenta Plant Protection Company**, booth 312, 314: The company will be introducing and marketing new 2-1/2-gallon and 55-gallon containers of Dacthal Flowable Herbicide®, in addition to its Dacthal W-75® formulation.

**FMC Corporation**, booth Island P.

**Forestry Suppliers, Inc.**, booth 1011.

**Four Star Agricultural Service**, booth 918.

**Frankco Industries, Inc.**, booth 352: The company will be offering "show discounts." Stop by and roll the dice to get yours.

**Gandy Company**, booth 1009.

**Garfield-Williamson**, booth 111.

**Georgia Marble Company**, booth 131.

**GNC Pump, Inc.**, booth 461: This company is introducing a newly designed plastic swivel rated at 400 psi, a new brass swivel, a 20-gallon-per-minute Triplex piston pump, and the Mighty-Meg tree spray gun.

**Graham Lawn Equipment, Inc.**, booth Island T: The company will have two new spray units on the floor; a 1,200-gallon, three-compartment tank mounted on a 2-ton International truck, and a 600-gallon tank with a 100-gallon drop tank on a 1-ton truck. Both rigs will be specially priced for the show.

**Grasshopper Company, Inc.**, booth 225, 227.

**Gravely International, Inc.**, booth Island H.

**Great Northern Equipment Company**, booth Island Y: The company will be introducing a new portable skid-mounted unit with a 200-gallon tank which can also be mounted on a trailer.

**Great Salt Lake Minerals**, booth 906: This company will be introducing a new improved formulation of its Freezgard ice-melting product.

**Green Pro Services**, booth Island U.

**Hahn, Inc.**, booth Island B: The company will be introducing two new aerifiers. One is a three-point hitch type and the other is a pull-behind model. Both models are 35 inches wide and cultivate a full 33-inch swath.

**Hannay and Son, Inc., Clifford B.**, booth 334: The company will introduce its new C16-10-11 Portable Cable Reel designed for increased speed and convenience in running electrical cable for power equipment.

**Hoechst-Roussel Agri-Vet**, booth 130: The company will have information on the soon to be registered new postemergence herbicide Acclaim®.

**Homestead Corporation, The**, booth 1005.

**Howard Johnson's Enterprises**, booth 348.

**Howard Price Turf Equipment**, booth Island S.

**Imler Industries, Inc.**, booth 1006: This company will be offering a 10 percent discount on all orders placed at the show and will also be raffling-off a black and white television.

**Imperial Nurseries**, booth 724, 825: The com-

(continued on page 55)



Among the various items on the meeting's agenda, PLCAA will be announcing a public relations program the association recently established. "We're going to tell the membership what we're going to try to do over the next few months," explains Brooks, "and we're going to talk about some of the things that we'll be asking them to do."

**SPECIAL HIGHLIGHTS.** Before getting into the heat of the week's activities, make sure you plan to greet old friends and meet new ones at the PLCAA/Baltimore '86 Early Bird reception. Refreshments will be served from 6:30 to 8:30 p.m. Monday, November 17 in the main ballroom of the Omni International Hotel, PLCAA/Baltimore '86 headquarters.

Spouses will be able to continue mingling on Wednesday's trip to Annapolis, the capitol of Maryland and a charming colonial waterfront city. Before leaving Baltimore, however, the group will visit the beautifully renovated Dollar House. Comfortable walking shoes are a must for the rest of the trip as the program includes tours to the Maryland State House, William Paca House and Gardens, and the United States Naval Academy. Lunch will be at the historic Maryland Inn, and plenty of time will be left for shopping. The

group leaves the Omni Hotel at 9:30 a.m. and will return at 4 p.m.

**ALL AROUND BALTIMORE.** The Mid-Atlantic Coast has so much to offer its visitors, and Baltimore is in the heart of it all. Nestled alongside the Chesapeake Bay, Baltimore's waterfront is dotted with an array of boutiques, restaurants, museums, and art galleries. Among them is Harborplace, a unique collection of over 140 specialty shops and food stalls which is housed within two glass-enclosed pavilions on the Inner Harbor. The Pratt Street Pavilion is home to many gift and clothing stores, while the Light Street Pavilion boasts a variety of ethnic and gourmet foods as well as a fine selection of small boutiques.

For more shopping and dining, stroll along Baltimore's Skywalk, an elevated pedestrian walkway which winds through the heart of downtown to the Inner Harbor. PLCAA conference goers can meander down the Skywalk to the Baltimore Convention Center each morning, passing colorful food courts, local retail shops, and other hotels along the way.

One of the most striking structures along Baltimore's harbor is The National Aquarium. Containing 5,000 species of

aquatic life and over one million gallons of water, The National Aquarium is one of the largest and most sophisticated facilities of its kind in the world. The Aquarium features more than 12 major theme exhibits, including the Rain Forest, an Atlantic Coral Reef, and the recently restored Children's Cove. Ramped bridges carry visitors on moving belts up to each exhibit level.

For a true taste of Baltimore's heritage, stroll the streets of the city's many ethnic neighborhoods. Fells Point, once a bustling port community, is now registered as a National Historic District. Many of the area's 18th century buildings, which used to house the period's sail-makers, dock workers, and ship builders, have been restored as residences, pubs, and antique shops. The cobblestone streets of Fells Point are just a mile southeast of the Inner Harbor.

Given a sunny, cloudless afternoon, Federal Hill is the place to be to capture a spectacular view of downtown Baltimore and its harbor. The brick sidewalks along the tree-lined streets, combined with the elegant 18th and 19th century townhouses, make this charming neighborhood a delight to walk around.

Little Italy is only a short walk to the east of the National Aquarium. The

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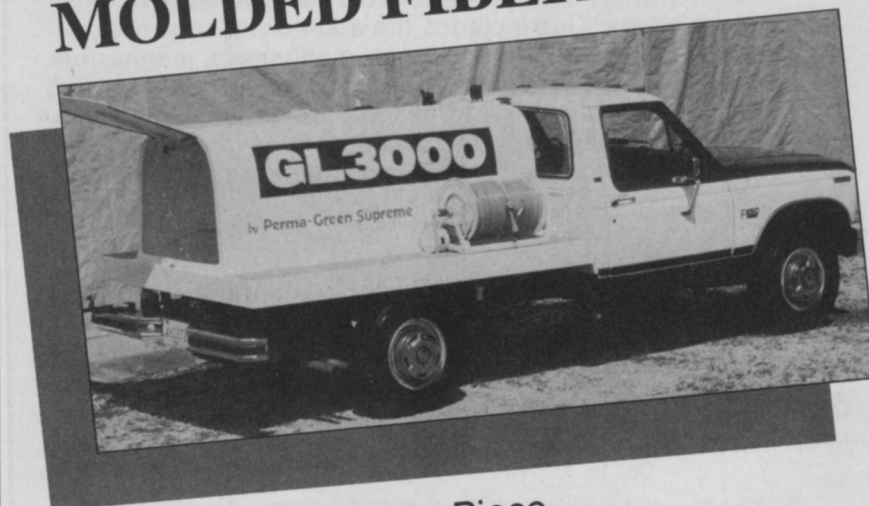
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neighborhood's roots date back to the 1840s when Italian immigrants migrated from Genoa to Baltimore's shores, only to be a resting point while transportation was arranged to take them west in search of gold. However, many Italians waiting for passage to California lost their money or inspiration, and settled for jobs as cooks and laborers in the hostleries or on the railroads in Baltimore. Today, Little Italy is a colorful neighborhood where visitors come to feast on authentic Italian cuisine and frolic among the neighborhood's Old World charm.

Mount Vernon Place is Baltimore's

most elegant square with the nation's first formal monument to George Washington at its center. Fountains and sculptures adorn this park, which is surrounded by many of the city's most beautiful townhouses.

For a comprehensive list of things to see and do in Baltimore, consult with the Baltimore Convention Bureau, Suite 14, Terrace Level, One East Pratt Street, Baltimore, Maryland 21202; 301/659-7300. — *Vivian F. Rose* ■

*The author is Assistant Editor of ALA magazine.*

## TASTE A BIT OF BALTIMORE

**S**eafood lovers rejoice! You're sure to get your fill of crab cakes, mussels, bouillabaisse, shrimp, scallops, mesquite-broiled fish, and other hearty seafood fare at this year's PLCAA convention in Baltimore. In addition to offering the best in seafood, Baltimore boasts a wide variety of ethnic cuisine within its colorful neighborhoods. Stroll through the city's seven markets and enjoy the sights, aromas, and tastes of fresh produce, meats, cheeses, and pastries. If you're looking for more than a nibble here and there, make sure you walk along North Charles Street, which takes you through the city's "restaurant row." Whatever your culinary desires, Baltimore is ready to please the palate. So peruse the following dining selections, consult your hotel concierge, or be adventurous and stumble upon your own tummy-tempting eatery. Just remember to get out there and taste a bit of Baltimore!

**The Admiral Fell Inn Restaurant**, 328 South Broadway, Fells Point, 522-7377. Dine in the traditional elegance of the early 1800s; eclectic American cuisine and premium wines by the glass.

**Burke's Restaurant**, Light and Lombard Streets, 752-4189. Bustling, pub-like atmosphere in the heart of downtown; Maryland seafood, steaks, burgers, and colossal onion rings.

**Chart House**, 601 East Pratt Street, Pier 4, 539-6616. Located on the water's edge; stunning nautical environment in a bevy of beautiful rooms; steaks, prime rib, and seafood; raw bar on the deck.

**Chiapparelli's Restaurant**, 237 South High Street, Little Italy, 837-0309. Popular southern Italian restaurant offering homemade pastas in a friendly atmosphere; specializing in veal and seafood.

**City Lights**, Light Street Pavilion, Harborplace, 244-8811. Fresh seafood served in an informal setting with a view of the Inner Harbor; bouillabaisse a house special.

**Jacqueline**, Omni International Hotel, 752-1100. European-style bistro, broad range of items including grilled salmon, smoked scallops, and lamb chops served in a festive atmosphere.

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# PLCAA ROOTS

*The Professional Lawn Care Association of America will soon be seven years old and is an association that has come a long way from some humble beginnings.*

**O**n the eve of the Seventh Annual Professional Lawn Care Association of America (PLCAA) Convention and Trade Show, we thought it would be fitting to review the association's history to see where we have been and hopefully get some insight into where the association is going. We spoke with some of the industry leaders who were instrumental in getting the PLCAA off the ground. Each individual we contacted told us some of the same basic facts about the origins of the PLCAA, but each also related some interesting tidbits that the others had not mentioned. That way, the recollections of some of the PLCAA's founding fathers could be woven together to tell the story of the birth of the association.

A few years before the first organizational meeting was held, a small group of people began to talk about forming a professional association. Jerry Faulring, President of HydroLawn, Gaithersburg, Maryland, was one of those people. In January 1979, Faulring recalls that he, Bob Earley (then Associate Publisher of *Lawn Care Industry* magazine), and Ron Giffen, Vice President at LESCO, Inc., met at two industry trade shows. The three met at the Maryland Turfgrass Conference and the Virginia Turfgrass Conference and had some "casual discussions." Faulring says these two meetings ignited the spark that soon became the PLCAA.

Earley then got things rolling by inviting to a meeting, those industry businessmen whom he believed would be interested in forming an association, according to Faulring. On June 14, 1979, representatives of 23 lawn care firms met at the Cincinnati-South Holiday Inn in Ft. Mitchell, Kentucky to lay the foundation for a lawn care association. At the meeting, another key player entered the picture. Doug Baker, President of Leisure Lawn addressed those in attendance on operational reasons for forming an association, while Faulring then spoke on government and regulatory concerns.



*Where we have been. The trade show floor of the First Annual PLCAA Conference and Show, Louisville, Kentucky, November 12-14, 1980.*

Faulring got about 10 minutes into his presentation when Ron Collins, President of R.W. Collins, Inc., Satellite Beach, Florida, interrupted him and suggested that since everyone in attendance was already in favor of forming an association they might as well get down to business.

At Earley's suggestion, Faulring says eight or nine of the 23 operators in attendance agreed to serve on a pro tem board of directors. Someone suggested that Earley choose the officers, so he designated Faulring President, Baker Vice President and John Latting, then Vice President of Bulkem Corporation, Normal, Illinois, as Secretary-Treasurer. The board and officers served on a pro tem basis for a year and a half, until a formal election was held at the first annual convention in Louisville, Kentucky in November, 1980. After serving as acting president for 1-1/2 years, Faulring was then elected official

president for the 1981 election year — November 1980 to November 1981.

Lawn care operators weren't the only professionals in attendance at the 1979 organizational meeting in Kentucky. Doug Baker and his father Ron Baker brought a business associate of theirs to the meeting. Glenn Bostrom, President of Bostrom Management Corporation in Chicago, Illinois, attended as a guest of the Bakers.

"The group was struggling with ideas and concepts," says Bostrom. He was asked to manage the new association and he said they would need about \$30,000 to get it started. Marty Erbaugh, President of Erbaugh Corporation, Peninsula, Ohio, was also at the meeting and he recalls the role of Dick Foster, who was then Group Publisher at Harvest Publishing Company, publisher of *Lawn Care Industry* magazine, and now Publisher of *American Lawn Applicator*

magazine.

"Dick Foster agreed on behalf of Harvest to kick in \$5,000 to start it," says Erbaugh. "Each of the attendees agreed to contribute \$400 in the form of a loan." John Latting recalls that since everyone in attendance was an entrepreneur, they were all concerned about how they were going to get a return on their investment.

"I certainly was concerned about how much money I was going to have to pay out and how I would get a return on that investment," says Latting. "I came away surprised that we got the thing rolling." Latting says two factors made it possible to launch the PLCAA at that meeting. First was the seed money that Foster and Earley were prepared to commit on behalf of Harvest Publishing. Second was the presence of Glenn Bostrom who gave the group a sense of direction about how to form and finance the organization. "Then it was up to us to make it happen," says Latting.

After the meeting, Bostrom went back to Chicago to put together a set of bylaws for the new association. "They wanted a convention and I had an exhibit manager on my staff, so we gambled that we could sell the space and that is how we started," says Bostrom. He managed the PLCAA until the board of directors decided at a



Jim Brooks



Don Burton



Jerry Faulring



Marty Erbaugh

board meeting on January 24, 1983 that the association should break away from Bostrom Management. Though Bostrom is disappointed to have lost the PLCAA's business and still believes he could serve the association well, he is happy to have been associated with this industry. "They are busting their buns to work hard and they are faced with a lot of problems because they are in a chemical game," says Bostrom. "I hope they feel we served them well while we had them, we turned them over in good shape, and they did invite me down to their convention and gave me an award for distinguished service to the industry."

Bostrom says the PLCAA is about the

tenth association he has helped get started and he is proud of the changes he instituted. He says Bostrom Management designed the logo which the PLCAA currently uses. He also credits his company with establishing a code of ethics and a profitable trade show for the association.

"It is quite a success story," beams Bostrom. "We had young guys who were eager and they didn't know they couldn't win. We even went through a recessionary period. We had differences of opinion from time to time, but they will be successful if they don't get involved

***"They will be successful if they don't get involved in their egos. That is going to be a problem," -- Glenn Bostrom.***

in their egos and politics. That is going to be one of their problems."

Most of the lawn care businessmen who were in attendance at that first organizational meeting would agree that hiring Bostrom Management was the right decision to make at that time. Marty Erbaugh looks back on the realities of getting the new association started and realizes that the money wasn't available to manage the PLCAA in-house. As the PLCAA's second president, Erbaugh had a great deal of input into the operation of the association at its inception. Though he supported the decision to leave Bostrom Management, Erbaugh feels the company served the association well.

"Bostrom had a guy working for him, Al Van Horn, and he was a maestro, he put together the first trade show," recalls Erbaugh. "The first trade show was well-produced." But then shortly after the first convention, Erbaugh says some PLCAA members expressed concern about whether Bostrom's lack of familiarity with the industry and his general operating methodology would serve the association well over time. Erbaugh delivered the bad news to Bostrom at the

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January 1983 board meeting.

"We had already had a preliminary conversation with (Jim) Brooks and put out the feelers to others," says Erbaugh. "We had a meeting in Chicago at the airport and the selection committee was fairly unanimous for Brooks." At that point, Erbaugh says the PLCAA had weathered its first three years and had just reached the financial break-even point.

Erbaugh's interest in forming a trade association was centered around improving the industry's relationship with suppliers. He wanted suppliers to address residential lawn care specifically. "At that point, if we wanted to go to a trade show, we would go to OTF and other grounds maintenance shows where the suppliers were principally targeting to golf courses and landscape contractors. At that time there wasn't the focused opportunity for suppliers to gear up and address our industry's needs. If we could have a trade show, we could have suppliers come there and start talking lawn care."

Don Burton, President, Lawn Medic, Inc., Bergen, New York, was at the organizational meeting and was a board member that first year. He can look back on the association's first year with fondness and observe changes in the PLCAA's priorities. "In the first few years we were just beginning to grapple with the overall direction and philosophy of the association," says Burton. "The overriding issue here was the need to have an organization that espoused and encouraged professionalism in our industry." Pesticide regulation was a concern of only a few at the organizational meeting. Burton says only two or three companies thought it should be the priority.

Most of the businessmen in attendance felt the priority should be placed on member services. "That really received the priority for the first several years," says Burton. "It is still a very important aspect of it. Although a few firms may have had some long-range vision, we were all unanimous that we had to build our association first. We had to have reasons why other companies should want to become members. Today we are channeling more resources into countering the regulatory threat."

Jerry Faulring characterizes the regulatory threat as an "emerging issue" when the association was in its formative

## IN THE BEGINNING...

**T**he Professional Lawn Care Association of America held its First Annual Conference and Show in Louisville, Kentucky on November 12-14, 1980. No doubt the board of directors and Bostrom Management were quite pleased with the results of their first trade show effort. In the January/February, 1981 issue of *ALA Magazine*, we also lauded their efforts: "The PLCAA fills a definite need in the lawn care industry, and if the success of their first convention is any indication of how successful the organization will be, they can't fail. Our congratulations to the PLCAA and best of luck to them in future endeavors."

Subsequent trade show endeavors have proved the association's mettle and every show has grown bigger and better with each passing year. The first conference was attended by 704 registrants and the trade show was staffed by 70 exhibitors. Compare those figures to the attendance figures at last year's Sixth Annual PLCAA Conference and Show which racked up a total attendance of 1,824 and featured a trade show filled with 130 exhibiting companies.

And this year's show in Baltimore, Maryland promises to be the most successful national convention in the history of the PLCAA. Keep up the good work!

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stage. He says the membership was small and their primary objective was to form an organization. "That didn't happen with just one meeting," says Faulring. "It was analogous to starting a business. You had nothing one day and the next day you had an idea and all kinds of energy, but you still didn't have a product." To compound the problem, the new association didn't have the money to fund the projects that were needed to attract more members.

Faulring says they were also getting flak from other green industry trade associations that felt the PLCAA's membership should remain under their more-inclusive umbrella. "There were those who said we could not survive on our own," says Faulring. "We were battling an up-hill struggle with our trade association peers. It took about three years before they recognized that we were going to be a lasting group. Our growth was phenomenal compared to the growth the other trade groups were experiencing."

There was also a strain on the board members those first few years. Faulring says they were meeting several times a year and it took a toll on them in terms of the time they spent away from their businesses and the travel expenses they incurred. Now board members can at least recoup some of their travel expenses through a compensation program the PLCAA has instituted.

Now the association has money to work with, but even that creates some problems. "Today we have financial strength, but we have to decide how we are going to spend the money," says Faulring. "That is just as hard because



The trade show floor at the 1985 PLCAA conference in Tampa, Florida.

Golf Course Superintendent's Association. His primary tasks were to increase the membership base and organize the 1983 annual convention. He had a responsibility to give the association the leadership aspects that were missing under Bostrom's guidance.

"I felt that the association needed greater visibility," says Brooks. "So I traveled a lot more. We set up a regional seminar program for that summer. As I recall, I think I made every regional seminar we had." By its very nature, Brooks recognizes that Bostrom Manage-

of the industry has come increased visibility in urban America. The media's perception of the lawn care industry as a toxic threat in the urban environment will no doubt be with us for some time.

The PLCAA is actively battling adverse publicity and has recently hired the services of Marcomm Marketing Communications, Inc., a public relations firm based in Minneapolis, Minnesota. "That shows you where we are going in trying to develop a pro-active role," says Brooks. "For the first time, this industry is really going to have to look at itself as coming together as colleagues, even though we are competitors in the marketplace." He says every lawn care operator has to contribute time, money and effort to improving the industry's image. For too long, the small- and medium-sized lawn care companies have allowed the industry giants to do all the work of promoting professional lawn care.

"We will weather the storm better if we are involved in our communities," says Brooks. "State and local chapters are forming and will become affiliated and will help in this process of working out these collective endeavors." The Professional Lawn Care Association of America has come a long way since that meeting at the Holiday Inn in Ft. Mitchell, Kentucky in 1979. The PLCAA has survived birth and infancy, but it is still in an adolescent stage. The association is still experiencing rapid growth and the pains and challenges that accompany such growth. — Tim Weidner ■

The author is Managing Editor of ALA magazine.

### ***With the increased growth of the industry has come increased visibility in urban America. The media perceives the lawn care industry as a toxic threat in the urban environment.***

you have judiciary responsibilities there as a board to spend the money in a fashion that produces a useful benefit for the majority of the membership." But Faulring notes that the PLCAA has produced a significant volume of products for its membership in the last couple years.

When Jim Brooks, now Executive Vice President of the PLCAA, assumed the position of Executive Director on May 1, 1983, he came to the association from a career as National Sales Manager of *Lawn Care Industry* and *Weeds, Trees and Turf* magazines. Prior to his position on these Harvest magazines, he had also served as Publisher of *Golf Business* magazine and Director of Membership Services and Director of Marketing and Sales of the

ment Corporation could not produce this needed visibility. "They were a management group managing many associations," says Brooks. "They couldn't be as visible as I was as a full-time employee of the association. The fact that I was known in the industry helped too."

Now the association's needs have changed, but Brooks admits that the membership still has to work on its public image. A great deal of growth has occurred over the last five years, but there is a need for even more safety measures. He says the association now has to be a stronger spokesman for the industry.

"Some of our problems have been a direct result of some of our successes," notes Brooks. With the increased growth



## WALKING THE FLOOR

(continued from page 46)

pany's Horticultural Distribution Center in the Baltimore area is under construction and it will be open for business in the spring of 1987.

**International Seeds, Inc.**, booth 1012.

**J.V. Manufacturing Company**, booth 609.

**Jacklin Seed Company**, booth 109: The company will feature a new blend and two turf-grasses. Four Star Sod Blend combines Nassau, Glade, Ram I, and Baron into a unique, complementary blend for excellent sod. Huntsville-Kentucky bluegrass is an excellent grass for southern transition zone seed mixtures. Arid is a tall fescue with good heat and drought tolerance that can perform well with low fertility.

**James River Limestone Company, Inc.**, booth 1004.

**Jonathan Green and Sons, Inc.**, booth Island F: The company is introducing a new fine-textured perennial ryegrass seed under the name "Allaira." At their booth you will also find Destiny — a new Kentucky bluegrass variety.

**Knox Fertilizer Company, Inc.**, booth 1008.

**KnoX, Inc.**, booth 818,919.

**LaRoche Industries**, booth 240,239.

**Lamb Industries, Inc.**, booth 1010: The company will be demonstrating a new enhanced version of their lawn care software system.

**Lawn Masters, Inc.**, booth 449.

**Lawn Servicing/Grounds Maintenance**, booth 132,134.

**Lawn Tech, Inc.**, booth 350.

**Lebanon Chemical Corporation**, booth 101-107: This company will be introducing a new liquid line of products under the name "Lebanon Liquid Turf Products." They will also be featuring their newly expanded custom SCU bag blending capabilities at their Lebanon plant. These custom bag blends will be introduced under the name "Lebanon Custom Turf Products." They also have a new fertilizer and Team® combination, and will offer a special show discount. Conference goers can win prizes by playing "Turf Trivia."

**LESCO, Inc.**, booth 519-527, 518-526, 621: The company will be introducing LESCO Arbor-Green, a tree and ornamentals fertilizer along with a tree and ornamentals feeder. Also at their booth you will find two new flow meters and a pH meter.

**Liqui-Land**, booth 920: This company will be introducing a new low-volume injection spray unit. They will also offer a special price discount during the show and introduce new low-volume custom-blended liquid fertilizers.

**Locke Manufacturing, Inc.**, booth 902.

**Lofts, Inc.**, booth 808,909: The company will feature Rebel II, a new improved tall fescue.

**Mallinckrodt, Inc.**, booth 500,502.

**Metromail Corporation**, booth 726.

**Miliken Chemical**, booth 715.

**Milwaukee Metropolitan Sewerage**, booth 1007: This company is introducing a new plastic bag packaging for their Milorganite.

**Minnesota Wanner Company**, booth Island E: The company will be featuring a new hand injector gun and an all-stainless steel truck-mounted sprayer.

**Mobay Corporation**, booth 319-323: This company is introducing two new formulations of Bayleton® turf fungicide: 1 percent and 0.5 percent granular.

**Modern Welding Company, Inc.**, booth 625,627: This company will have their new utility tool box on display.

**Monsanto Agricultural Company**, booth 506,508.

**Moyer and Son, Inc.**, booth 623: The company will be introducing MicroFlow®, a new che-

lated iron with low staining and good green-up. They will also introduce a new easy-to-handle tree and shrub fertilizer called Arbor-Flow® and will have a special show price for this product.

**Murray Equipment, Inc.**, booth 827.

**Na-Churs Plant Food Company**, booth 349: The company will introduce its new Balance® line of liquid fertilizers which features a low salt index and near-neutral pH.

**New England Green, Inc.**, booth Island RR: This company will be featuring a new five-piece fiberglass deck as an option on its 1987 model spray rigs.

**Nice 'N Green Plant Foods**, booth 141.

**Nor-Am Chemical Company**, booth 413,415.

**Northrup King Company**, booth 422.

**O.M. Scott and Sons**, booth Island I.

**Olathe Manufacturing, Inc.**, booth Island L.

**Oregon Tall Fescue Commission**, booth 260.

**P.S.B. Company**, booth 1019.

**Palm Industries**, booth 900.

**P.B.I. Gordon Corporation**, booth Island Q: The company is now marketing Embark® and Atrimmec® plant growth regulators.

**Perfco**, booth 115, 117, 119, 121.

**Perma-Green Supreme, Inc.**, booth Island D, 124,126: The company will feature a new fiberglass spray unit with compartmentalized tanks and granular storage. The entire unit, which includes the bed, is one piece of molded fiberglass. Also featured will be a pesticide fill/wash/recycling station.

**Pickseed West**, booth 457.

**Plant Food Chemical Company, Inc.**, booth 451.

**Practical Solutions, Inc.**, booth 1001,1003: The company has a new multi-user version of its Lawn Care Management System which they will be demonstrating.

**Precision Laboratories, Inc.**, booth 1112: This company will be introducing two new products to the industry. The first, Signal®, is a spray indicator with a temporary water-soluble colorant. The second, Hantex®, is a unique waterless hand cream that removes pesticide stains and residue.

**Professional Turf Manufacturing**, booth Island K: The company will be giving away a Professional Turf measuring wheel daily.

**PRS Materials, Inc.**, booth 354.

**Publishers for Conventions, Inc.**, booth 1013.

**Pumping Systems**, booth 605,607.

**Quintessence Computing**, booth 258: The company is introducing a new lawn care software program which they will be demonstrating.

**R.L. Polk and Company**, booth 1002.

**R.G.B. Laboratories, Inc.**, booth 332: This company will be featuring a new chelated iron called Lawn Plex® which is tank mix-compatible with most pesticides and liquid NPK fertilizers.

**Rainbow Computer Sales, Inc.**, booth 151,153: The company will be featuring a newly expanded and even more powerful version of the Lawn Care Business System for IBM and multi-user systems. They will also offer a free word processor with the purchase of a system. A color television raffle will also take place.

**Real Green Professional Services**, booth 1106: This company is introducing a new lawn care software program to the industry.

**Rhone-Poulenc, Inc.**, booth Island Z.

**Richway Industries, Ltd.**, booth 1116: The company has a new foam applicator system for various types of herbicide applications.

**Ringer Corporation**, booth 904: This company will be offering a special show price on Lawn Restore®.

**Rockland Chemical Company, Inc.**, booth 504.

**Ryder Supply Company**, booth 355.

**Salsco, Inc.**, booth 806,907: The company will be introducing the new SS-35-20 slicer/seeder

with a 25-inch seeding radius and a 20-inch seeding width.

**Seacoast Laboratories, Inc.**, booth 455.

**Seal-Rite (Division of F.A. Iezz)**, booth 1015.

**Seed Research of Oregon**, booth 914,916.

**Shemin Nurseries, Inc.**, booth 1016,1018.

**Smithco, Inc.**, booth 338,439.

**Specialty Equipment Company**, booth 361.

**Spring Valley Turf Products**, booth 358,360: The company will be introducing a new 200 gallon skid unit spray rig, featuring an agitation system that dissolves dry sprayables. Also look for the first dry sprayable fertilizer that contains a fertilizer and Team® crabgrass preventative in one bag. Watch for show specials at the booth.

**Sta-Green Plant Food Company**, booth 900A.

**Stauffer Chemical Company**, booth 220,222,224.

**Terracare Products Company, Inc.**, booth 351: This company will be introducing a new walk-behind aerator.

**The Toro Company**, booth Island G: The company will have their new mid-size mower on display as well as several new attachments for the Groundsmaster 117®.

**Tuflex Manufacturing Company**, booth Island R: This company will be introducing a new 140-gallon, seamless, fiberglass tank for mid-sized and mini-trucks.

**Turf Seed, Inc.**, booth 330: The company is introducing a new hybrid Kentucky bluegrass variety called Challenger which is distinguished by its darker green color and a new tall fescue variety called Apache which has a dark green color, is low-growing, and is deep-rooted.

**Turfco Manufacturing, Inc.**, booth Island FF.

**Tyler Enterprises, Inc.**, booth 614: The company will announce the availability of soluble fine sulphate of potash in bags or bulk.

**UAP Special Products, Inc.**, booth 620,721: The company will introduce two new products this year: Clean Crop Pendimethalin 60WDG®, a water-dispersible preemergent herbicide, and Clean Crop PCNB—10G®, a granular fungicide.

**Union Carbide**, booth 424,426: The company will be introducing its new formulation of Sevin® brand SL carbaryl insecticide for control of white grubs.

**Valagra, Inc.**, booth 1014.

**Velotta Uniform Sales, Inc.**, booth 325,327.

**Walker Manufacturing Company**, booth 1110:

This company is introducing a new commercial riding mower with a 16 horsepower Kohler engine.

**Wanner Engineering, Inc.**, booth 133,135,137.

**Weeds, Trees, and Turf/CI**, booth 431-435.

**Westheffer Company, Inc.**, booth 226,228: The company will be introducing the new Grounds and Estates Sprayer and the 300-003 Deep Root Feeder for professional tree and shrub feeding.

**Wheel Horse Products, Inc.**, booth Island W.

**Zeager Brothers, Inc.**, booth 256. ■

## COMING NEXT MONTH

The November issue of *ALA* will be distributed at the PLCAA and Ohio Turfgrass Conferences. Both the 1987 Mowing/Maintenance Equipment Preview and the 1987 Turf Chemicals Preview will contain information on new products for the new year as told to us by company representatives. We will also feature an interesting selection of technical articles.



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Circle 48 on reader service card

## PRODUCTS

**T**he Jacklin Seed Company announces the release and availability in commercial quantities of the new Arid turf-type tall fescue beginning in September, 1986. For the second consecutive year, nationwide progress reports show Arid as number one in the mean quality ratings of the National Tests at 26 locations. The same is true of the spring, summer, and fall density ratings. Leaf texture ratings of the tall fescue cultivars also ranked Arid first. Arid again led the way in drought tolerance ratings.

Last year's 26-location tests gave Arid first position in shade trials and disease resistance. Arid's name came about because it develops deep roots which enable the grass to better withstand temperature extremes — subzero winters and hot temperatures, including humid transition zones.

Jacklin emphasized that the finer blades and the excellent sod-forming characteristics of Arid will gain considerable favor with growers. The tests also showed that the new turf-type tall fescue is well-adapted to a wide range of soil types. Because of its improved disease and stress tolerance, Arid should require fewer pesticides and less moisture. Arid's low-growing characteristics reduce mowing requirements.

Circle 124 on reader card

Turflon II Amine®, a new broadleaf weed herbicide from **The Dow Chemical Company**, will be available for commercial usage in late 1986. Rob Peterson, Product Marketing Manager at Dow, says the broadcast herbicide is designed to control a wide spectrum of weeds.

"Turflon II Amine gives lawn care operators their first opportunity to control both easy and hard-to-kill broadleaf weeds in the second round application," says Peterson. The product, which was granted EPA registration this summer, contains triclopyr and 2,4-D. Triclopyr is the first new broadleaf herbicide chemistry to be introduced to the turf industry in 16 years. Turflon II Amine was developed by Dow to provide the industry with a more effective broadcast herbicide.

"The spectrum of broadleaf weeds had not been effectively controlled by other products in broadcast applications over the years," says Peterson. He adds that effective weed control translates into economic benefits. Peterson sees the pro-



duct fitting in any of the broadcast rounds following the first round.

Circle 117 on reader card

The Lawn Assistant software package from **Real Green Professional Services** will automate your entire lawn care operation. The Lawn Assistant will do routing, driver invoices, scheduling, month-end statements, special applications, and anything else you are now doing with your manual system, plus a whole lot more. Even if you have never used a computer before, you will be running your system in only a few hours with our simple commands and easy-to-use help screens.

The Lawn Assistant was developed as a low-cost system to handle all the needs of smallest and largest lawn care companies. From the moment your phone rings with an estimate, Lawn Assistant will print the estimate sheet and follow that lead until signing. The program will even give you friendly reminders to contact the prospective customer with follow-up calls and will print personalized follow-up letters.

Lawn Assistant will automatically schedule customers' applications, print the customers' daily invoices for your drivers to take with them on the jobs, and sequence the drivers' routes each day. Keeping track of special applications is no problem for Lawn Assistant. It can print the invoices for the special applications by either the date they are scheduled, or by the type of special application desired.

The most impressive aspect of the system is that it is always checking for your mistakes. If you try to print an invoice for a customer whose invoice has already been printed, it will warn you. If you try to print an invoice for a customer who is not supposed to get a round, you will be notified. Every step of the way it is constantly checking for mistakes in entering data and errors in running the system.

Circle 123 on reader card



# 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 aerification 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.

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### DIMENSIONS

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

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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.  
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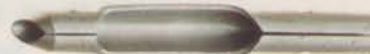
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There are undoubtedly additional internal efficiency factors in lawn grasses which will be identified and may be useful in genetic improvement programs. Suffice to say, there is ample opportunity to increase the nutrient use efficiency of lawn grasses and the advent of new techniques for gene transfer and manipulation may speed the process substantially. In the meantime, the lawn care professional can do much to increase the efficiency of nutrient use by implementing those management strategies which provide nutrients at the times and in the amounts of greatest use by lawn grasses. The future offers the opportunities for exciting advances in this area of turfgrass science. — Richard J. Hull

The author is Professor of Plant Science at the University of Rhode Island, Kingston, Rhode Island. ■

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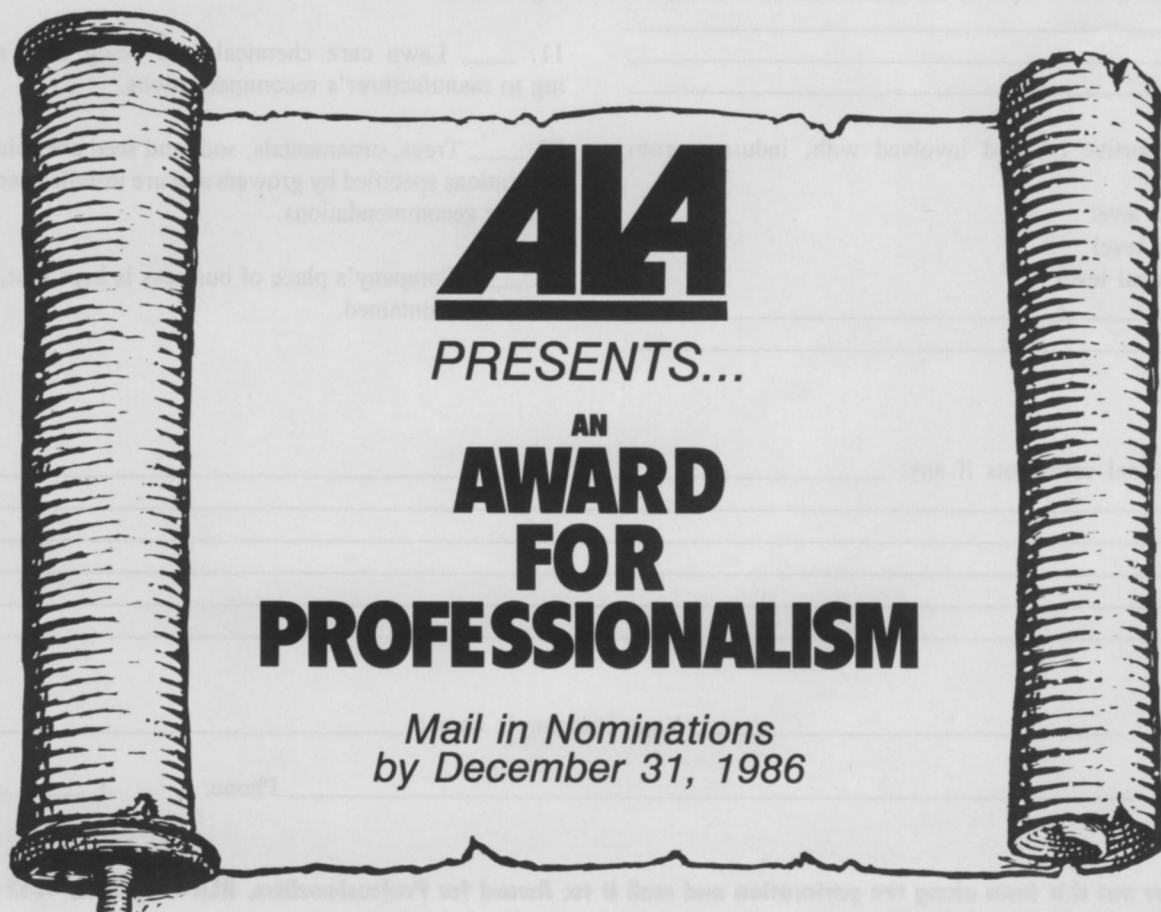
# AWARD FOR PROFESSIONALISM

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) \_\_\_\_\_

2. Belongs to a trade association.

- \_\_\_\_ local
- \_\_\_\_ state
- \_\_\_\_ national

3. Has the following employee benefit programs:

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

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

- \_\_\_\_ local level
- \_\_\_\_ state level
- \_\_\_\_ national level

(Explain) \_\_\_\_\_

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

6. \_\_\_\_ Equipment is kept clean and in good operating condition.

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.

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.

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.

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.**



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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.

### Wanted! Lawn Care Companies—

Will acquire for cash, lawn care companies or customer lists. Prefer companies doing \$500,000 or more in residential service. Especially interested in companies in the central, east coast, or southern United States. Contact our agents: Ed Wandtke or Rudd McGary, All-Green Management Associates, 1033 Dublin Road, Columbus, Ohio 43215. All inquiries will be maintained on a confidential basis.

## EQUIPMENT FOR SALE

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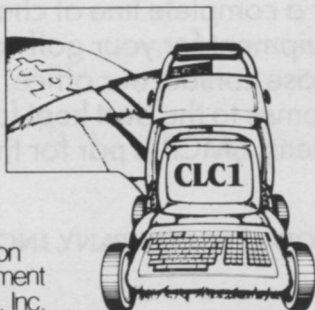
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