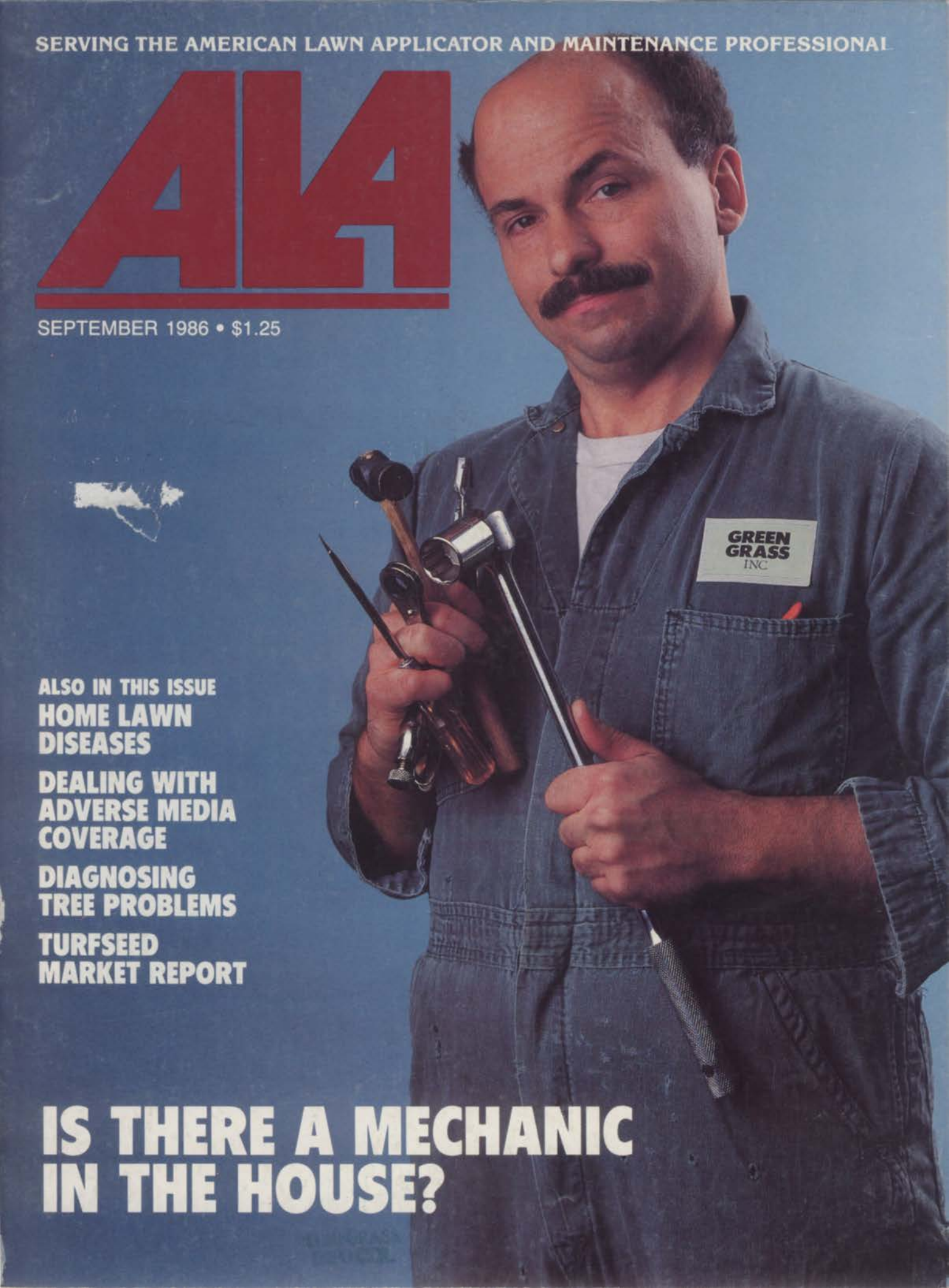
SERVING THE AMERICAN LAWN APPLICATOR AND MAINTENANCE PROFESSIONAL

# ALA

SEPTEMBER 1986 • $1.25




ALSO IN THIS ISSUE

**HOME LAWN DISEASES**

**DEALING WITH ADVERSE MEDIA COVERAGE**

**DIAGNOSING TREE PROBLEMS**

**TURFSEED MARKET REPORT**

# IS THERE A MECHANIC IN THE HOUSE?

# When coverage is important

Insist on Glade for the important coverage, the beautiful coverage in both sun and shade.

**Glade is widely accepted *as the improved* sun and shade bluegrass variety!**

Get coverage where it's important now and in the future. Growing trees and long roof shadows surprise even the best landscape architects.

Insist on Glade in **every** mix — from your local wholesale seed distributor.

Glade

**Kentucky bluegrass**

U.S. Plant Patent 3151
Canadian License No. 2133

**Circle 97 on reader service card**

**Another fine, quality-controlled product of**

**Jacklin Seed Company**

SEPTEMBER 1986
VOLUME 7 NUMBER 9

ALA

BPA MEMBERSHIP APPLIED FOR 10/85.

# TABLE OF CONTENTS

## BUSINESS FEATURES



## TECHNICAL FEATURES



## DEPARTMENTS



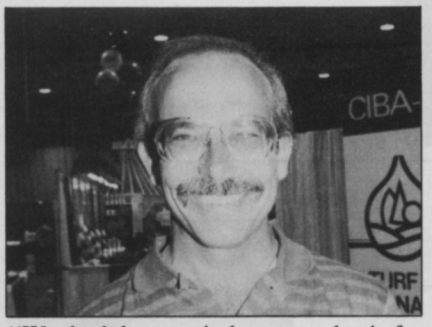

## COVER

Do you have an in-house mechanic? Depending on your operation, it may be a good or bad idea.
(Cover photo by Barney Taxel)

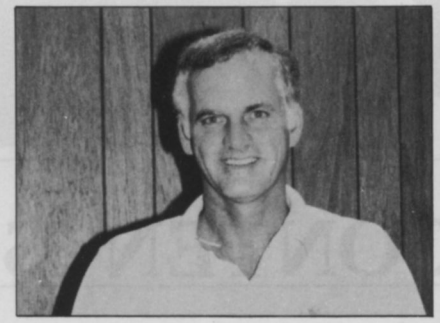
ALA (USPS 65747000) is published twelve times per year. One year subscription rates: $12.00 in the USA and Canada; Single copy rate: $1.25; Foreign subscriptions: $30.00 per year. Subscriptions and classified advertising should be addressed to the Cleveland office. Second class postage paid at Cleveland, Ohio and additional mailing offices. Postmaster: Return Form 3579 to ALA, 4012 Bridge Avenue, Cleveland, Ohio 44113.

# VIEWS ACROSS THE TURF INDUSTRY

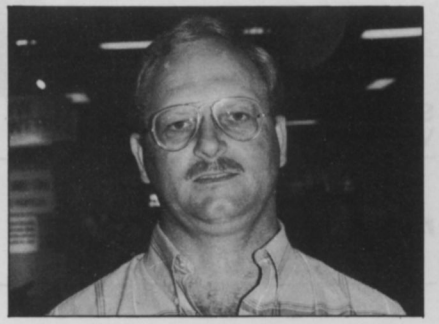
## DO YOU HAVE AN IN-HOUSE MECHANIC?




"We don't have an in-house mechanic for whom that is his sole job. We do the majority of our maintenance ourselves. That includes work on the pumps; piping the pump/hose systems; installation or maintenance work on the hose reels; and any work on the aerators, of which we have a Ryan and a Classen. Any heavy welding or fabricating is sent to a local machine shop. We do all mechanical work ourselves, but we do not have a person whose sole purpose in life is that. We have a person who is assigned to that duty and he does spraying also. We are on a regular maintenance schedule with the equipment and the trucks." — **Mike Deen, Liqui-Green, Danville, Illinois**



"Our problem was our lawn spray trucks rather than our pest control vehicles. We weren't properly outfitted to do the major work. When you start getting into transmissions, engines, and clutches, we ended up having to go outside with things like that anyway. They needed bigger equipment and lifts. We were spending a lot of money on stocking equipment. It was OK as far as doing oil changes and grease jobs and minor tune-ups, but that was not really enough to keep the guy occupied to the point that it is making you money. We found that we were better off to send it out." — **Brendon Cavanagh, Petri's Positive Pest Control, Miami, Florida**



"I don't believe any company can afford to send their maintenance out to a contractor or a shop. An in-house maintenance program is crucial. During the peak periods we normally have someone who takes care of the majority of the maintenance, therefore freeing up the crews. You can train anyone to do preventative maintenance, whether it is spraying an air filter or servicing an engine. At a shop, you are talking $15 or $20 every time you go through the door. Every piece of equipment has to have an air filter serviced every day and it has to be lubed every day." — **Bill Taylor, Taylor Commercial Services, Inc., Henderson, Kentucky**

# CALENDAR

**Sept. 17-18**
A New Tree Biology featuring Dr. Alex Shigo, Hyatt at Los Angeles Airport, Los Angeles, California. Contact: National Arborist Association, 174 Route 101, Bedford, New Hampshire 03102; 603/472-2255.

**Sept. 20**
Oklahoma Turf Research Field Day, Lincoln Plaza, Oklahoma City, Oklahoma. Contact: Michael P. Kenna, Extension Turf Specialist, Cooperative Extension Service, Oklahoma State University, 335 Agricultural Hall, Stillwater, Oklahoma 74078; 405/624-5404.

**Sept. 23-24**
A New Tree Biology featuring Dr. Alex Shigo, Adult Education Center, University of Maryland, College Park, Maryland. Contact: National Arborist Association, 174 Route 101, Bedford, New Hampshire 03102; 603/472-2255.

**Oct. 6**
Long Island Turf and Grounds Field Day, Huntington Crescent Club, Huntington, New York. Contact: Ann Reilly, New York State Turfgrass Association, Inc., 210 Cartwright Blvd., Massapequa Park, New York 11762; 516/541-6902.

**Oct. 7**
Golf Course Superintendents Association of New Jersey 22nd Annual Turfgrass Equipment, Supplies, and Irrigation Field Day, Rutgers Stadium and Golf Course, Piscataway, New Jersey. Contact: Dr. Henry W. Indyk, Soils and Crops Department, Cook College, New Brunswick, New Jersey 08903; 201/932-9453.

**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.

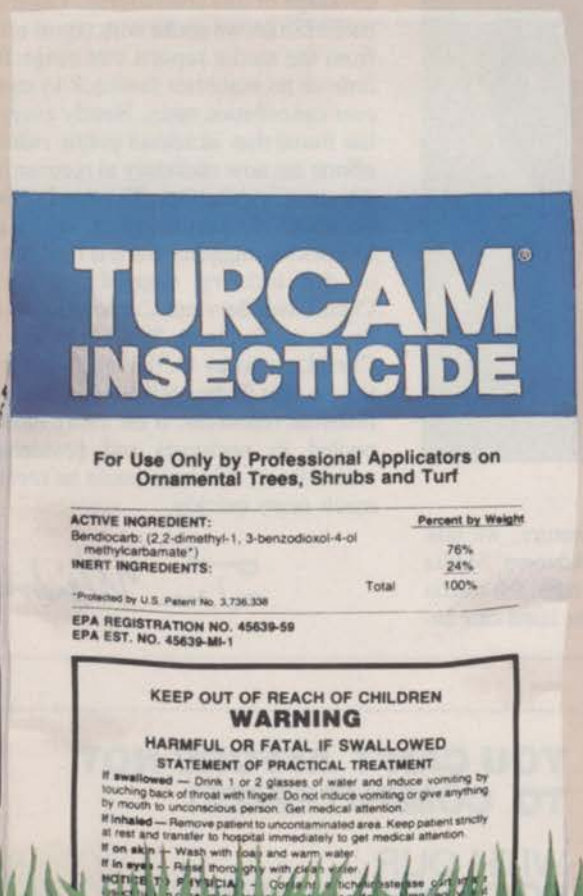
**Oct. 23-24**
Southwest Turfgrass Conference, Holy Cross Retreat, Las Cruces, New Mexico. Contact: Charles R. Glover, Extension Agronomist, New Mexico State University, College of Agriculture and Home Economics, Box 3AE, Las Cruces, New Mexico 88003.

**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**
CLCA Annual Convention, Hawaii's Waiohai Hotel, Kauai Island. Contact: Larry Rohlfes, CLCA, 916/448-CLCA.

**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. ■

# UNDERCOVER AGENT




An advanced carbamate insecticide that roots out and ruthlessly destroys white grubs, chinch bugs, sod webworms, mole crickets and other lawn and turf "terrorists". This tough operator doesn't get trapped in thatch, thus assuring positive grub control. TURCAM® is odorless...works well in spray equipment...won't damage turf or ornamentals. You'll find that TURCAM packs a federally-approved nationwide label, too.

Powerful reasons for assigning TURCAM to your toughest pest control problems.

For more information on TURCAM, including full labeling and recommendations for use, contact your local distributor or write to:

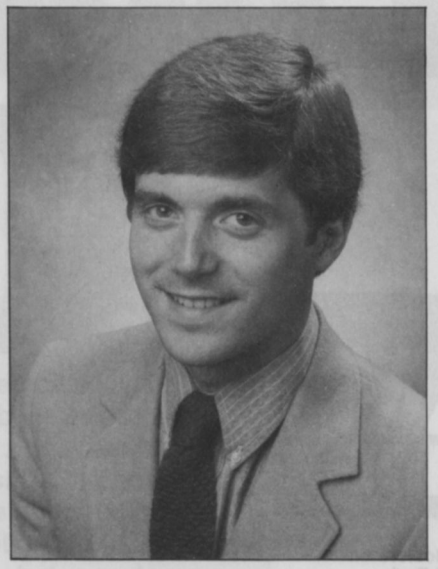
NOR-AM®
NOR-AM CHEMICAL COMPANY
3509 Silverside Road, P.O. Box 7495
Wilmington, DE 19803

Circle 11 on reader service card

# INSIDE STORY

This month we asked industry experts the much-pondered question, "Is There a Mechanic In The House?" This cover story by Assistant Editor Vivian F. Rose probes the pros and cons of hiring an in-house mechanic. She found that it really depends on the size and structure of your business. There are actually four options. You can develop a mechanic/applicator from your existing workforce to handle maintenance and repairs who can still service lawns during busy periods. You can hire a full-time mechanic. You can hire a "moonlighting" mechanic. And your final option, you can send your repairs and maintenance to a local shop. Take your pick!

Once again, we bring you our annual "Turfseed Market Report." We contacted the turfseed growers to get a feel for the dynamics of the 1986-1987 turfseed market. Across the board, producers told us that bluegrasses will be in short supply and prices will remain high. Otherwise, it will be a mixed bag for other varieties.



In our final business feature, we talk about "Dealing With Adverse Media Coverage." In recent months, the media has come down hard on the lawn care industry's use of pesticides. If you had to pick *the* big lawn care industry issue of 1986, it would have to be the media's coverage of this controversy. Lawn care businessmen we spoke with report effects from the media reports that range from little or no customer feedback to significant cancellation rates. Nearly everyone has found that increased public relations efforts are now necessary to recover from this sensitive situation. Thomas E. Mann, President of Greenskeepers, Inc., Egan, Minnesota, suggests that it is time the rest of the industry stopped relying on ChemLawn Services Corporation to battle the media alone. While it is true that ChemLawn is by far the most visible entity in this industry and has the most financial resources, if the entire industry pooled its resources and presented a united front, this issue could be resolved much more quickly.

Tim Weidner

# For A Handle On Quality Turf Products Get A Handle On This

One-source ordering is just one call away, and that call to SMCP means prompt delivery of the chemicals and equipment your lawn maintenance business needs. We carry a complete line of professional lawn care products, so ordering is easy and fast. For *all* your chemical and equipment needs, *one* number is all it takes. Take a moment right now to call the SMCP office nearest you to place your order, and request our 1986 catalog.

SOUTHERN MILL CREEK PRODUCTS COMPANY, INC.

SMCP

**SMCP proudly serves you in the Eastern U.S.**

**TAMPA, FLORIDA**
Phone: (813) 626-2111
FLORIDA WATS: (800) 282-9115

**MIAMI, FLORIDA**
Phone: (305) 635-0321
FLORIDA WATS: (800) 432-8717

**LAKE WORTH, FLORIDA**
Phone (305) 585-6049

**JACKSONVILLE, FLORIDA**
Phone: (904) 398-3759

**ORLANDO, FLORIDA**
Phone: (305) 678-0699

**ATLANTA, GEORGIA**
Phone: (404) 355-6583
GEORGIA WATS:
(800) 282-1637
SOUTHEAST WATS:
(800) 241-8752

**CHARLOTTE, NORTH CAROLINA**
Phone: (704) 334-5926
NORTH CAROLINA WATS:
(800) 521-3859

**FT. LAUDERDALE, FLORIDA**
Phone: (305) 584-2819

**NEW ROCHELLE, NEW YORK**
Phone: (914) 235-6925 (212) 538-7300
NORTHEAST WATS: (800) 431-2418

**PHILADELPHIA, PENNSYLVANIA**
Phone: (215) 289-7500
NORTHEAST WATS: (800) 523-3397

Circle 35 on reader service card


Ground Ivy
Oxalis
Wild Violet

# TURFLON D. No weed too tough.

**Stops more than 50 broadleaf weeds.** TURFLON* D herbicide has the wide spectrum power to control most any broadleaf weed you encounter. From ordinary ones like dandelions and clover to oxalis, spurge, wild violet, ground ivy and the rest of the really stubborn weeds. And that means happy customers...fewer callbacks and more referrals for you.

**Maximum efficacy.** With TURFLON D, you benefit from the proven effectiveness of triclopyr in stopping difficult broadleafs, *plus* the well-known ability of 2,4-D to control the standard portion of the weed spectrum. The low volatile ester formulation of TURFLON D increases its efficacy, without increasing the chance of damage to off-target species when used according to professional standards.

**Control that's under control.** For all its effectiveness against target weeds, TURFLON D is easily managed. It penetrates the waxy cuticle of weeds to act systemically. Yet it does not move through turf, so there is very little chance of damage to ornamentals. TURFLON D is safe to most established cool-season turf grasses such as tall fescue, bluegrass and perennial rye. And it is exceptionally low in toxicity to humans and pets.

**Reduces callbacks.** TURFLON D delivers superior performance at lower dosage rates than many leading herbicides. And its broad spectrum efficacy can mean a significant reduction in service callbacks...and improved customer retention. Which all adds up to better profits for you.

**TURFLON D.** The broad spectrum herbicide with power to control the toughest broadleaf weeds...and the others, too. Get the full story from your distributor, today.


**TURFLON D**
**The broad spectrum herbicide.**

Dow

*Trademark of The Dow Chemical Company



6001

Circle 39 on reader service card

**Richard J.W. Foster**
Publisher

**Maureen Mertz**
Associate Publisher

**Tim Weidner**
Managing Editor

**Vivian Rose**
**Julie November**
Assistant Editors

**Charlotte Goerss**
Art Director

**Fran Franzak**
Reader Service

**Rosalie Slusher**
Circulation Manager

**ALA**
**4012 Bridge Avenue**
**Cleveland, Ohio 44113**
**216/961-4130**
Editorial Office

**Maureen Mertz—Sales Manager**
**42480 Park Ridge Road**
**Novi, MI 48050**
**313/348-9636**
Advertising Office

# LETTERS

## PRACTICING IPM

This letter is in response to a back issue of your magazine dated March, 1986. In this issue, there was an article entitled, "IPM For Lawn Care," written by Dr. Patricia Vittum. It discussed a new method of pest management. The opening caption stated, "Integrated pest management is an accepted practice in agriculture and a mark of professionalism in the structural pest control industry. Perhaps it is time lawn care operators adopt IPM practices."

It's time you met an innovative lawn care company, Virginia Turf Management Associates, Inc. of Norfolk, Virginia.

Virginia Turf is currently practicing IPM methods for the 1986 season. Environmental concerns caused a major overhaul of the previous spray program and by January 1984, IPM was created. It included the spot check method with a chemical application process as needed. To further increase the effectiveness of the program, a chemical technician was hired to oversee mixing and spraying applications.

To this date, the Virginia Turf spray program has been well-received by its customers, both for its effectiveness and its environmental concerns. The spray program meets the needs of its customers while having concern for the environment.

Recently, Virginia Turf has developed a new service which has increased the professionalism and efficiency of our daily operations. This is the establishment of a soil testing lab. We have turned lawn care into a science. Quick analysis enables us to make accurate chemical determinations. This lab is truly an adventurous expansion, but one which will make Virginia Turf a total lawn care center.

*Paul E. Dickson, Jr.*
*Virginia Turf Management Associates*
*Norfolk, Virginia*

# NEWS IN BRIEF

### EXPO '86 SCORES RECORD-BREAKING ATTENDANCE

The International Lawn, Garden, and Power Equipment Expo '86 recorded unprecedented success with a registration of over 20,000 people at the annual trade show in Louisville, Kentucky on July 28-30. Before the doors opened on the first day of the Expo, pre-registration figures had already topped total participation in Expo '85 by 4,000. National and regional sales representatives from 510 exhibiting companies met with nearly 13,000 attendees from throughout the United States and 36 other countries.

The 250,000 net square feet of exhibit space in the specially landscaped East and West Wings, Coliseum, and Pavilion of the Kentucky Fair and Exposition Center represented a 20 percent increase in space purchased by exhibitors to showcase their newest products.

*The trade show floor was bustling at the Power Equipment Expo.*

First-time events at the Expo included a sell-out crowd for a dealer/retailer riverboat cruise featuring the big-band sound of the Glenn Miller Orchestra, a dealer/retailer lounge hosted by industry publications, on-site taping for closed-circuit television programs about the show, a dealer answer center where ques-

tions about merchandising problems were answered by industry experts, and a seminar by the popular NBC "Today" show personality Willard Scott.

Outside, in the Expo's unique 450,000 square foot demonstration area, 160 exhibitors set up colorful, innovative exhibits that provided try-before-you-buy opportunities to solidify deals initiated on the indoor exhibit floor. For thousands of exhibitors and attendees, a highlight of the Expo's special events was the Great Kentucky Picnic headlined by Roy Clark and Marie Osmond. Expo '87 will be held in Louisville, July 27-29 at the Kentucky Fair and Expositions Center.

*Kubota showcased its new four-wheel drive, four-wheel steering, remote-controlled mower.*

## RIGHT-TO-KNOW BILL INTRODUCED IN OHIO

According to an *Associated Press* report, Ohio State Senator Lee I. Fisher (D-25), and State Representative Judy Sheerer (D-18), introduced legislation on August 11 to "protect homeowners from lawn care chemicals that could threaten their health or the environment." The two legislators introduced the bill because they felt that under current federal and state laws, the public had little knowledge of what chemicals are being used on their lawns.

Among other things, the proposal would require lawn care companies to provide their customers with information about the chemicals they use. Applicators would also have to place markers on the lawns they treat, indicating date of treatment. The bill sets penalties of up to 60 days in jail and a fine of $500 for violations and up to 90 days in jail and a $750 fine for a second offense.

## FLORIDA TURF ASSOCIATION BEGINS ROAD SEMINARS

The Florida Turfgrass Association this year began what will be a series of "on-the-road" educational seminars designed to give the professional turfgrass manager

*(continued on page 14)*


# VORLAN®

**with a capital "V" keeps you winning with your customers.**

The best way to build a successful lawn care business is repeat customers. And the key to repeat customers is satisfied customers. So why trust the future of your business with anything less than the most effective turf fungicide . . . VORLAN!

Experience gained with VORLAN on professionally maintained turf and in university trials confirm VORLAN establishes new performance standards against Leaf Spot, Red Thread, Dollar Spot (even resistant strains!), and Pink Snow Mold. NO DISEASE PROBLEMS = SATISFIED CUSTOMERS.

## It's Economical Too!

VORLAN's effectiveness – it takes just a little and lasts so long – also makes it economical, too. Win a victory over turf diseases with VORLAN and build your satisfied customer list! Call Mallinckrodt toll-free, or contact your Mallinckrodt Turf Products distributor.

Mallinckrodt®

P.O. Box 5439
St. Louis, MO 63147
(800) 325-7155

**Available in 6 x 2-lb cases.**

Circle 12 on reader service card

*(continued from page 12)*

an opportunity to get the latest technical information available. "As a turfgrass association, we feel that we have an obligation to provide educational seminars to the turfgrass professional in Florida," says Bill Nass, Director of Member Services for the Florida Turfgrass Association. "These seminars, in addition to our highly successful conference and show, are designed to educate, inform, and provide a valuable member service."

Recently, FTGA held its second seminar at Ft. Lauderdale. Entitled, "Weed Control: Identification and Control Strategies," this seminar attracted more than 120 interested turf professionals. Hands-on learning was stressed. Weed samples were collected and passed out to all the attendees who actually learned how to tell weeds apart by looking at key botanical characteristics.

The first seminar this year was held in March and dealt with pesticide disposal considerations and factors that affect insecticide performance. Held in Orlando, the seminar attracted 217. Eventually, the Association will hold these seminars in major areas throughout Florida so all professionals in the state will have an opportunity to visit at least one seminar. They are open to both members and nonmembers of FTGA.

For additional information on the Florida Turfgrass Association seminars contact: Bill Nass, FTGA, 302 South Graham Avenue, Orlando, Florida 32803; 305/898-6721.

*Dr. David Hall discusses practical ways to identify the common turf weeds found in Florida.*

## OPEI SPONSORS COMMERCIAL MARKET SHOW

In a press conference during the recent International Lawn, Garden, and Power Equipment Expo '86 in Louisville, Outdoor Power Equipment Institute (OPEI) Executive Director Dennis Dix announced that the OPEI will sponsor a show for the commercial market. The concept was

approved in June at the annual OPEI meeting and is being formally called Pro Show, The Professional Landscape Contracting, Turf, and Grounds Maintenance Expo. Pro Show '87 is slated for November 17-19, 1987, at the Dallas Convention Center in Dallas, Texas.

The new show, which is separate from the Louisville Expo, is being formulated to fill the void which the commercial segment of the industry has long felt. Like the Louisville Expo, the Pro Show will feature a large outdoor exhibition area, this one in the 20-acre Trinity River Bottoms near the convention center. Exhibitors of commercial equipment will occupy booths covering over 200,000 square feet of indoor exhibit space.

This show will be designed for professionals who are responsible for purchasing commercial equipment, products, and services for residential, commercial, and government use. The show is also for dealers and distributors of commercial equipment and products. The exposition will also feature dozens of relevant seminars on landscape contracting, turf, and grounds maintenance issues.

OPEI-member supporters of the show include such Louisville Expo exhibitors as Gravely, Ransomes, Jacobsen, Toro, Deere, Bunton, Excel, and Briggs and Stratton, to name a few. According to Dix, already 30 associations have expressed interest in the show. He says the intention of Pro Show is not to take away from the special interests of the commercial market, but to bring them all together to benefit the whole commercial industry.

Pro Show 87

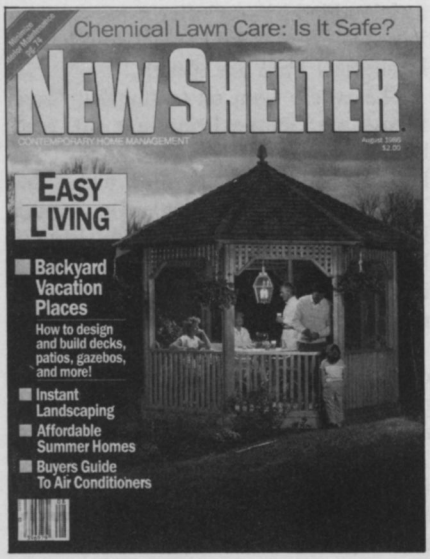
## MORE ADVERSE MAGAZINE COVERAGE

The lawn care industry has recently received a barrage of adverse media coverage. Coverage of the alleged dangers of chemical lawn care on network television news programs has been supplemented by similar coverage in national magazines. The June 23 issue of *People* magazine contained the first magazine coverage of the issue on page 105 in an article titled, "A Golfer's Mysterious Death Suggests That Lawn Care May Be Hazardous To Your Health."

The article went on to say that Navy Lieutenant George Prior, age 30, died because he played golf on a course that had just been sprayed with a fungicide. The omnipresent toxicologist Dr. Samuel Epstein from the University of Illinois Medical Center also commented on the issue, as he has done in numerous other media reports.

Rodale Press, Inc. has also recently covered the controversy in two of its publications: *Rodale's Organic Gardening* and *Rodale's New Shelter* magazines. The July issue of *Organic Gardening* featured an article by Susan Milius titled, "If You're Sprayed." The article described how to initiate and win lawsuits against pesticide applicators. A key source of information for the article was Margie Searcy, an attorney who is National Chairperson of the Environmental and Toxic Tort Litigation Section of the Association of Trial Lawyers of America.

The article organized a plan of attack for persons who believe they have been exposed to a pesticide. The plan of attack was outlined under subheads which contained such advice as proper planning, things you should observe while the spraying is taking place, taking photographs of the spray vehicle, identifying the chemical, getting medical advice, keeping a diary, and having samples taken.




In the August issue of *Organic Gardening's* sister publication, *New Shelter,* an article titled "Chemical Lawns" contained much of the same information featured in other media coverage of the issue. Environmental health officials reported increasing numbers of patients made sick by exposure to pesticides. Homeowners described symptoms ranging from rising pulse rates to vomiting after neighbors' lawns had received lawn care treatments.

At the end of the article, authors Carrie Kent and Greg Jensen listed some precautions to take to protect oneself from pesticide exposure. The authors advised readers to make sure windows are closed on the day of treatment, cover stacked firewood with plastic, instruct the applicator to treat only infested areas (use a string to mark off these areas), warn neighbors in advance of the tank truck's arrival, and post signs warning people to keep pets and children off the lawn for at least a week following treatment.

If you have not seen these articles and would like to receive copies of them, write: Rodale Articles, ALA Magazine, 4012 Bridge Avenue, Cleveland, Ohio 44113.

## UNION CARBIDE BROCHURE PROMOTES PROFESSIONALISM

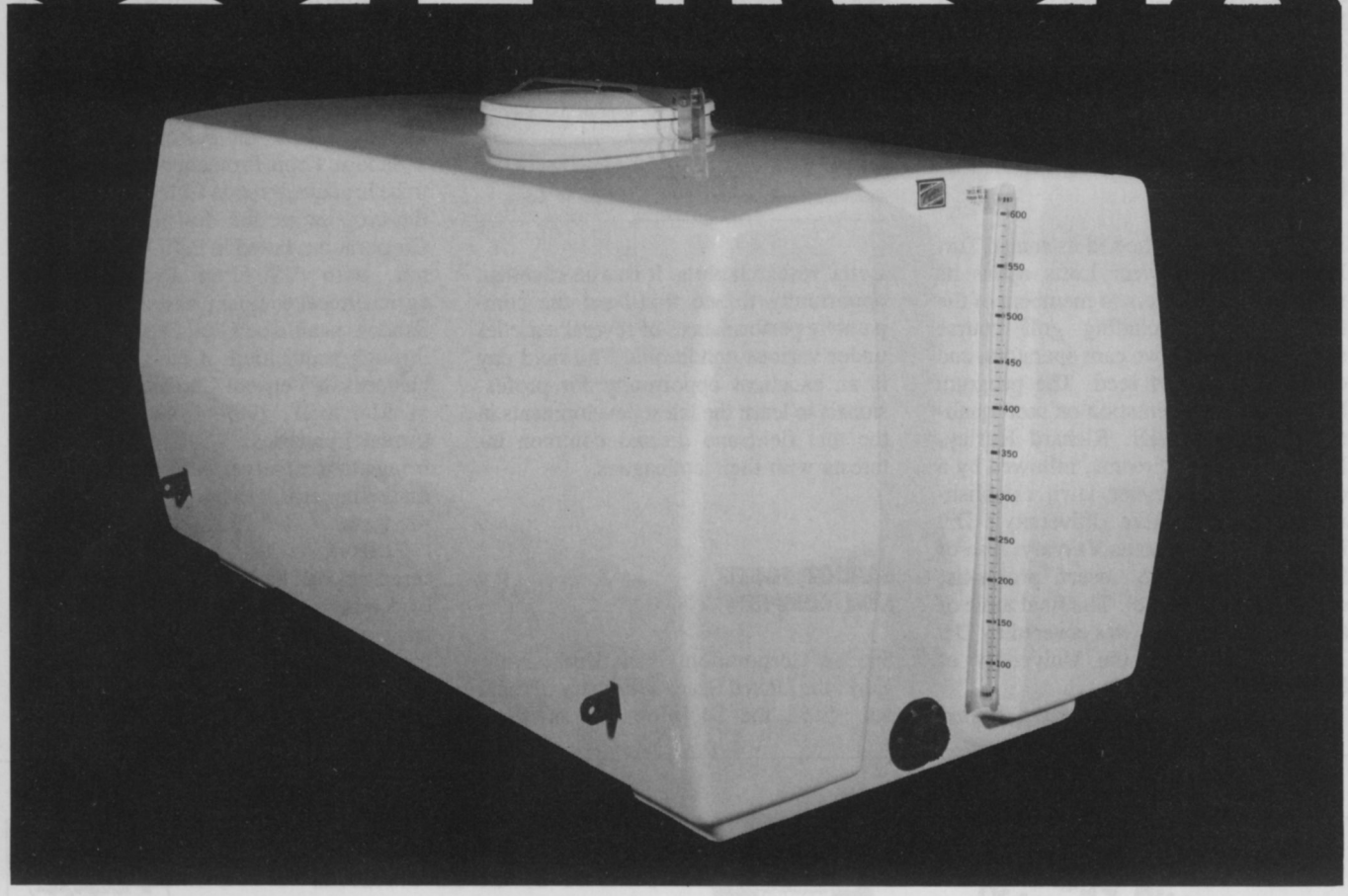
To emphasize the benefits and effectiveness of professional lawn care, the Specialty Products Group of Union Carbide Agricultural Products Company, Inc., in cooperation with the Professional Lawn Care Association of America (PLCAA), has produced a new brochure that contains up-to-date, useful information on the industry.

"What You Should Know About Professional Lawn Care" is designed to promote and help create a more positive image for professional turf maintenance. The brochure features six of the most commonly-asked lawn care questions accompanied by accurate, straightforward answers. Some of the pertinent issues addressed in the brochure include the benefits of professional lawn care versus do-it-yourself, government regulations within the industry, and safety of applications.

Available to lawn care professionals, this information piece can be a useful tool in responding to customer, general public, regulatory, legislative, and media inquiries. For more information, please

*(continued on page 20)*

# SUPER SIX




Tuflex introduces its new Model 0600HX, 623 gallon capacity tank. Whether frame mounted or bed mounted, the Model 0600HX's patented integral molded mounting base allows a safe, secure installation with *minimal* labor. Tank dimensions of 83½'' long x 43⅜'' wide x 52'' high provide an exceptionally large area for your company's logo. In addition, the Model 0600HX is available in either two or three compartment models.

## *NOW THAT'S A SUPER SIX!*

### *Additional tank features:*

- Hand crafted, lightweight, *seamless* fiberglass construction
- Ultrasonically tested for uniform thickness
- High gloss molded finish assures clean professional image
- 18'' gasketed and lockable hatch system
- Two internal baffles to eliminate liquid surge
- Two calibrated sight tube gallonage indicators
- 2'' threaded plastic outlet fitting
- Four heavy duty tiedown lugs molded permanently into tank wall

*Custom colors, mechanical, sparger or jet agitation available as options. Consult sales representative.*

**FIVE YEAR WARRANTY**
The exclusive TUFLEX process allows a full five year warranty on all handcrafted seamless fiberglass tanks.

**CALL RIGHT NOW!**
Call *TOLL FREE* for economy prices and more information on our complete line of tanks.

**1-800-327-9005**
In Florida call collect (305) 785-6402

Tuflex® MANUFACTURING CO.

1406 S.W. 8th Street • Pompano Beach, FL 33060

**Circle 27 on reader service card**

**NEWS**

*(continued from page 18)*

contact Jim Brooks, Executive Vice President, PLCAA, 1225 Johnson Ferry Road, N.E., Suite B-220, Marietta, Georgia 30067; 404/977-5222.

## LOFTS' TURF FIELD DAY DRAWS CROWD

Lofts, Inc. recently hosted its annual Turf Field Day. Each year Lofts opens its research headquarters to members of the turf industry, including golf course superintendents, lawn care operators, and distributors of turf seed. The program began with a presentation on seed quality, presented by Dr. Richard Hurley, Lofts' Research Director, followed by a discussion on summer lawn establishment, led by Rutgers University's Dr. Bruce Clark. Dr. Louis Vasvary, also of Rutgers, spoke on insect problems, diagnosis, and control. The final topic of turf-type tall fescues, was covered by Dr. Thomas Turner of the University of Maryland.

Following a picnic lunch, guests toured

*Attendees discuss common interests at Lofts*

Lofts' research plots. It was an excellent opportunity to see first-hand the comparative performances of several varieties under various conditions. The field day is an excellent opportunity for professionals to learn the latest developments in the turf field and discuss common interests with their colleagues.

## SANDOZ FORMS NEW COMPANY

Sandoz Corporation, New York, New York, the United States subsidiary of Sandoz, Ltd., the $4 billion Swiss-based pharmaceutical and chemical company, announced the formation of the Sandoz Crop Protection Corporation through the merger of two of its U.S. agrichemical subsidiaries. The new company represents another step in Sandoz' plan to become a leading force in the agrichemical industry by merging its operations and implementing a market-driven, close-to-the-customer strategy.

Sandoz Crop Protection Corporation, to be headquartered in Chicago, combines the crop protection division of Zoecon Corporation, based in Palo Alto, California, with VS Crop Protection, an agrichemical company based in Chicago. Sandoz established VS Crop Protection through acquisition of the agrichemical business of Velsicol Chemical Company on March 21, 1986, from Farley/Northwest Industries. VS Crop Protection brings to the merger a highly successful marketing arm, as well as several strong products.

Zoecon, a leader in agrichemical research, has been in the Sandoz family of companies since 1983. The company has been particularly successful in its development of herbicides and has long been recognized as a world leader in the development of insecticides.

## LOUISIANA STATE DEVELOPS SPREADER ANALYSIS PROGRAM

When a professional applicator uses a spreader to apply fertilizer or pesticides to turf, it is important that the spreader produce a uniform distribution pattern. It is not always easy for him to know the quality of pattern his spreader is applying. Testing the spreader pattern is only one part of the problem. Once a test is run and the pattern data collected, the applicator must be able to evaluate and use that data.

In the past, most applicators who conducted their own spreader tests were limited to a subjective analysis of the data. The only practical analysis for most people consisted of plotting a graph of the data and then studying the graph to estimate the best swath width and the quality of the pattern.

Now computers can be used to analyze spreader pattern data. A new program called Spreader.EZ is now available for use on IBM-compatible microcomputers. Applicators who have had no previous statistical or engineering training in pattern analysis can use the program with ease.

The program was developed by the Agricultural Engineering Department of the Louisiana Agricultural Experiment Station in Baton Rouge, Louisiana. The program was written in the BASIC language. The program is general and "user-friendly" so that it can be used easily by people outside the Experiment Station.

The output from the computer analysis of a single test usually consists of four pages of standard output, plus additional optional output requested by the operator. The program and an Extension publication that provides instructions in conducting the spreader tests and using the program are available from the Louisiana Cooperative Extension Service. Contact Darryl Rester, Associate Specialist — Engineering, Louisiana Cooperative Extension Service. Knapp Hall, Louisiana State University, Baton Rouge, Louisiana 70803; 504/388-4141; or Richard L. Parish, Agricultural Engineering Department, Louisiana State University, Baton Rouge, Louisiana 70803; 504/388-3153; for details on obtaining a copy.

### SAN DIEGO APPLICATORS FORM ASSOCIATION

The San Diego, California chapter of the Pesticide Applicator's Professional Association announces the formation of its chapter and the election results for 1986 officers. Officers for 1986 are President Charles Voos, Secretary Karen McConnel, Vice President Phil Phillips, Treasurer Al Peas, and Publicity Chairperson Cynthia Drake.

This professional association was formed in northern California in 1985 due to the increased need for information on the latest laws and regulation updates, application methods, new chemicals, and increased professionalism within the industry. The association provides a monthly newsletter, book buying, networking, educational seminars, and monthly local meetings.

In 1987 there will be a requirement for all applicators in both public and private sectors to maintain 40 continuing education hours every two years. Local meetings will aid in helping San Diego applicators to obtain these hourly credits in order to renew their licenses. To contact the association, write Farm and Home Advisors Office, County of San Diego, 5555 Overland Avenue, San Diego, California 92123.

### FIFRA BILL IS STILL STALLED

FIFRA legislative proposals have been changing on a daily, and sometimes hourly, basis for the past month and a half, according to a report in the National Arborists Association newsletter, *Treeworker*. The House Agriculture subcommittee on Department Operations, Research, and Foriegn Agriculture (DORFA) pieced together, marked up, and turned out a FIFRA bill on May 14. That bill, H.R. 2482, as amended, has been the subject of numerous other meetings and negotiating sessions. On June 10, the bill was again marked up. The Senate will probably not move on FIFRA until the House Agricultural Committee reports on the bill.

The likelihood of a FIFRA bill being produced this year grows smaller by the day, for two main reasons. Congress has very few legislative days left this year, and still faces some very key issues. Second, the number of FIFRA issues in contention seems to be increasing over time, not dwindling as one might expect. Two of the issues still being contended include certification, and groundwater. ■

# PLCAA UPDATE

Once again, Professional Lawn Care Association of America (PLCAA) Executive Vice President James Brooks has had to respond to another media assault on the lawn care industry. This time Brooks' letter was addressed to Av Weston, Executive Producer of ABC's "20/20" program in response to the segment titled, "Danger in the Grass" which aired on July 10. The following three points have been excerpted from the eight points listed in Brooks' letter.

"Your segment 'Danger in the Grass' on '20/20' Thursday, July 10, was a biased and injurious attack on the lawn care industry and the 900 member firms of the PLCAA. As the Executive Vice President of the Association, I am outraged that innuendo, hearsay and sensationalism were used to frighten our customers and slander the good reputation of our members. 'Danger in the Grass' was entertainment, not news, because broadcast journalism is responsible journalism. You have mislead the public and unjustly injured our industry.

How can '20/20' appoint itself guardian of the nation's health and safety when it demonstrates such little regard for truth and justice. Industry representatives you interviewed presented clear explanations of the issues during the videotaping, but you elected to use less than a minute of their tape on the air — out of 16 minutes of the show. In addition, there were no statements by recognized third party health officials and scientists to present the many years of accumulated experience and data. Let me demonstrate:

1. The great majority of products commonly used by our members do not carry a skull and crossbones graphic, a symbol health authorities designate as the highest level of toxicity. Yet, your billboards for the show created fear among viewers with the sensationalism of a banner headline superimposed over a skull and crossbones. Is this responsible journalism?

2. There is no cyanide (hydrogen cyanide or potassium cyanide) in the chemical composition of Daconil fungicide. You scared people out of their wits with this sensationalism.

3. Claire Connelly of Parkville, Maryland, and Bob Montoya of Kansas City, Missouri, have filed a lawsuit against one of our member companies. You expertly reported the pain and suffering of these individuals, even though each case is in litigation. But never once did you present testimony on the case from a health official, attending physician, or recognized authority. You leapfrogged the courts and compromised the case of our member.

Frankly, Mr. Weston, your story lynched our industry before the judge rode into town. I want you to clearly understand that our industry has been maligned without regard for the facts. Our members are rightfully angry and dismayed. Furthermore, you have aired a story that is a disservice to the general public. To do this in the guise of responsible reporting is a discredit to the journalism profession." ■

# QUESTIONS & ANSWERS

**Q.** What is a hard fescue? Is it different from a creeping or Chewings fescue?— *Todd Brown, Rhode Island*

**A.** All three of the species you asked about are considered in the fine fescue group. They all are very fine-textured, shade tolerant, and do better than other cool-season grasses at reduced fertility. None of the fine fescues do well in poorly-drained soils.

The new hard fescues have outperformed the Chewings and creeping fescues in turf evaluations around the United States in recent years. They have better heat tolerance and red thread and dollar spot resistance than other fine fescue species. The hard fescue varieties, Aurora, Spartan, Scaldis, Reliant, Waldina, and Biljart (C-26) have performed well compared to most other creeping and Chewings fescues in most turf trials around the country.

The reason that hard fescues are somewhat more expensive and not as widely used as Chewings and creeping fescue is because of seed production difficulties. Some of the newer varieties have shown improvements in seed production which should make them more competitive in the marketplace. The hard fescues have smaller seeds and a much higher seed count than the Chewings and creeping types. They do have a slower establishment rate compared to the other two species, but they are still faster-establishing than Kentucky bluegrass. — *William A. Meyer, Turf-Seed, Inc., Hubbard, Oregon*

**Q.** Is there a standard pay scale in the lawn care industry? — *Paul Fox, Virginia*

**A.** From my experience and travels, I can honestly say, "No." This topic covers a wide spectrum, from hourly wages, to weekly salary, to wages and bonus, to commission and wages, to straight commission. Benefits and cost of living for individual areas also figure into what lawn care companies are paying their operators and managers. — *Des Rice, Turf Management Systems, Inc., Mississauga, Ontario*

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.** ■

# PEOPLE

**Harry Stalford** has been named Director of Turf Seed Development at International Seeds, Inc., Halsey, Oregon, according to J.L. Carnes, President. Stalford returns to ISI after a two-year sabbatical during which he was manager/partner of one of the largest turf and forage seed farms in Oregon's Willamette Valley. His responsibilities at International Seeds will include customer contact, distributor sales, and the overseeing of convention activities.

In other personnel news from ISI, Research Agronomist **Craig Edminster** has joined the staff. Edminster earned a master of science degree in 1981 from New Mexico State University after earning a bachelor of science degree from the University of Arizona in 1977. He comes to ISI after serving for five years as forage crops breeder/seedstock specialist and western research manager for FFR Cooperative in Salem, Oregon. Edminster will work under Dr. Kevin McVeigh, ISI's Director of Research.

**Scott West** has been named National Sales Manager for Bluebird International, Inc. West came to Bluebird from OMC Lincoln where he had been employed for 11 years. His latest position was District Sales Manager for the southwestern United States. His prior positions included those of General Manager of Cushman Motors, Inc., a company-owned distributorship of OMC Lincoln in Cerritos, California, and Advertising and Sales Promotion Manager for OMC Lincoln in Lincoln, Nebraska.

Jacobsen Division of Textron, Inc., awarded three "Golden Reel Outstanding Achievement" awards and six "Distributor of the Year" awards at its Annual Distributor Awards Breakfast. The breakfast was held in February in conjunction with the 57th Annual Golf Course Conference and Show in San Francisco. Three distributors were recognized for outstanding achievement within the "Golden Reel Club." The "Golden Reel Club" is an elite group of Jacobsen distributors who have each won the "Distributor of the Year" award six times. The three distributors were: Sawtelle Brothers, Inc., Swampscott, Massachusetts; Southern Specialty Sales Company, Inc., New Orleans, Louisiana; and Tresca Industries, Inc., Jacksonville, Florida.

Six Jacobsen distributors received "Distributor of the Year" awards for outstanding sales, promotion, and service of Jacobsen professional turf equipment. The six distributors were: Illinois Lawn Equipment, Inc., Orland Park, Illinois; Indiana Turf Equipment Corporation, Indianapolis, Indiana; Lawn and Garden Supply Company, Phoenix, Arizona; Wilfred MacDonald, Inc., Clifton, New Jersey; Tieco, Inc., Birmingham, Alabama; and Turf-Aid Distributing Company, Billings, Montana. Jacobsen appauds these companys' efforts. ■

# IS THERE A MECHANIC IN THE HOUSE?

*When you're in a business that works extensively with mechanical equipment and vehicles, such as the lawn service and lawn maintenance industries, sooner or later breakdowns are going to occur. The question is, do you fix them yourself, take them to a local repair shop, or hire an in-house mechanic?*

Every lawn care and maintenance professional probably wishes he or she had a little genie who could fix sputtering engines, squeeky brakes, and loose fan belts with the blink of an eye. With that kind of turnaround time, vehicle and equipment maintenance woes would be long forgotten. Unfortunately, there aren't many genies around aside from those in the movies. That leaves you with a choice to make — do you have the time and capabilities within your organization to handle preventive maintenance and repairs of your vehicles and equipment; do you need to rely on an outside source; or can you afford hiring your own mechanic to do the job?

In talking with turf professionals across the country, we found that each of these options is viable, depending on the size and structure of your business, and should be considered carefully before changing your current maintenance and repair program.

***In his experience, Smith would lose a half-day's work bringing mowers or vehicles into the shop and half-a-day taking them home. While transportation alone usually meant a day of downtime, the servicing of equipment often took two or three days.***

Prior to January 1 of this year, J. Harold Smith, owner of Smith's Lawn Care, Bowling Green, Kentucky, farmed out 90 percent of his vehicle and equipment repairs to local dealers or service centers. "The big problem with that," he explains, "is expense and time loss."

In his experience, Smith would lose a half-day's work bringing mowers or vehicles into the shop and half of a day taking them home. While transportation alone usually meant one day of downtime, the actual servicing of equipment often took two or three days — provided that parts didn't have to be ordered, he adds. "In our particular area, even dealers who sell, promote, and service a particular brand of equipment rarely have parts other than filters, belts, or something simple. But if you need any motor parts or any major repair parts," Smith explains, "they just don't have them."

Disgruntled by dealer service and cost, Smith had always hoped to find an employee who was mechanically-inclined and could tend to his business' vehicle and equipment maintenance needs. Last summer he got lucky when he hired a lawn care technician who happened to start tinkering with repairs around the shop when not in the field and eventually proved his mechanical instincts.

At the beginning of this year, the employee traded in his spray rig and mower for a wrench and welder, and became the company's in-house mechanic. He does or supervises all preventive maintenance of equipment and vehicles, as well as all repairs, including tough jobs like major motor rebuilding. Although the new mechanic's first priority is to "keep the company going mechanically," Smith says, "he's not always in the shop. He goes out with crews (supervising or filling in where needed) and also does repairs in the field."

That has proved to be an important benefit of having an in-house mechanic, according to Smith. "It's been my experience that everyone is a shade tree mechanic," he says, "and that's dangerous. You may not want a regular lawn care operator adjusting carburetors or doing minor vehicle repairs."

When a vehicle or piece of equipment breaks down on a customer site, Smith's in-house mechanic is available to go out and service it in the field. Such a response can be critical to getting an important job finished, as well a preventing lengthy downtime due to equipment failure.

Smith's mechanic is paid hourly and his job is protected over the winter lull months. "We have a few people on through the winter, but we have about a 10-week lay-off that is just about unavoidable," Smith explains. "In Kentucky we're in a transition zone. Sometimes we get a lot of snow removal work, but that's not something you can count on. Some years there's no snow. Other than refurbishing equipment, there's little for our employees to do then, so most of our men are off for a period of time."

While Smith has saved money on maintenance and repairs by having his own mechanic, he has acquired a few expenses with the new position. "We are having to

equip ourselves with more specialty tools. Although that's not a big expense," says Smith. "You've got to have most tools anyway. There are a few specialty tools, but most of them are ordinary shop tools."

"Other than that, it's the other way around. It would be more costly not to have our mechanic," Smith emphasizes. "We don't have to have mechanical work done outside and I can shop for parts. I can probably buy parts a good bit cheaper now. When you buy parts on the repair man's ticket, the price is usually elevated."

Several manufacturers, he says, sell parts directly to the end-user. And parts such as belts and bearings are universal, he adds. "The key is being able to learn how to cross-reference a particular manufacturer's numbering system with the manufacturer of the individual parts. It's not too difficult, and our mechanic keeps current with those."

If Smith could not use his mechanic in the field during slow maintenance periods, he admits that his operation probably couldn't support an in-house mechanic. "Unless," he says, "you opened another can of worms and started taking in repair work off the street that would keep him busy."

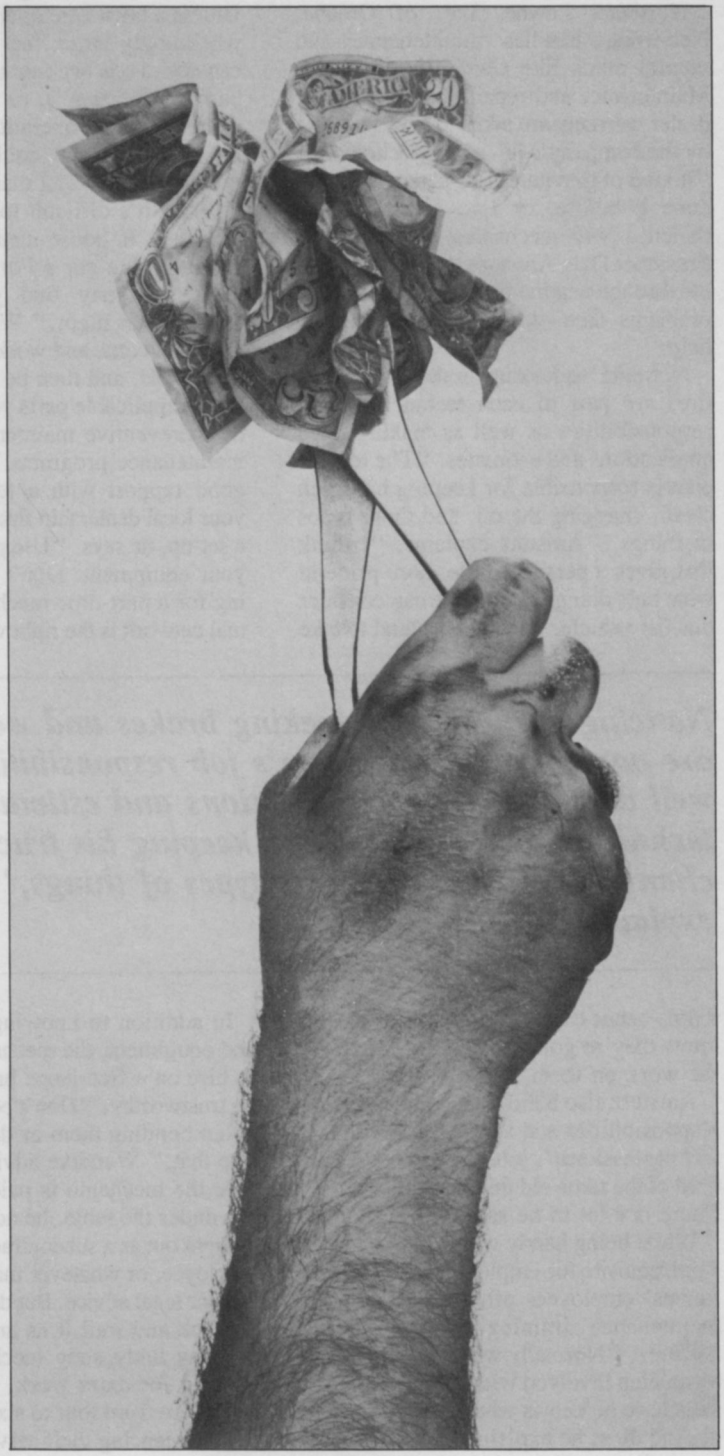
For lawn care operators who are looking for their own in-house mechanic, Smith advises they find someone who has vehicle and equipment maintenance experience from a vocational school or on-the-job training program. "That's important," he says, "because there's a difference between people who can work on things and people who can fix things." He also recommends that a new mechanic start on simple projects first. It's better for him to prove his skill before he is given a $3,000 or $4,000 engine to work on, Smith concludes.

Not all lawn care and maintenance professionals have been as happy with in-house mechanics as Smith. Neal DeAngelo of Lawn Specialties, Hazelton, Pennsylvania, had an in-house repairman, but reports that it didn't work out. "You're trying to give full-time work to him and yet, it's not a full-time position," he explains.

After having an in-house mechanic for one season, DeAngelo returned to his company's previous system where preventative maintenance was taken care of on a routine basis by employees and repairs were taken to a local garage. Loyalty to one particular garage in town has earned fast service for the company. According to DeAngelo, his vehicles and equipment are only out of commission for one day when sent outside for repairs.

He believes the biggest problem with having an in-house mechanic is retaining good help at an affordable price. "If I hire an employee and pay him the kind of money that would be necessary to have a good employee and have him stay, it wouldn't be worth it. And if you're going to hire somebody for a lot less," DeAngelo adds, "you're not going to get a good employee and you're going to have turnover. So it's just simply a lot better to have it done outside."

Several lawn care operators have learned on their own how to repair vehicles and equipment out of necessity. Although it would be nice to have an in-house mechanic whose sole responsibility was to keep vehicles and equipment going, says Brian Gambill, President of The Groundskeeper, North Augusta, South Carolina, his company presently cannot afford it. Gambill himself does all repairs, including installation of new engines, except for any hydraulic work, which has to be taken to an outside



source. He also works in the field three days a week. "The rest of the time," he says, "I'm working on equipment, the books, and other administrative things."

Gambill admits the time he spends on maintenance and repairs can infringe on his other duties, however, he says it's worth it in the long run. But there have been disappointments. "I bought a tractor once and it had some transmission problems. I put the thing in the shop and it came out in worse shape than it went in. That sort of deflated me a little bit as far as working on equipment."

Instead, Gambill now purchases a service and parts manual for each new piece of equipment he buys. "Finan-

cially, it's worth it," he says. "I don't have things breaking down and I don't have to cart them off somewhere to have them fixed."

Northern Lawns, Inc. of Omaha, Nebraska, handles maintenance and repairs much like Gambill's company. Maintenance and repairs not covered by dealer warranty are taken care of in-house by the company's lawn care technicians. "It kind of gravitates to a person who has done it before, or I've had some experience (with mechanics) myself," says President Dale Amstutz. "We just stumble through it sometimes. If we encounter problems, then we look for extra (outside) help."

Noticing squeeking brakes and worn tires are part of each technician's job responsibilities as well as making lawn applications and estimates. "The technician is responsible for keeping his truck clean, changing the oil, and those types of things," Amstutz explains. "I think that gives a person a little more pride in what he's doing, because he can consider that *his* vehicle. Technicians tend to take a little better care of their vehicles if they know they're going to be doing some of the work on them, too."

Amstutz also believes the maintenance responsibilities add a little variety to the turf professional's job. "Everybody gets tired of the same old thing day after day." There is a lot to be said for variety.

While being handy with a wrench isn't a prerequisite for employment, Northern Lawns' employees often get on-the-job maintenance training. According to Amstutz, "Normally we try to have each technician involved with the repair of his vehicle so he knows what's going on with it. And then, he explains, "if something is repaired to the point where it needs some watching, the technician can monitor it himself."

The company tries to schedule maintenance and repairs for rainy days as much as possible, Amstutz says, but sometimes breakdowns and repairs can't be worked around the weather. "Even if you have to take a half-day out of a work schedule, we feel that it's valuable time spent to keep a vehicle maintained," Amstutz explains. "It's something you just have to do."

Ed Wandtke, Senior Consultant for All-Green Management Associates, Columbus, Ohio, believes the best scenario is to hire a "moonlighting" mechanic. Unless a lawn care operator has an overwhelmingly large fleet ("such that you can afford one back-up truck sitting in the barn all the time"), or runs a landscape or tree removal operation that requires a lot of mechanical equipment prone to needing very regular maintenance, Wandtke says it's difficult to justify having a full-time, in-house mechanic.

"If you've got a Ford, Harvester, or GM, you may find you can rent a mechanic at night," Wandtke explains. "They'll come and work at your site with their tools, and then be able to purchase all the applicable parts you need to do decent preventive maintenance and minor maintenance programs." Establishing a good rapport with a few mechanics at your local dealership first can lead to such a set-up, he says. "Use people who know your equipment. Don't go out advertising for a part-time mechanic. The informal network is the right way to find one."

***Noticing things like squeeking brakes and worn tires are part of each technician's job responsibilities as well as making lawn applications and estimates. "The technician is responsible for keeping his truck clean, changing the oil, and those types of things," Amstutz explains.***

In addition to knowing your vehicles and equipment, the mechanic you choose to hire on a free-lance basis should also be trustworthy. "Don't be afraid to think about bonding them or doing something like that," Wandtke advises. And make sure the mechanic is paid above board, not under the table, he adds. "Pay them straight out as a subcontractor, a part-time employee, or whatever may be acceptable to your legal advice. But do pay them with a check and trail it as an expense."

Many body shop mechanics also are looking for extra work, and will spend anywhere from four to six hours an evening free-lancing their services, according to Wandtke. He says many auto garages pay their mechanics a flat rate for a given amount of work. If a man's efficient and gets his job done in five hours, Wandtke says, he's usually eager to find outside work to supplement his income.

"The moonlighter in many cases is an excellent resource until you become so heavily taxing on that individual that they cannot be effective anymore," Wandtke explains. "And that's a function of hours. If you start giving them too much work, they get exhausted from the evening work; they're exhausted from the day work; and their total effectiveness drops completely."

Chem Turf, Inc. in Anaheim, California, is an example of one lawn care business that has a successful relationship with a moonlighting mechanic. "We used to have the drivers take care of minor repairs and on anything that required any ability at all to repair, we would take around the corner to our friendly garage. But the cost was phenomenal," exclaims George Meeley, Vice President and General Manager. "The guy was good — no comebacks — but you couldn't afford to go back if you had to because you couldn't even buy gas for the truck after he finished working on it."

While Chem Turf technicians are still responsible for changing oil, checking tire pressure, and doing other types of standard maintenance, the company has hired an "outside, in-house" mechanic. "One of the fellows that worked here knew a truck mechanic and he now comes in on Saturdays, or during an evening if we have an emergency, and works at a flat hourly rate," Meeley explains. "He helps us out if we need brakes, tune-ups, or whatever."

However, when major repair work needs to be done, such as rebuilding an automatic transmission, Chem Turf usually has to seek outside help. "Not only because of the specialized equipment that is needed," Meeley explains, "but because of the time involved. A transmission shop will turn the job in one day, whereas if a mechanic is just working in the evenings, it may take him three or four days."

So there are pros and cons to each vehicle/equipment maintenance option. An in-house mechanic can certainly relieve the burden of maintenance and repairs, allowing lawn care professionals to focus on what they do best — and that's treating lawns. On the other hand, before rushing out to find your own mechanic, make sure you compare the cost of outside service versus wages and other costs associated with staffing an in-house mechanic. Remember to include moonlighting mechanics in your comparison, which could be the most economical option for small- and medium-size lawn care companies.

However you determine to meet your vehicle and equipment repair needs, it is important to have a consistent program. Preventive maintenance often averts any problem from becoming a major expense in the first place. And the more repair incidences you can control, the less you'll be calling for a mechanic. — *Vivian F. Rose* ■

*The author is Assistant Editor of* ALA *magazine.*

# TURFSEED MARKET REPORT

*Turfseed production is a risky business. Producers try to meet the demand for seed, but sometimes Mother Nature doesn't cooperate.*

Every year, during the first week of August, turfseed growers in the Pacific Northwest harvest the year's crop and hope for the best. Like any crop, the quality and quantity of the turfseed harvested will depend upon the growing conditions present earlier in the year. Luckily, turfseed is grown over a fairly large region, so growing conditions will vary somewhat from one company's production field to the next. Therefore, one turfseed company may report a good seed yield, while the company at the other end of the valley may report a poor seed yield.

*Pickseed West's field of Banff Kentucky bluegrass in Tangent, Oregon.*

**NORTHRUP KING COMPANY.** One of those companies with a poor seed yield to report is Northrup King Company of Minneapolis, Minnesota. Sales Manager Larry Vetter reports that the only crop coming in well for his company is the turf-type tall fescues. "The bluegrass crop is very disappointing at best," says Vetter. "Last year was very poor and the initial fields that have been run on this crop are somewhat worse than last year." With few exceptions, Vetter says the bluegrass crop has been very poor this year industry-wide. The fine fescues, which include the hard, creeping, red, and chewings fescues, also appear to be coming in very poor, according to Vetter. Ryegrass, however, seems to be producing a normal crop.

Bluegrass seedhead formation seemed good in the field, but when the workers harvested it, there were a lot of double seedheads and a lot of seedheads that just didn't fill in. Drought and excessive heat were the determining factors in the poor bluegrass crop, according to Vetter. "There was a really hot stretch in early June again this year about the time of pollination which did not make for a good pollination," notes Vetter. He says the field burns of last fall which are intended to prepare the fields for planting also did not burn well because they were wet.

Vetter even suspects that bluegrass will be shorter in supply this coming year than it has been in 1986. "Last year there was some carry-over going into the 1985 crop, and that is not the case this year," says Vetter. "The pipeline is pretty dry and now we are having an even worse crop." Bluegrass and ryegrass prices will probably increase anywhere from 10 to 20 percent, according to Vetter.

Despite shortages, Northrup King will debut two new bluegrass varieties with this seed harvest: Aspen and Trenton.

**INTERNATIONAL SEEDS, INC.** The outlook is not quite so bleak at International Seeds, Inc. in Halsey, Oregon. Product Manager Harry Stalford says seed yields have been average to above average on some crops. However, he says high demand has created a market shortage. "There was such a demand for turf-type perennial ryegrasses that it created a shortage," says Stalford. The International Seeds varieties that will be short for the 1986-1987 marketing year will be Derby and Regal. "If people are going to buy grass seed for 1987," says Stalford, "I would suggest that they try to tie their source down in the fall of 1986." Prices will be stable, but maybe a little bit higher than they were going into this harvest, according to Stalford.

Although International Seeds is working on new tall fescue and perennial ryegrass varieties from Europe and the United States, Stalford doesn't foresee any significant developments that will shake the turfgrass market. "There is no one variety that does it all anymore," says Stalford. Blends of more than one turfseed variety are necessary for healthy turf. He does see a trend in developing turfgrasses which are suited for specific regions of the country.

**NORMARK, INC.** Joe Jacob, President of Normark, Inc. of Tangent, Oregon, reports that harvest yields are off about 10 to 30 percent across the board. "We will have tight supplies," says Jacob, "I don't know if they will be short. The prices are going to reflect the lack of production because we had very good demand last year. The carry-overs are much lower than normal and we will have high prices all year." When supplies are tight, Jacob says market prices go up a little, but when supplies are ample, prices come down. "We are in a tight supply situation," says Jacob. "Prices will be at least as high as they were last year."

The demand for turf-type tall fescues has replaced the demand for fine-leaved fescues to a certain extent. The tall fescues have a little better adaptability and a little better resistance to disease, according to Jacob. Normark should have at least one new turf-type tall fescue variety available by next season.

**PICKSEED WEST.** The bluegrass harvest has been disappointing, but turf-type tall fescue and perennial ryegrass harvests have been at least average at Pickseed West in Tangent, Oregon. Dr. Gerry Pepin, Director of Research, says all

Pickseed bluegrasses are going to be in tight supply. Pepin says common Kentucky bluegrass prices will not be coming down much and proprietary Kentucky bluegrass prices will be about the same as last year.

Researchers at Pickseed West are looking for bluegrasses that will blend well with turf-type tall fescue. Bronco is one such bluegrass that Pickseed will introduce this year. In perennial ryegrass, Pickseed is breeding for higher-yielding, rust-resistant varieties. "With turf-type tall fescues, like everybody else, we are trying to get lower-growing, high seed-yielding, dark green varieties," says Pepin. "We have two new ryegrasses that don't have names yet. One is a rust-resistant type that has been excellent in the turf trials so far. The other one is a very dark green, low-growing type that is also looking outstanding in the trials."

*Dr. Gerry Pepin, Director of Research, Pickseed West, inspects a field of creeping red fescue.*

**LOFTS SEED, INC.** At Lofts Seed, Inc. in Bound Brook, New Jersey, the problem of dwindling supplies has been more a function of high demand than production difficulties. Production Manager Dr. Rich Hurley says yields have been up, but the demand has outstripped the supply. "Turfgrass seeds all around the world have been in such great demand with the tremendous amount of building activity," says Hurley. "There are a lot of golf courses being built. The lawn care industry is expanding. Homeowners seem to be doing well economically and are using a lot of turfgrass seeds." By May or June of 1987, seed users should expect shortages similar to this year.

Hurley says geographical differences prevent industrywide shortages of particular types of turfseed. "A company might have all their production in one area and they might get hit a lot more than another company that has production in different areas," notes Hurley. "Some of the varieties that might be produced in larger quantities might be produced in two or three areas." He also remarks that the best looking bluegrasses in turf trials sometimes are the poorest seed yielders and produce disappointing crops every year.

Hurley says bluegrass prices will come down over the next six months, but then they will go back up when the shortages manifest themselves again. However, bluegrass usage is almost in a no-growth phase. "We are using more and more turf-type ryegrasses and turf-type tall fescues," says Hurley. "The total production of proprietary bluegrasses is on a slight increase, but do not show the tremendous growth of the other grasses."

The tall fescues seem to be a better all-around grass plant than the bluegrasses. "They have a deeper root system and they avoid drought, compared to the bluegrasses," says Hurley. "We find much less insect damage with the tall fescues, compared to the bluegrasses. They require much less fertilizer." He says tall fescues are becoming popular with turf managers in Southern California and the transition zone where tall fescues are best-adapted.

Turf managers can expect some new varieties from Lofts in the near future. Rebel II turf-type tall fescue will be available in small quantities this fall and will be in full production next year. A new, unnamed, experimental tall fescue variety that will be similar in quality to Rebel II is in the works. Rebel II will have a darker green color, with finer, denser turf, and an improvement in leafspot resistance compared to Rebel, according to Hurley.

"We also have a *Poa trivialis* coming along named Laser that we will have available in limited quantities next year," says Hurley. "We have other projects a couple of years away that we are working on, like a Palmer II and a Prelude II ryegrass. We are working on the preliminary stages of our Rebel III. We also have another variety of bluegrass that is on the market this year that we call Princeton (P) 104. That is one of the best-performing bluegrasses out of the Rutgers program. It is excellent for the sod market."

**TURF SEED, INC.** Until the harvest actually came in, Turf Seed, Inc. of Hubbard, Oregon, expected a bumper crop. Unfortunately, yields in general in the Willamette Valley of Oregon were slightly below normal overall. Tom Stanley, Marketing Manager, says there will be shortages of certain elite varieties of bluegrass, perennial ryegrass, and fine fescues. There should be enough tall fescue seed to meet most demands, according to Stanley, but prices are going to stay very strong. "Next spring and even this winter we could be looking at higher prices on public varieties," predicts Stanley. "Next spring we could be looking at 10 percent higher prices."

Turf Seed has recently released its "II" series of perennial ryegrasses: Citation II, Manhattan II, Birdie II, and Omega II. Stanley says these varieties are unique in their resistance to both crown and stem rust. He says Turf Seed tall fescue breeding is striving for darker, denser, more dwarf varieties. Within a year the company will release a dwarf tall fescue which is currently code named 5BB and a new sheep fescue called Bighorn. Stanley says Bighorn "will be a standout performer in areas like cemeteries and roadsides where there just isn't any maintenance except maybe one mowing per year. Its biggest asset is its powder-blue color. It maintains its density in turf situations better than Covar, which is the industry standard in sheep fescue right now."

**E.F. BURLINGHAM AND SONS.** Like most growers, E.F. Burlingham and Sons of Forest Grove, Oregon, can claim shortages of all varieties, but especially the fine fescues. Vice President Sherry Burlingham says fine fescues will be in short supply because of a very early freeze last October. Fescue tillering produces the growth in the spring that produces the seed. "They couldn't do the tillering because of the early freeze," explains Burlingham.

The harvest of fine-leaved, turf-type perennial ryegrasses was alright, but Burlingham says all the growers in the Willamette Valley are completely sold out because distributors expect to have very good fall and spring business. "The prices on most items should stay very strong," predicts Burlingham.

"We will be coming out with a new

turf-type tall fescue and a new fine-leaved perennial ryegrass within two years,'' says Burlingham. ''We will start advertising them next year. The real trend is looking for increased drought resistance in the turf-type tall fescues. When we started the new breeding program, that was one of the things we were really looking for.''

**J&L ADIKES, INC.** J&L Adikes, Inc. of Jamaica, New York, has the same complaint all of the bluegrass growers have voiced. President Bob Russell says his company's Adelphi Kentucky bluegrass has produced a very poor crop for the same reasons other companies' bluegrass seeds have not come on strong. ''Adelphi will be as short in supply as it was last year and it was tremendously short last year,'' says Russell. ''We hope to maintain the price at the present level.''

**JACKLIN SEED, INC.** Kentucky bluegrass yields at Jacklin Seed, Inc. of Post Falls, Idaho, are low, but Glade in particular was hard-hit. Gayle Jacklin, Marketing Communication Manager, says they are harvesting about 60 percent of a normal Glade crop. ''Last year we had an average of about 366 pounds an acre,'' says Jacklin. ''This year the average yield per acre is about 500 pounds. With virtually no carry-over, it is still going to be quite short. Everything is pretty much sold out in the proprietary market.''

Jacklin is excited about the introduction of a new warm-season bluegrass called Huntsville. ''It is the first warm-season bluegrass,'' claims Jacklin. The bluegrass originated in Huntsville, Alabama and has proved its mettle in tests in the transition zone. ''We will try to market it in the transition zone and blend it with some of the new turf-type tall fescues on the market,'' says Jacklin. ''It is resistant to stem rust. It has done really well in high humidity and heat tests.''

Jacklin has also released some proprietary Kentucky bluegrasses to other companies. Liberty was released to Garfield-Williamson, Dawn and Julia to LESCO, Inc., and Destiny to Jonathan Green. All of these bluegrasses were bred for deep green color and better seed yield, according to Jacklin. A final variety is still in the number phase (F1872), but it is scheduled for release sometime soon.

''With bluegrasses, it is hard to get a variety that will yield a lot of seed and yet when you put it down in a lawn or in a sod field, it will have that deep green color,'' remarks Jacklin. ''If we could have both, we could run away with the market. We have only reached the point where we can have one or the other.''

**LESCO, INC.** Art Wick, Vice President of Research and Development at LESCO, Inc. of Rocky River, Ohio, predicts that Kentucky bluegrass prices will generally be the same as or slightly lower than last year. The price of proprietary bluegrasses will be about the same. Wick believes common Kentucky bluegrass prices may be a little bit lower than they were this past spring.

''On the ryegrasses,'' says Wick, ''a somewhat higher cost than what we saw with the 1985 crop. Because of a bluegrass shortage, there is more fine-textured perennial ryegrass being used in the retail package line of products. As a result, it has caused somewhat of a short crop or short supply of the turf-type perenial ryegrasses. The turf-type perennials coming off the fields this fall look like they are about 20 percent below expectations. When we add those two things together, we expect the turf-types to be somewhat short. That shortage will show up in the marketplace next spring.''

Since supply is starting to catch up with demand, Wick expects turf-type tall fescues to weaken in price. ''We may only be talking about a nickel a pound, but this will be the first time in the history of the turf-types, which are only five years old now, that we have seen a softening in the price,'' claims Wick.

In 1987, and in very limited supply this fall, LESCO is introducing a new dwarf turf-type tall fescue called Trail Blazer. ''This particular variety will be denser and finer-textured and slower growing than the old turf-types or the old forage types,'' says Wick. The company is also introducing Cimarron turf-type tall fescue developed by Dr. Bill Meyer of Pure Seed Testing which features a rich dark green color and good density. This new variety also exhibits brown patch resistance. Also from LESCO is Julia Kentucky bluegrass, which produces a dark green turf with medium-fine texture and upright growth habit.

Wick says the lawn care industry needs turfseed that can be introduced into an existing turf and stand a chance of surviving in that turf and improving that turf. ''We see a lot of lawn service companies that are in the habit of buying their products on a price basis and are not concerned enough about incorporating the best and most adapted varieties into those lawns,'' complains Wick. ''I see no gain in taking a common Kentucky bluegrass and introducing it into an old Kentucky bluegrass lawn, because you are going to get more of the same. If you are going to go to the effort of renovating or seeding a turf, you might as well introduce something that stands a better chance of surviving than what is already there.'' — *Tim Weidner* ■

*The author is Managing Editor of* ALA *magazine.*

# DEALING WITH ADVERSE MEDIA COVERAGE

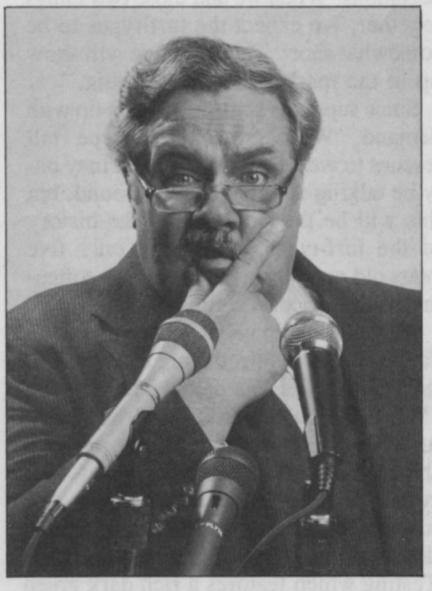
*Recent adverse media coverage has put the lawn care industry on the defensive.*

Until this summer, the lawn care industry has plied its trade virtually unopposed by any individual or group. The industry has had to battle isolated local regulatory legislation over the past few years, but in recent months a full-scale media assault has been launched on professional lawn care. Television coverage of the lawn pesticide controversy began on May 22 with a segment on the CBS "Evening News With Dan Rather." On July 2, the NBC "Today" show ran a segment on the issue and ABC's "20/20" program finally put in its two-cents worth on July 10. Shortly after the "20/20" program aired, many local television network affiliate stations also jumped on the bandwagon and presented the story from a local angle.

The print media also covered the controversy, but in a characteristically more detailed fashion. An article appeared in the June 23 issue of *People* magazine. Rodale Press, Inc. has published articles on the subject in two of its magazines: *Organic Gardening* and *New Shelter*. No doubt more consumer press coverage of the issue will be forthcoming.

We wondered how all of this media coverage has affected the industry and how the industry is dealing with the coverage. So we contacted industry leaders around the country to gauge the media's impact. The Milwaukee, Wisconsin area was considerably shaken by all the media attention, according to Bill Vogel, Vice President of Spring Valley Turf Products in Jackson, Wisconsin. Vogel says the problem was aggravated by one particular radio talk show that ran two shows on the subject. He says it happened to be on the largest radio station in Wisconsin.

"I have talked to some of our lawn care operator customers and they got immediate calls the next day cancelling service," reports Vogel. The local landscape contractors association recently designated a new post to handle public relations, according to Vogel. The post was formed to promote the benefits of landscape maintenance and to formulate a plan to deal with negative publicity. Lawn care businessmen are trying to get on radio talk shows to voice their side of the story.



The situation in New Jersey isn't much better, according to Ilona Gray, Executive Director of The Alliance for Environmental Concerns, Wayne, New Jersey. Gray says a reporter from the *Asbury Park Press* newspaper wanted to know what is being done to protect New Jersey consumers from the problems that were voiced in the television reports. "The basic problem with the '20/20' report was that it lacked expert opinion," says Gray.

She says the Alliance's annual meeting in November will stress safety. "Our education committee is working on some safety material that we received from Cornell," says Gray. "Locally, we can cut down on misapplications."

Public education is the name of the game, according to Rick Gilmore, Trustee and Recording Secretary for the Alliance. Gilmore wants the public to see that do-it-yourself lawn care creates more exposure problems for the public than professional lawn care. He believes the bias of the media stories have driven more people toward do-it-yourself applications.

Gilmore has witnessed a "significant roll-over of customers due to the negative media publicity." However, he says those lost customers were customers who were about to drop their lawn services anyway for one reason or another. "In a lot of cases they used this for the catalyst to make their decision to stop lawn care," says Gilmore. He is convinced that another group of ex-customers dropped their service because the particular company they were with happened to be mentioned as an example in the media reports.

Still, Gilmore is sure that the anti-pesticide sentiment that exists in a very small segment of the population has not gotten any larger. "They have allied themselves with the people who are not aware of the pros and cons, risks and benefits, and they have done a better job of educating that segment of the public than the industry has," complains Gilmore. But educating the public will not be the biggest problem the industry has to face. The most pressing problem, according to Gilmore, will be educating local legislators who will now be more convinced than ever that they should enact legislation to regulate the use of lawn pesticides.

Gilmore's colleague, John Buechner, Regional Agronomist with Lawn Doctor of Matawan, New Jersey, says his company has not experienced the kind of problems that Gilmore reports. "I know we had eight cancellations at the company store in Philadelphia," says Buechner. "In talking with some of the New Jersey dealers, some of them had one or two cancellations and others had none. The overall impact in our company was not that great." Buechner suspects that

*(continued on page 35)*

**ADVERSE MEDIA COVERAGE**

*(continued from page 32)*

because Lawn Doctor is a granular company, the public might perceive them as being safer than liquid spray companies.

Buechner isn't alone in reporting minimal effect from the adverse media coverage. Thomas E. Mann, President of Greenskeepers, Inc. and the Minnesota Professional Lawn Care Association of Egan, Minnesota, says his company has received no feedback from the public at all. Mann polled Association members about three days after the "20/20" program aired and then again about 30 days later. He found that substantially less than one percent of their customers have cancelled as a result of the adverse publicity. A posting ordinance was also enacted in nearby St. Paul on the day the "20/20" program aired, so applicators were bracing for an avalanche of public outcry, but it didn't materialize.

"In one case," reports Mann, "one guy said he has had more calls on pets since the '20/20' thing aired than in the other three years he has been in the twin cities market. Generally, they are talking in terms of five or six people having called their telemarketing department to inquire about it. They are talking about not more than six to 10 cancellations that are directly attributable to the airing of these programs."

At the other end of the spectrum, Jim Foote, District Manager, The Davey Tree Expert Company, Lancaster, New York, has never received stronger public reaction in the nine years he has been in the business. But then the Western New York State area is unusual in being the center of anti-lawn pesticide activity since April of this year. Foote says local media had already damaged the industry before the national media ever picked up the story.

"We lost a lot of business," says

*(continued on page 43)*

## A PRODUCT UNDER FIRE

The Fermenta Plant Protection Company of Painesville, Ohio has been forced into a defensive posture by allegations reported in television programs like "20/20" that their turf fungicide, Daconil 2787®, caused the death of Navy Lieutenant George Prior. Ed Sabala, Fermenta Communications Manager, tells us how his company has been addressing recent media references to Daconil:

"First we have addressed all inquiries on an individual basis with statements prepared to answer the variety of questions coming from customers, distributors, media, and anyone else with concerns regarding this topic," says Sabala. "Secondly, we have been in contact with our distributors regarding our product position. We have also provided them with materials to address concerns at the distributor level. In regards to the inquiries we have received, we have issued the following position statement:

'Daconil 2787 Position Statement — Recent media coverage has wrongfully implicated Daconil 2787 fungicide as the cause of the tragic death of Navy Lieutenant George Prior in September, 1982. Daconil 2787 was not the cause of Lieutenant Prior's death. He died from toxic epidermal necrolysis (a condition not associated with Daconil 2787). The media's association of Daconil 2787 with Lieutenant Prior's death is without merit.'"

# DIAGNOSING TREE PROBLEMS

*Diagnosing tree problems requires ordered thinking, data gathering, and careful planning.*

Much of the skill of being a good tree care professional involves being able to quickly identify the causes of tree problems. This is the business of diagnosis. Because of the diversity of urban landscape environments, every sick tree can present a unique problem solving challenge that not only benefits from our previously developed skills, but helps us acquire yet more skill. Thus, we are always learning more about diagnostics. In this article, we will review the basics of the diagnostic process in an effort to help you continue to improve your problem solving abilities.

Diagnosis consists of three general areas. First, there is perception of a problem; second, determination of the cause or causes; and third, planning a solution to the problem. An important part of the diagnostic procedure is to proceed through these three general areas with *organized thinking*.

**PROBLEM PERCEPTION.** Perception of a problem generally starts with the appearance of a symptom. A symptom is defined as a noticeable, abnormal condition. A good diagnostician is one who can recognize the symptoms of a developing health problem or pest infestation very early, while there is still time to carry out an effective control program. In addition, you may want to be able to recognize signs of poor tree health before the client or home owner does!

There are four perspectives to consider when learning how to increase your ability to perceive symptoms of poor tree health. One is the detailed or close-up view. This is the most common way people look for symptoms and can be very rewarding. Often a hand lens magnifier is used to view plant tissue. Spider mites, aphids, powdery mildews, and many other infectious tree problems can often be quickly diagnosed in such a manner. The presence of a particular insect pest or pathogen can be noted, and it can be identified properly by looking carefully and closely. The effectiveness of a spray applied a week or so ago can be evaluated with the close-up view as well. Did you or did you not bring the pest problem under control?

In many cases, however, the general view is just as important to notice as the close-up view. The general view is the second of the four perspectives. A general view is most valuable in identifying chronic environmental stresses present that may be causing non-infectious decline in a tree in the landscape. Is the site subject to summer dryness, standing water after a storm, soil compaction, crowding, or shading from neighboring plants? Such common stresses can usually be noted if sufficient attention is given to the general view.

*Landscape herbicide damage*

The general view is also useful to discern whether or not acute stress may have occurred. Tree injuries to roots or lower trunks can be identified. Herbicide or other agrichemical problems can often be noted.

Another useful diagnostic perspective is to get some idea as to the *amount of time* a certain symptom or set of symptoms have been present. This is the third of our diagnostic perspectives. No matter how often you may ask, trees cannot speak to you and tell you how long they have been sick. However, you can learn to evaluate and recognize the perspective of time in plant diagnostics by using indirect methods and knowledge. For in-

*(Clockwise from left) Crabapple scab on crabapple leaf, mountain ash displaying canker symptoms, and ash displaying anthracnose symptoms.*

stance, experienced arborists know how to keep sufficient records of plant appearance, weather conditions, and cultural activities so they can trace back through these records when problems arise. Perhaps a tree has been declining over the course of two years. A review of records may reveal that wet weather periods were uncommonly frequent or that new construction occurred nearby two years ago. The condition of the tree may have resulted from such factors.

Finally, we must not forget the perspective that our knowledge and experience can give us regarding symptomatology. We learn (as we study more about trees) that there are certain general things to look for in different situations or on different types of plants. Pines for example, are particularly susceptible to decline or death resulting from soil compaction combined with several successive years of dry weather. Certain crabapple varieties are very susceptible to apple scab disease. If we have these plants on the site, we want to be very watchful for these problems.

**DETERMINING CAUSES.** Generally, problems of plants do not arise from one isolated cause. There may be a primary or most obvious cause, such as the occurence of spider mites on spruce or rust disease on a hawthorn. However, there may be some associated environmental stress conditions present that need to be diagnosed. Droughtiness often precedes mite problems, for instance. We need to sort out causes by correct perspective and orderly thinking. Orderly thinking is easily accomplished by formulating a series of questions to ask about the tree exhibiting poor health symptoms. You may need to write

out lists of symptoms and questions. The key is to keep your thinking orderly. Do not repeat yourself or go off on a tangent unnecessarily.

One of the most difficult diagnostic areas for the tree care industry is determining the causes of problems that result in nonspecific symptoms. Such nonspecific symptoms as leaf yellowing, leaf drop, browning of the tips of leaves and branch diebacks may be serious and easily detected. However, they do not usually relate to a specific cause. We call these *nonspecific symptoms*.

It is most important to realize that such symptoms commonly, but not always, result from poor root health in the urban landscape. There can be many hundreds of things wrong with the root environment that may cause root health problems and result in such symptoms. Some of these may be infectious diseases and others may be non-infectious environmental problems. The table included in this article gives some examples of non-specific symptoms and possible causes. Notice how each of the symptoms has several causes that must be sorted through.

The only way to achieve a correct determination of the cause of a plant problem when beginning with a nonspecific symptom is to try and find more symptoms. Gather more data. Produce a set of symptoms. Even if your set of symptoms includes nothing more than a group of individually nonspecific conditions, it might still lead to a correct conclusion as to cause or causes.

Let's suppose you start with yellow leaves. We could increase our symptom set by:

- Noticing where on the plant the yellow leaves are located.
- When the yellow leaves first appeared.
- What unusual cultural things might have happened.
- What other leaf conditions can be observed (browning, leaf drop, or leaf size change).
- What soil conditions are present (wet, dry, compacted, acidic, or salty).

Perhaps the help of an outside diagnostic clinic or a soil testing service will be needed. The end result of all of this investigation will be an increased ability to correctly diagnose the cause of the symptoms and correctly plan a solution.

| SYMPTOMS | POSSIBLE CAUSES |
|---|---|
| 1. Brown or scorched leaves; progressive dieback of branches. | A) Poor root health from overwatering, excessive soil dryness, excessive fertilizer, or compaction and poor water penetration into soils.<br>B) Specific nutrient toxicities or imbalances.<br>C) Excessive heat or light reflected onto leaves from driveway or buildings.<br>D) Pesticide or mechanical injury.<br>E) Air pollution.<br>F) Winter drying.<br>G) Vascular fungal or bacterial infection. |
| 2. Leaf spots, blotches, blemishes, blisters or scabby spots. | A) Excessive soil dryness coupled with high temperatures.<br>B) Frost injury.<br>C) Chemical spray injury.<br>D) Fungal infections.<br>E) Herbicide injury.<br>F) Insect damage. |
| 3. Foliage yellow-green. | A) Insufficient fertilizer or nutrient imbalance.<br>B) Poor root health due to compacted soil or poor drainage.<br>C) Winter drying.<br>D) Root or crown injury.<br>E) Air pollution.<br>F) Soil pH (acidity).<br>G) Herbicide injury.<br>H) Mites or scale. |
| 4. Foliage of one branch dying. | A) Fungal canker.<br>B) Injury.<br>C) Insect damage.<br>D) Winter damage. |
| 5. Leaf drop. | A) Poor root health from overwatering, excessive dryness, excessive fertilizer, compacted soil, or girdling roots.<br>B) Heat and drought stress.<br>C) Insect infestation.<br>D) Herbicide injury. |
| 6. Wilting or drooping of foliage. | A) Poor root health from over-watering, excessive dryness, excessive fertilizer or other soluble salts in the soil, compacted soil, or poor soil drainage.<br>B) A toxic chemical poured into the soil.<br>C) Fungal infection of vascular system.<br>D) Fungal cankers.<br>E) Insect infestation. |
| 7. Leaves with tiny yellow speckling or yellow banding of needles. | A) Spider mite infestation.<br>B) Air pollution.<br>C) Insect infestation.<br>D) Fungal or bacterial infection. |
| 8. Deformed or misshapen leaves. | A) Herbicide injury.<br>B) Late frost or freeze.<br>C) Insect infestation.<br>D) Anthracnose. |

*A general diagnostic guide for landscape trees exhibiting nonspecific symptoms. To more correctly determine causes of tree problems, compile lists or sets of symptoms. Look for specific symptoms associated with these nonspecific symptoms.*

**RECOGNIZING INFECTIOUS DISEASES.** Recognizing infectious diseases on flower, leaf, and stem parts of trees is sometimes more difficult than recognizing insect or mite pests because the pathogens cannot be viewed directly. In many cases, infectious diseases cause non-specific symptoms similar to those discussed above (see the table). You may be unfamiliar with what the pathogens and the damage they cause are supposed to look like! Most often, the pathogens you are looking for will be fungi.

A fungus often grows on a leaf similar to the way mold grows on bread or a rotted spot develops on a fruit or vegetable. Look for a circular spot of growth. Sometimes one circular spot overlaps another, giving more of a blotchy appearance. Look for concentric rings in the spot, which gives a bullseye appearance. Sometimes you can see evidence of the production of spores of these fungal pathogens on leaves or stems of plants.

Inspect for fluffy, moldy growth on the surface of the plant, such as you see in powdery mildews. Also, look for black pinpoint-like pustules within the damaged tissue. These pustules are actually fungal formations in which many spores are produced and pushed to the outside. There are many different fungal pathogens found on foliage. They produce different sizes, shapes, and colors of lesions, spots, blights, or blemishes. Some hints to help you more correctly diagnose infectious tree diseases are as follows:

- *Verticillium wilt and dieback.* Wilting and yellowing of foliage is followed by premature defoliation. One limb of the tree may be affected first. Gradual dieback may be apparent. Yellow-brown, brown, black, or greenish-black streaks may be found in outer rings of wood of infected branches.
- *Cankers and twig blights.* A canker is an infection of the bark and outer vascular tissue of a tree. The infections are definite areas that vary in color from the surrounding healthy bark. Infected tissue may be sunken or swollen. When

*(continued on page 46)*

# HOME LAWN DISEASES

*Knowing how to control lawn diseases means knowing how to identify the symptoms of those diseases.*

The more we know about home lawn diseases, the more we realize how sophisticated our disease control efforts must be. Proper identification is the key to controlling turfgrass diseases. The following information summarizes identification and cultural, fertility, and irrigation control measures for the common cool-season turfgrass diseases.

*Summer patch on annual bluegrass (above). Necrotic ring spot on Kentucky bluegrass (below).*

**SUMMER PATCH.** The disease formerly called Fusarium blight is now believed to be either summer patch or necrotic ring spot. These two diseases form the spots and "frog eyes" that were referred to as Fusarium blight.

Summer patch is a warm weather disease that occurs from late June through early September, depending on your location. The disease usually occurs after a week or two of dry weather following a heavy rain. The characteristic initial symptom is yellow turf in the infected spot. This separates it from other diseases that have similar "frog-eye" symptoms.

Cultural management consists of core aeration which should be done to improve root development, and reduce thatch. Light, daily irrigation will also help reduce the severity of the disease.

Nitrogen fertility in the summer months of June, July, and August will reduce the severity of summer patch. Approximately 1/2-pound of actual nitrogen per 1,000 square feet per month should be adequate.

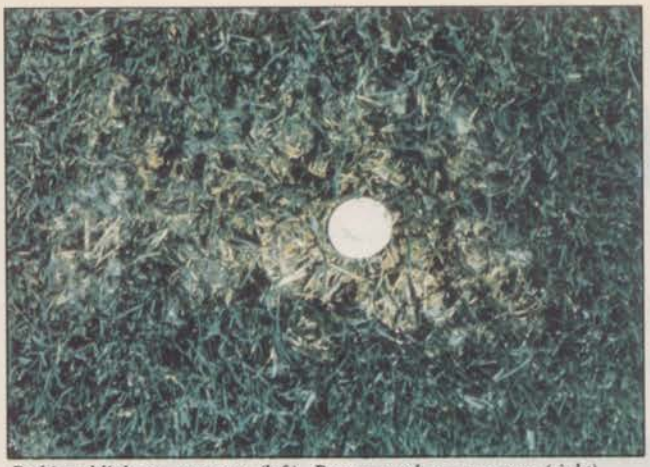
Chemical management is also possible. Cleary's 3336® , Fungo 50® , and Tersan 1991® , are good fungicides for the management of summer patch. They all have the same basic chemistry. The turf area to be treated should be irrigated the night before and the fungicides drenched in before they dry on the foliage. They can be used either curatively or preventively.

A fouth fungicide, Bayleton® , does not have to be drenched in to be effective. However, it does have to be used preventively. This means it has to be applied before the disease becomes active during the current season. This does not mean Bayleton cannot be used on turf areas that had summer patch the year before, only that it must be used before the disease becomes active this season.

**NECROTIC RING SPOT.** Necrotic ring spot is caused by *Leptophaeria korrae* and is a newly recognized disease of Kentucky bluegrass. This is a cool weather disease that is active in April through May, and September through November, depending on your location. The disease symptoms are red to purple leaves on the infected plants. The disease is characterized by "frog-eye" patches which resemble summer patch "frog-eyes." Consequently, the disease is often misidentified as summer patch. The main differences between the two diseases are that summer patch is active in warm weather and is characterized by wilting turf in the active spots, whereas, necrotic ring spot occurs in the cool weather of the fall and is characterized by the red blades on the infected grass plants. However, the weakened plants in these spots may begin to deteriorate during the warm weather of summer, especially under drought conditions. It may be difficult to distinguish between these two diseases at this time.

Nitrogen fertility during the growth season is necessary for recovery of the older necrotic ring spot "frog-eyes" that were formed in previous seasons in the spring. The effect nitrogen has on development of new necrotic ring spot "frog-eyes" has not been determined. There are some products which seem to have biological activity against necrotic ring spot. Several products were tested for the management of necrotic ring spot. Products called Lawn Restore, Green Magic, Strengthen, and Renew have promoted excellent recovery of older necrotic ring spot "frog-eyes" and prevented new ones from forming.

Supplemental irrigation can culturally



*Pythium blight on ryegrass (left). Brown patch on ryegrass (right).*

reduce summer patch if applied on a daily basis. If applied at mid-day, it will cool the plants, similar to syringing performed on golf courses during the heat stress period. It also provides water for the short and limited root systems of the infected plants. If the mat or thatch is kept moist, antagonistic microorganisms may develop, which will prevent the pathogenic fungi from attacking the plants. A daily irrigation program during the summer on infected turf may also cause the build-up of antagonistic microorganisms that destroy the *P. graminicola*.

Preliminary data suggests that Chipco 26019® and Rubigan® will manage necrotic ring spot. Effective timing and minimal rates have to be determined. It appears nitrogen application will have to be made in conjunction with the fungicide. Otherwise, fungicides may prevent the older "frog-eyes" from becoming active again and new ones from forming, but the older "frog-eyes" will not fill in and the maximum benefit from the fungicide treatments will not be realized.

**PYTHIUM BLIGHT.** *Pythium* blight (cottony blight) is an important disease in regions of the United States where daytime temperatures are routinely above 90 degrees Fahrenheit, night temperatures stay above 75 degrees, and where high humidity is common. Under these conditions, *Pythium* blight can devastate large areas of turf within 24 hours.

*Pythium* blight consists of spots initially ranging in size from ½ to 6 inches. These spots first appear as dark, greasy, or slimy water-soaked areas on the turf. When the spots dry, the leaves shrivel and turn light brown or straw colored. In the early morning when the humidity is high, a fluffy white mold growth may be seen in association with these lesions. If the turf is mowed while the fungus is still active, the disease will spread in streaks. Remember that *Pythium* blight appears during humid, warm weather and in poorly-drained areas.

*Pythium* blight management begins with improving soil drainage, which eliminates the problem in most instances. Other cultural practices that reduce the severity of this disease include reducing the amount of nitrogen applications just prior to and during warm weather and improving air circulation.

Effective fungicides for the management of *Pythium* blight include, Termec SP® and Proturf Fungicide II® (chloroneb), Subdue® (metalaxyl), and Banol® (propamocarb).

**RHIZOCTONIA BROWN PATCH.** *Rhizoctonia* brown patch, caused by *Rhizoctonia solani* Kuhn, attacks all turfgrass species. It is most severe on perennial ryegrasses, annual bluegrass, tall fescue, and creeping bentgrass and can be a problem on Kentucky bluegrass lawns. The brown patch fungus lives in the soil and competes well with other saprophytic microorganisms (organisms that live on decayed organic matter). *R. solani* is found in most soils and can survive for years without a suitable host.

Brown patch occurs as circular brown patches ranging from a few inches to several feet in diameter. Infected leaves first appear water-soaked and dark, but eventually dry, and turn dark brown. Brown to black sclerotia (survival structures) are sometimes found beneath the leaf sheath or on the stolons. When the disease develops under conditions of high humidity, a "smoke ring" often develops along the outer edges of the diseased area. Under conditions of low humidity, the smoke ring is usually absent. Brown patch has a slimy appearance when it occurs on perennial ryegrass.

*R. solani* survives the winter months in plant debris as mycelium and sclerotia. The fungus begins to grow as temperatures rise into the mid 70s. *R. solani* grows as a saprophyte in the thatch. High humidity, daytime temperatures in the mid 80s, and nighttime air temperatures above 70 degrees, put the grass plant under stress and allow the fungus to attack plants and produce the patch symptoms. Under proper weather conditions, infected plants previously showing no symptoms, will exhibit them almost immediately.

High nitrogen levels increase the severity of *Rhizoctonia* brown patch. Therefore, fertilize with no more than 1/2-pound of actual nitrogen per 1,000 square feet per month as hot, humid weather approaches. Phosphorus and potassium should be maintained at normal levels and the pH should be neutral. Removing dew early in the morning will help reduce the severity of the disease.

Several fungicides are available for management of brown patch. Refer to

| COMMON NAME | TRADE NAME |
|---|---|
| chlorothalonil | Daconil 2787® , Proturf 10IV® |
| cycloheximide PCNB | Actidone RZ® |
| cycloheximide thiram | Acti-dione-Thiram® |
| anilazine | Dyrene® , Dymec 50® , Proturf Fungicide III® , Ortho Dyrene Lawn Disease Control® |
| iprodione | Chipco 26019® |
| mancozeb | Fore® , Formec 80® |
| pentachloronitrobenzene (PCNB) | Lawn Disease Preventer® , Proturf FF II® , Turfcide® |
| thiophanate thiram | Bromosan® |
| thiram | Spotrete® , Tersan 75® , Thirimad® |

*Table 1. Recommended fungicides for the management of* Rhizoctonia *brown patch.*

Table 1 for the list of these chemicals and their manufacturers. Brown patch infection begins to take place long before symptoms are evident, so the best use of these fungicides is as a preventive measure. Fungicides should be applied when average daytime temperatures begin reaching the 80s.

The introduction of the perennial ryegrasses into home lawn turfs has caused many diseases, like brown patch, dollar spot, pythium blight, and red thread, that were formerly considered diseases of golf course turfs, to become major home lawn turf problems.

**DOLLAR SPOT.** Dollar spot is one of the primary diseases of creeping bentgrass, annual bluegrass, creeping red fescue, perennial ryegrass, and Kentucky bluegrass. Management is achieved through the use of a good fungicide program in combination with cultural practices which inhibit disease progression.

Dollar spot is characterized by circular straw-colored, bleached out areas ranging from the size of a quarter to a silver dollar on low-cut turf and up to 3 or 4 inches in diameter on higher-cut turf. These areas appear as sunken spots, especially when the turf is mowed to 1/2-inch or less. Individual spots may merge and blight larger, undefined areas of turf. The white, fluffy mycelium (fungus strands) is often seen in these spots in the early morning while the grass is still moist. On individual grass blades, dollar spot symptoms appear as bleached out or yellowed, blanching lesions extending the width of the blade. On bentgrass and Kentucky bluegrass, reddish-brown bands appear at the borders of the lesions. The reddish-brown banding does not appear on annual bluegrass.

Dollar spot is caused by species of *Lenzia* and *Moellerodiscus*. The fungi overwinter as dormant mycelium in infected plant parts in the thatch and soil. The dollar spot fungus resumes growth near 60 degrees and peak activity for infection occurs between 70 and 90 degrees. One species is favored by cool weather (below 75 degrees), while the other strain is favored by high humidity and warm weather. The fungus produces a toxin necessary for disease symptom development. The fungus does not normally produce spores, so the disease is spread by movement of infected plant material by water and wind, or carried on mowers, maintenance equipment, hoses, and shoes.

No cultivars of creeping bentgrass or annual bluegrass are resistant to dollar spot. Most Kentucky bluegrass cultivars are resistant. Two susceptible cultivars which should be avoided are "Nugget" and "Sydsport." Most perenial ryegrass cultivars are susceptible to dollar spot. During periods of severe infection, the nitrogen levels should be kept high to reduce dollar spot and to make a fungicide management program more effective. Adequate nitrogen levels should be maintained with light, frequent applications of 1/2-pound per 1,000 square feet applications per month in June, July, and August to manage dollar spot and promote growth of the grass plants during warm weather.

Table 2 contains a list of effective fungicides for dollar spot management.

| COMMON NAME | TRADE NAME |
|---|---|
| benomyl | Tersan 1991®, Profurf Fertilizer +®, DSB fungicide® |
| cadmium chloride | Caddy®, Cad-Trete® |
| cadmium succinate | Cadminate® |
| chlorotholonil | Daconil 2787®, Proturf 101V Broad Spectrum fungicide® |
| cycloheximide | Acti-dione TGF® |
| cycloheximide + thiram | Acti-doine Thiram® |
| dyrene | Dyrene®, Dymec®, Proturf Fungicide III®, Ortho Dyrene Lawn Disease Control® |
| iprodione | Chipco 26019$_4$® |
| thiophanate-ethyl | Clearys 3336® |
| thiophanate-methyl | Fungo 50®, Topmec 70 W®, Proturf Systemic fungicide® |
| thiophanate + thiram | Bromosan® |
| thiophanate + anilazine | Spectro Turf fungicide® |

*Table 2: Recommended fungicides for the management of dollar spot.*

**RED THREAD.** Red thread is an especially serious problem on slow-growing turf whether it is growing slow from lack of adequate nutrition or irrigation or the cold weather. The new perennial ryegrasses are highly susceptible to red thread, and with more of this species being used in home lawn turfs, this disease is becoming more important. Red thread can be recognized by the red to coral pink stroma that are present on the foliage. The stroma appear fleshy and gelatinous when the turf is moist, later drying to become thin and thread-like. The lawn may appear as though it is infected with *Helminthosporium or dollar spot when viewed from a distance.

| COMMON NAME | TRADE NAME |
|---|---|
| chlorothalonil | Daconil 2787®, Proturf 101V® |
| iprodione | Chipco 26019® |
| anilazine | Dyrene® |
| fenarimol | Rubigan® |
| triadimefon | Bayleton® |
| vinclozolin | Vorlan® |

*Table 3. Recommended fungicides for the management of red thread.*

Adequate nitrogen and irrigation will manage the disease on Kentucky bluegrass and the fine leaf fescues and help reduce the severity on perennial ryegrass. However, the perennial ryegrasses are so susceptible to red thread that fungicides will be necessary to manage the disease when severe outbreaks occur. Fungicides for the management of red thread are listed in Table 3.

**STRIPE SMUT.** Stripe smut is a major disease of Kentucky bluegrass and creeping bentgrass. In most instances, the effects are very subtle and are difficult to detect. The disease is often not recognized until damage to the turf area is fairly extensive. Because the smut fungus *Uskilago striiformis*, is easily transmitted by people, animals, or machinery, the disease can become widespread before symptoms become severe enough to recognize.

This disease becomes active when temperatures reach 50 to 60 degrees and grass begins to grow. Infected areas of turf are stunted and slow to initiate growth in the spring, hence the lawn may show tufting in initial phases of growth. Foliar symptoms are difficult to find on short-mowed turf. Symptoms of infected grass blades are pale green coloration with black longitudinal streaks along the veins. The black streaks are masses of fungal spores contained within pustules. When mature, the pustules burst open to liberate the black spores.

During the spore liberation, infected blades fray, segment, twist, and turn white. The disease is usually seen at this time due to these symptoms or because people using the turf area find black or dark smudge marks on their shoes or clothes. The foliar symptoms virtually disappear in the summer, making diagnosis difficult if not impossible. However, in heavy traffic areas stripe smut-infected plants are slow to recover.

Stripe smut overwinters in infected clumps of grass as a systemic perennial

infection in the tissues. Since only meristematic (early formative) tissues of the grass are susceptible to infection by the spores of the smut fungus, most rapid and severe infection occurs when the host is actively growing in the spring and fall. Spores are disseminated by wind, water, equipment, and human or animal traffic.

*U. striiformis* becomes dormant during hot summer weather and its presence is difficult to detect. Most turf loss occurs during this time due to heat and drought stress on the weakened, stripe smut-infected plants. Quackgrass and other weeds often invade areas where the turf has been thinned by the infection. The stripe smut fungus resumes activity in the autumn when average temperatures are again 50 to 60 degrees.

Cultivars of Kentucky bluegrass and creeping bentgrass differ greatly in their susceptibility to stripe smut. Windsor, Merion, Fylking, Pennstar, Galaxy, and Rugby are the most susceptible Kentucky bluegrass cultivars. Toronto and Pennlu are the most susceptible creeping bentgrass cultivars. Avoid these varieties whenever possible.

Most other Kentucky bluegrass and creeping bentgrass cultivars show moderate to high resistance. However, remember that the stripe smut fungus is quite variable and new strains can develop which could attack some resistant cultivars which have been well-established. Resistant cultivars should be used in blends to help ensure longevity of the turf. If a new strain of stripe smut should develop, the combination of cultivars in the blend will still provide a satisfactory turf.

Once established turf becomes infected with stripe smut, control is difficult and temporary at best. Several fungicides can be used to suppress stripe smut for up to two months (see Table 4). The chemicals should be applied according to label direction. They must be applied when the turf is dormant, and some require drenching to be effective. They are most effective when applied early in the spring.

Fungicides can only suppress stripe smut for a short time. Follow good cultural practices throughout the growing season to manage this disease. Application of moderate levels of nitrogen should reduce disease incidence. No more than 1/2-pound of actual nitrogen per 1,000 square feet should be applied in any month and no more than 3 pounds of actual nitrogen per 1,000 square feet should be applied per season. There is a direct correlation between the amount of nitrogen applied and turf losses due to this disease. Light, frequent watering (daily, if possible) during hot weather will help prevent turf losses where stripe smut has weakened the plants. Do not allow a stripe smut-infected lawn to wilt or go into summer dormancy from lack of water, since stripe smut-infected plants will die.

| COMMON NAME | TRADE NAME |
|---|---|
| benomyl | Tersan 1991® |
| chlorothalonil | Daconil 2787® , Proturf 101V Broad Spectrum Fungicide® |
| maneb + zinc sulfate | Tersan LSR® |
| mancozeb | Fore® , Formec 80® |
| thiophanate-ethyl | Cleary's 3336® |
| thiophanate-methyl | Fungo 50® , Topmec 70W® , Proturf Systemic Fungicide® |
| triadimefon | Bayleton® , Pro Turf Fungicide 7® |
| thiophanate-methyl + mancozeb | Duosan® |

*Table 5. Recommended fungicides for the management of anthracnose.*

**ANTHRACNOSE.** Loss of annual bluegrass has traditionally been attributed to direct high temperature kill, or to the natural dying of a winter annual. However, fungicide treatments have recently been used to prevent annual bluegrass from dying during summer heat stress. This suggests that annual bluegrass does not die from these stress factors, but as a result of other causes that can be mitigated by fungicides. Anthracnose, caused by *Colletotrichum graminicola*, has been shown to be a primary cause of annual bluegrass, perennial ryegrass, and fine fescue decline during warm summer weather. Annual bluegrass will grow successfully during the summer stress period if this disease is managed through the use of fungicides.

The initial characteristic symptom of anthracnose is a yellow-bronze coloring of the turf. This color is an indication of senescence and is distinctly different from wilt, in which the turf becomes dark blue to purple in color. Later, the turf darkens and irregular brown to purplish black lesions appear on the leaf blades.

In cool weather, the turf will remain yellow, with little thinning or dying. But when temperatures range in the 80s, and humidity is high, the yellowish-bronze turf will darken within 48 hours, unless fungicides are applied. Anthracnose may initially appear as irregular patches 1 to 2 feet in diameter, but within 24 hours, large areas or even an entire lawn, can thin out and die. It is at this time that the black fruiting structures (acervuli) of the anthracnose fungus are visible in the yellow and/or newly killed tissue. The black spines (setae) protruding from the fruiting structure distinguish the fruiting bodies of anthracnose from the majority of other fruiting bodies produced by saprophytic fungi. The acervuli can be seen with the aid of a hand lens or dissecting scope.

Anthracnose occurs when daytime temperatures are in the 80s for a week or more and is most severe when nighttime temperatures stay above 70 degrees for three or more nights in a row. Anthracnose is most severe where grass plants are under stress, as in compacted areas, heavy traffic areas, poorly drained areas, and improperly fertilized or irrigated areas.

Anthracnose can be prevented, in years of moderate temperature, by proper nitrogen fertility. A nitrogen program of 1/2-pound of actual nitrogen per 1,000 square feet applied in June, July, and August will help suppress the disease. This nitrogen fertility program should be supplemented by applying 1 pound of actual nitrogen per 1,000 square feet in early September and late fall after vertical plant growth has stopped.

Systemic fungicides (benomyl, triadimefon, thiophanate-methyl, or thiophanate-ethyl) applied at 2 ounces per 1,000 square feet will allow newly infected areas to recover in about 10 days. However, a 1-ounce rate is sufficient when applied as a preventive treatment before the disease occurs. This application should be made sometime during the middle of the month of July. Contact fungicides, such as chlorothalonil and mancozeb, can be applied on a preventive basis every seven to 10 days starting in early July as well. Table 5 lists the recommended fungicides for the control of anthracnose. — *J.M. Vargas* ■

*The author is Professor of Botany and Plant Pathology, Michigan State University, East Lansing, Michigan.*

| COMMON NAME | TRADE NAME |
|---|---|
| benomyl | Tersan 1991® |
| fenarimol | Rubigan® |
| propiconazole | Banner® |
| thiophanate-methyl | Fungo 50® |
| thiophanate | Cleary's 3336® |
| triadimefon | Bayleton® |

*Table 4. Recommended fungicides for the management of stripe smut.*

## ADVERSE MEDIA COVERAGE

*(continued from page 35)*

Foote. "The whole industry is off about 20 percent from where we were at the end of last year. It has gotten very difficult to service in specific areas where people may have a neighbor who is adamantly against lawn services."

Foote fears that customer retention will suffer because of the controversy. He wonders how many customers will sign up again next year. "Now we have the situation where everyone is either for us or against us. There is no more middle of the road. It is still pretty hot in people's minds and I don't think it is ever going to go away again." He says an anti-pesticide activist sent a four-page letter to one of his larger commercial accounts. Now he must post signs on that account to keep their business.

The ordeal has caused personnel problems as well. "We have lost one or two people and I have had to hire people," says Foote. To help regain lost ground, other lawn care businessmen in New York are banding together to form regional associations that will soon be united under the banner of the New York State Lawn Care Association. "Rochester just voted to form a chapter and some people from Syracuse were talking about doing the same," says Foote. "We will have western, central, eastern and upstate New York chapters."

At the other end of the *country*, the situation is a little better. Cynthia Drake, Landscape-Horticultural Consultant, San Diego, California, applies pesticides herself and has talked with a number of her peers in southern California. "In the least, it was very damaging," says Drake. "I wrote '20/20' a rather seething letter in which I called their tactics similar to that of the '60 Minutes' crew and that they had joined the elite in the gutter."

The industry is still just getting a foothold in southern California. In fact, Drake says there are only five lawn spray companies in San Diego. "But the companies I talked to were asked quite a few pointed questions and one company reported some losses," says Drake. "It is such a young industry that companies are picking up accounts left and right. I don't think it is enough to get them out, but is enough to make some of their established customers think twice about having their services. Overall, it is bad for the psychology out here because people are sue-crazy to begin with."

She says a lot of new reactionary groups have sprung up in the wake of the recent media coverage. The public in general is more pesticide-conscious. "I have commercial accounts that want a written letter before I even set foot on the property that tells what I am going to use, what it is going to do, and how long it is going to last in the environment," says Drake. "I am getting a lot more of it in the last two years, than I have in the last five years. We have to go out daily, practically, and put articles in the paper that support our use of pesticides."

Back on the East Coast, Chris Forth, Regional Technical Manager, ChemLawn, Wilmington, Delaware, also reports cancellations at his company. He is primarily upset with the "20/20" program because it lacked expert opinion. Customers who have contacted the company have been more concerned about how ChemLawn is going to respond to the "20/20" program than the content of the program itself, according to Forth. "In general," says Foote, "the industry rebutts things piecemeal by responding to specific customer concerns. The perception of the average Joe in the street is that this is going unanswered."

Forth is convinced that the public places little credence in programs like "20/20." "By and large, the customer still has a high degree of faith in the industry, but that may be wearing thin," says Forth. "They are getting a pretty constant assault. I was interviewed locally last year in a Philadelphia news slot." He is concerned about the cumulative effect of the media reports. "Even if you don't give something credence initially, you begin to think there may be something to it simply because you hear it repeated several times."

At least one operator is worried about the customers who aren't calling him. Ron Miller, President, SuperLawns, Inc., Bethesda, Maryland, fears that customers who are not calling him are deciding on their own to cancel his services later. "We had more questions raised over the last three or four months than we have had in all the years I have been in business," says Miller. He thinks ChemLawn is getting singled out unfairly by the media. Miller believes that all applicators should contribute to a Professional Lawn Care Association of America (PLCAA) legal defense fund so the PLCAA can institute a liable action against the television networks.

Thus far, the fallout from the adverse media coverage has ranged from a severe (20 percent) loss of customers to virtually no reaction from the public whatsoever. Regardless of the short-term effect, everyone we talked with agreed that the long-term effect on the public's perception of professional lawn care will be the most important factor in this whole affair. Will this create an air of ill-will that will stay with the industry for years to come? — *Tim Weidner* ■

*The author is Managing Editor of* ALA *magazine.*

# PRODUCTS

Researchers have discovered a unique nitrogen compound that combines low burn, stability, and controlled availability in one fertilizer solution. N-Sure® nitrogen solution (28-0-0) is the first — and only — lawn fertilizer to contain triazone, a completely new form of nitrogen fertilizer that has been developed for commercial manufacture by **Arcadian Corporation**. Unlike urea, ammonium, and other nitrogen forms, triazone is composed of a closed-ring structure, which gives the compound low-burn, and controlled availability characteristics.

In field trials comparing N-Sure to urea and urea-based nitrogen solutions, N-Sure solution caused little or no foliar burn. N-Sure solution also received higher marks for turf color and vigor. A major midwestern university also found that the triazone form of nitrogen found in this product releases nitrogen more slowly than urea, but not as slowly as IBDU. Fertilizers containing triazone volatilized four times less than urea in the days following application.

Labeled for both southern and northern turfgrasses, N-Sure solution is a clear liquid that can be stored indefinitely at temperatures ranging from 0 to 90 degrees Fahrenheit without forming precipitates.

Triazone supplies approximately 65 percent of the nitrogen in N-Sure solution. Another 28 to 30 percent comes from urea, and the rest is provided by other complex nitrogen compounds. The product is completely water-soluble, which ensures that 100 percent of its nitrogen is transformed into usable plant food.

The product is available nationally through the following Arcadian authorized dealers:

- UAP Special Products, P.O. Box 37800, Omaha, Nebraska 68137; 1/800/642-TURF (Nebraska); 1/800/228-0096 (All other states); Dennis Faith.
- United Suppliers, Inc., P.O. Box 538, Eldora, Iowa 50627; 1/800/782-5123 (Iowa); 1/800/247-7906 (All other states); Mike Murphy.
- Tidewater Agricorp, Inc., Subsidiary of Lebanon Chemical Corporation, 2121 Old Greenbrier Road, Chesapeake, Virginia 23320; 804/424-7910; Mark Nuzum.
- The Andersons, Lawn Fertilizer Division, P.O. Box 119, Maumee, Ohio 43537; 1/800/225-ANDY (Nationwide).


- Wilbur-Ellis Company, Old 99 at Cedar, P.O. Box 1286, Fresno, California 93715; 209/442-1220; Paul Volker; Mike Cline.
- Wilbur-Ellis Company, 3145 N.W. Yeon, P.O. Box 8838, Portland, Oregon 97208; 1/800/547-1757; Mike Vandecoevering.
- Wilbur-Ellis Company, 5420 West Camelback Road, Glendale, Arizona 85311; 602/937-2592; Mike Gross.
- Soluco, Inc., A Division of Ideal Machinery Company, Ltd., 952 Notre-Dame Street, P.O. Box 189, St. Cesaire, Quebec, Canada J0L IT0; 514/469-5371; Royal Gregoire.

**Circle 111 on reader card**

Landscape ponds choked by unsightly weeds now can be made more attractive with a new aquatic weed control product called Sonar from **Elanco Products Company**, recently registered with the Environmental Protection Agency. This new herbicide removes pondweed, coontail, waterlily, duckweed, and many other water weeds without affecting water quality or wildlife. Unlike previously available products, Sonar carries no label restrictions against fishing, swimming, or drinking treated water, which allows this herbicide to be used without interrupting water use.

Sonar has no detrimental effects on fish, game birds, insects, or other organisms such as plankton, and it is not harmful to nearby trees and shrubs that are not growing in the water. It can also be applied early when aquatic plants are small to control them throughout the season.

Sonar controls a wide range of submersed and emersed plants and shoreline grasses, but does not control algae. Water chemistry and quality are not adversely affected by this product. There is no change in the dissolved oxygen content, no sudden growth of algae and no unsightly effects on target weeds.

Sonar works by causing a bleaching or chlorosis on the terminal bud or growing points of the plants. With growth checked by Sonar, the target plants slowly deteriorate without any shock to the water environment. In proving its environmental acceptability, this product has been found free of any interference with growth or reproduction of pond animal life. The effects are long-lasting, often keeping water clear for a year or two after a single application. The product comes in both liquid and pelleted forms to fit any available application equipment. It is easy to apply with common spreaders, sprayers, or by hand.

**Circle 109 on reader card**

# We've Got Your Number!

## And the MOYER MAN will be calling soon!

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

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

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

### Moyer Announces NEW Series of DRY PROFIT BLENDS!

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

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

Moyer & SON INC

MEMBER OF PLCAA

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

**Circle 13 on reader service card**

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

Name_____

Address_____

City_____ State___ Zip___

Phone ( )

I'm interested in more information on:

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

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

**DIAGNOSING TREE PROBLEMS**

*(continued from page 38)*

cankers girdle the twig or branch, the end of the branch dies. Small black or brown bumps, fruiting bodies of the fungus, are often seen in the canker. These may produce an ooze of orange, white, salmon, or tan spores during rainy weather.

• *Anthracnose blight.* Irregular tan or brown areas are found on the leaves, especially along the margins and major veins of the leaf blade. The condition usually is noticed in late spring on lower parts of the plant. Deformation and twisting of leaves often results from infections that occurred during bud break and leaf expansion. The blight is commonly found on ash, white oak, maples, and sycamore, particularly when such plants are growing in damp, cool places. Frost injury, herbicide damage and leaf scorch are often mistaken as anthracnose infection. Examine affected leaves closely for fungal fruiting bodies or threads of fungal growth within or near the edge of browned areas.

• *Powdery mildews.* White, powdery spots appear on leaves, stems, flowers, or buds. If the infection is widespread, the entire leaf blade may be covered with a thin, white fungal growth. Some mildew fungi affect older leaves first, such as on lilacs. Others affect newer shoots, such as on roses or crabapples. When new shoots are affected, leaf curling and shoot stunting and twisting may be severe.

• *Rust diseases.* Orange to reddish-brown spots or lesions will form on leaves, twigs, or fruit. Sometimes galling and disfigurement will be associated with the infections. In midsummer, infections on some plants will produce cup-like structures or tubular growths that will bear abundant orange spores. Commonly-affected trees are hawthorns or crabapples.

**CONCLUSION.** Remember, diagnosis of problems on trees is a three step process. First, you must correctly perceive of the problem in its entirety. Second, you must correctly determine the cause or causes of the problem. Be sure and look for environmental stresses as well as the presence of a pathogen or pest. Keep in mind that more than one cause or stress will probably be involved. Third, you must plan your course of action to solve the problem and prevent its continuing or happening again in the future. Continued efforts at diagnosis is an important part of your continued success. — *C.C. Powell* ■

*The author is Professor of Plant Pathology, Cooperative Extension Service, Ohio State University, Columbus, Ohio.*

# CLASSIFIED

### COMPUTER SERVICES

**Computer Systems—**
Complete systems with software for lawn care operators. Affordable prices. Pest Control Data Systems, 3535 Keith, Cleveland, TN 37311; 615/479-9711.

### LAWN CARE INDUSTRY SOFTWARE

Fortunate Enterprises, Inc.
3365 Oleander Drive
Spring Hill, FL 33526
904/596-6347 or 596-0863
201/953-0315 New Focus Infosystems
516/928-7161 Lukin Computers
301/864-1717 Howel Disinfectant
404/733-7702 Annis, Inc.

Nationwide network of service.

### ACQUISITIONS

**Wanted To Acquire—**
Lawn care accounts in eastern half of U.S. being sought by established corporation. Willing to negotiate a fair market price. If interested, please call me directly:
Paul Anderegg
Vice President/Marketing
Tru Green Corporation
404/442-8700

**Companies Wanted—**
National company seeking expansion desires to purchase lawn care companies. Price negotiable. To be considered, please send information concerning the number of customers and revenue to: ALA magazine, Box 320, 4012 Bridge Avenue, Cleveland, Ohio 44113.

**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.

**For Sale—**
Small Mid-West Lawn Care Company, near Dayton, Ohio, showing good return. Will sell with or without equipment. If interested, call 513/492-1241.

**Lawn Care Company—**
Fertilization and weed control servicing the suburbs of Detroit (Oakland and Mac-Comb Counties). Sales of $160,000, include three trucks and accounts. Excellent business for expansion. $165,000. For information call 313/247-8873.

### EQUIPMENT FOR SALE

**Spray Tank—**
Clean 1978 Chevy C-50. 1000 gallon fiberglass tank. Myers 2G-95 Centrifugal pump. Power take off, 30,000 miles. Best offer takes it. 715/341-7956.

**Lawn Service Trucks—**
Truly Nolen Pest Control has four used lawn trucks in good condition. Price includes: 1978-1980 Ford F-600 Chassis, 16 HP Kohler engine, 20-gallon per minute Hypro pumps, 1,000-gallon main holding tank, 200-gallon drop tank, and 100-gallon liquid fertilizer tank. Pricing starts at $5,000.00, pictures available on request. Trucks are currently setting in the Tampa Bay and Orlando, Florida areas. Call Ron DeSear at 813/351-4931.

# AD INDEX

# Winter cash flow with Freezgard® plus PCI.™

Freezgard plus PCI offers an excellent way to generate cash flow during the winter months. Freezgard plus PCI is an anti-corrosive liquid deicer designed for use by LCO's. It is effective to 30° below zero (F) and is shipped ready-to-use for residential, commercial and municipal deicing.

With regular applications you can help reduce your customers' liability from icy parking lots and sidewalks.

- Spray from cab of truck.
- 4 gal./1,000 sq. ft. (maximum per application).
- Easy equipment clean up.
- No pump damage.
- Can be stored in outside tanks.
- Apply after snow fall and blading.
- Can be used in back pack sprayers.
- 80% less corrosive than salt.
- No pavement clean up required (compared to sand applications).

GSL

## Great Salt Lake Minerals & Chemicals Corporation

P.O. Box 1190 • Ogden, Utah 84402
Phone (800) 453-4515. In Utah (801) 731-3100

Circle 14 on reader service card

# *Now you can hang up your gloves in the fight against broadleaf weeds with LESCO Three-Way Selective Herbicide.*


Deliver the knockout punch to more than 30 broadleaf weeds — including such tough champions as ground ivy and spurge — with the combined effectiveness of 2,4-D, MCPP and dicamba. You'll get quick-action, single-application control.

Available in five-gallon, 30-gallon and 55-gallon containers, LESCO Three-Way Selective Herbicide eliminates the inconvenience and inefficiency of tank mixing individual components. Bulk shipment by tanker truck or tote tank is also available in most areas.

Controlling broadleaf weeds doesn't have to be a fight. Order LESCO Three-Way Selective Herbicide today. Call toll free.

**(800) 321-5325 NATIONWIDE**

**(800) 362-7413 IN OHIO**


LESCO

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

**Circle 10 on reader service card**