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# Lawn & Landscape MAINTENANCE

VOLUME 13, NUMBER 4

APRIL 1992

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Cleveland

## FEATURES

### 26 No Surprises, Guaranteed

*His frank manner and dedication to his customers have earned Andy Wright the top spot at Muellermist Lawn Sprinkler Systems, and an evolving role in the national irrigation industry.*

### 32 Selling the Benefits of Irrigation

*Irrigation installation and maintenance are fast-rising markets for the landscape maintenance contractor; some well-planned marketing strategies can help clinch those accounts.*

### 40 Compost Quality: Users Beware?

*As the need for compost increases, the numbers supplying product will also expand. Landscapers should be prepared to demand consistent, quality compost.*



p. 70

### 50 Working with Wetlands

*From clipping hedges to wading through water: Are landscapers succeeding in the transition?*

### 54 Stimulating Plant Growth

*Fertilizer nutrients are designed to stimulate plant growth, among other things, but shouldn't be viewed as a panacea.*

### 62 Can Mowing be Subcontracted Successfully?

*Before getting involved with subcontracting, it's best to establish cost controls and job responsibilities.*

### 70 Managing Pests with Decisive Methods

*By achieving a thorough awareness of key pests and key plants, maintenance operators can more effectively and efficiently manage customers' landscapes.*



p. 8



p. 26

## DEPARTMENTS

94  
Advertisers' Index

6  
Business Watch

4  
Editor's Focus

22  
Landscape News

82  
People

17  
Association News  
*PGMS plans its first  
Midwest conference.*

92  
Calendar

15  
Fax Survey

5  
Letters

87  
Products

93  
Classifieds

78  
Hands On

8  
News in Brief

80  
Trees & Ornamentals

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# Editor's Focus

LANDSCAPING IS A professional business. As such, it is no different than other businesses that require regulations, when necessary, at the appropriate levels of government.

Landscapers, lawn care operators, mowing maintenance contractors and irrigators all have an understanding of business, or should, as they are continuously working with budgets, insurance costs, depreciation and overtime.

So why does this industry constantly find itself under siege? Why hasn't the landscape industry done a better job of promoting itself as a legitimate business?

The auto industry, the banking industry — even the government has no qualms promoting its successes and achievements. While most landscape companies aren't the conglomerates these industries are, landscaping is a multi-billion dollar industry and a growing one at that.

So why isn't the industry more vocal about the value of landscaping? About National Lawn Care Month? About the products it uses to control insects, diseases and weeds?

The green industry has a lot to be proud of, and its members should be taking every opportunity to alert the public. For every negative article about pesticides, mowing mishaps or blower aggravations, there should be news of the boost landscaping adds to property values, the cooling effects of turf or the pest-free environments landscapers create.

Idealistic? Maybe. But the green industry needs to make itself accessible to the media. Contractors should answer any questions their customers have about the products being applied or used in the care of the landscape.

This is especially critical as various bills currently being considered in Washington, D.C. have the potential to dramatically affect the landscape industry. From national certification to equipment emissions to preempting local control of pesticide regulations, these issues are vital to the long-term viability of this business.

Each and every business person in the green industry is obligated to be as open and honest with customers and the general public.

For instance, articles such as the one appearing in the April issue of *McCall's*, "Pesticides: danger in the grass," should not appear without some input from professionals. Although the article did a good job of identifying safety techniques for the do-it-yourselfer, the story also told of the potential dangers associated with pesticides to both consumers and their pets.



But the news isn't all bad. Everytime a professional contractor makes a positive statement, backed by facts, about the industry, it adds to the industry's growing credibility.

Ann McClure, executive vice president of the Professional Lawn Care Association of America said she thinks the cycle is turning. "It looks as if their (Congress) whole approach to questioning is maturing each year," she said. "Hopefully, people aren't jumping the gun every time they hear something about the industry. They continue to have more information to base their judgments on."

But the industry's education of the public shouldn't stop there. Issues such as water conservation and choosing the right grasses and trees for a particular landscape should become more prevalent.

In this month's cover story, Andy Wright of Muellermist Lawn Sprinkler Systems said contractors need to become more efficient in their designs and installations. "A good design is a good water management situation. If you spend water wisely you don't have to feel bad about using it," he said.

This is particularly obvious in drought-ravaged California, but needs to become a way of life in the rest of the country as well. The time to start promoting a wise approach to water usage is not after sprinkler bans go into effect, but now.

In this month's issue of *LLM* you'll find two new features — a fax survey and a "Hands On" department. Both are designed to gain your input and create an exchange of ideas among our readers. We think you'll be interested in these new additions. We look forward to receiving your completed surveys and stories. — Cindy Code

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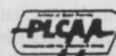
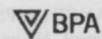
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# Letters

## Movie Madness Returns

Congratulations on a really superb publication. I read it in its entirety every issue, and I can't begin to tell you how very timely and helpful each article is for me. My husband and I run a medium-scale lawn and garden service here in Vermont, and at the present are the largest and most professional service in the area. And we must admit, gratefully, that many of the articles from your publication have helped us keep ahead of the competition.

But this was not intended to be solely a fan letter. We just spent an hour laughing hysterically about the "Movie Madness" blurb and the movie titles just leapt into our heads:

**"The Flowering Inferno":** a strange, Asian insect attacks 20 acres of flowering nursery stock and threatens to destroy every flower on earth unless they are stopped. Desperate stockmen burn every flower in sight.

**"Root Zone, The Movie":** a sci-fi/horror classic filmed just below the earth's surface; terrifying close-ups of grubs feeding on tender, young and naive roots.

**"The Zoysia from Brazil":** Jane and Jim Smith finally triumph over the Joneses when they secretly smuggle hearty zoysia seeds in from South America and create the best lawn on the block; plenty of intrigue, some minor violence during the time-lapse photography of the new seeds sprouting.

**"Turf Guys":** An action-packed story of a lawn mowing crew faced with 20 acres of knee-high grass to tame.

**"Mow Better Blues":** a stunning musical with some show-stopping numbers featuring the National Lawn Mower Precision team.

Robert & Paula Wyman  
Owners, Lawn Maintenance Co.  
Arlington, Vt.

## A Complete Fertilizer?

As a turfgrass specialist for the past 15 years, I have been interested in the nutritional needs of turfgrass in order to maintain optimal health and minimize the negative impacts of a wide array of stressful situations.

The terms macronutrients, micronutrients and trace elements are all relative terms that have the capacity to inaccurately place values on certain nutrients as they may relate to proper plant nutrition. The most important nutrient(s) to any plant must be those which are lacking.

The current definition of macronutrients (aside from C-H-O) includes the major nutrients N-P-K, representing those elements historically required for a "complete" fertilizer. I suggest that in the specific case of turfgrass nutrition there are four, not three, primary nutrients critical to the healthy completion of the normal life cycle.

Sulfur should be the fourth major nutrient required of turf fertilizers before deemed complete.

Sulfur is usually found in tissue analyses of healthy turfgrass in amounts greater than that of phosphorus. Sulfur in the plant-available sulfate form is also generally much more lacking in most soils

than are the other two secondary nutrients, calcium and magnesium.

The nutritional value of sulfur for turfgrasses has been overshadowed for far too long by the use of sulfur as a soil amendment to modify soil pH, yet sulfur is responsible for a great number of plant processes of particular importance to turfgrasses vs. other crops.

Sulfur is a major factor in turf's ability to provide for improved drought tolerance, winter hardiness, color and density; this is in addition to its important role in many metabolic functions which are commonly accepted as beneficial for other plant groups.

I believe fertilizers manufactured for turfgrass should be described in terms of their nitrogen, phosphorus, potassium and sulfur content.

The N-P-K-S designation for a complete turf-type fertilizer will be of far more value to serious turfgrass nutritionists and consumers.

Dan Nason  
Marketing Manager/Potash  
Great Salt Lake Minerals Corp.  
Overland Park, Kan.

Letters to the editor are encouraged.  
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# Business Watch

IT'S ELECTION YEAR, and pollsters are asking: Are you better off now than you were in 1988? In a recent CBS News poll, 32 percent of Americans said they were worse off now than in 1988. Only 24 percent believed themselves to be better off; and 44 percent said they felt about the same.

Statistics provide a mixed bag of economic indicators. The consumer price index, a measure of inflation, is at 3.1 percent, its lowest reading since 1986. Unemployment in February, however, reached 7.3 percent, its worst showing since 1985.

In housing, fixed mortgage rates bottomed out in 1991 at 9.25 percent, a 13-year low. Yet housing starts, at 1.01 million, were at their lowest since 1945.

Businesses failed at a record rate of 88,000 in 1991. But business debt as a share of the gross domestic product was 62 percent, its lowest since 1985.

So are you better off now than you were in 1988? *Fortune* magazine recently weighed this question and concluded that while the answer is individual and somewhat elusive, education will help secure an affirmative response for the future.

## PRODUCER PRICE INDEX\*

NOV.	DEC.	JAN.	FEB.
+0.2	-0.2	-0.3	+0.2

\*Percent change from preceding month.

## RETAIL SALES\*

NOV.	DEC.	JAN.	FEB.
-0.6	+0.4	+2.1	+1.3

\*Percent change from preceding month.

## BRAND LOYALTY STAYS STEADY

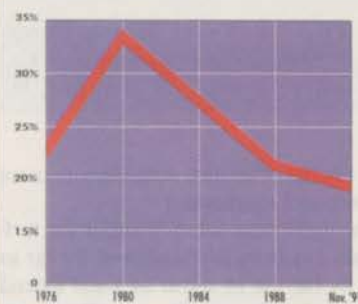
Brand loyalty remains strong, despite the recession and promotions that push price over brand names. Although loyalty declined 8 percent in 17 years, it has remained steady for the past four years.



Source: NPD Group

## THEN VS. NOW: HOUSING AFFORDABILITY

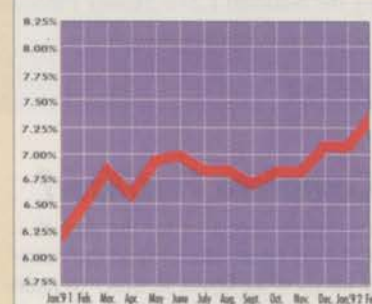
Mortgage payments on a median-price house as a percent of median family income have declined.



Source: National Association of Realtors

## LOOKING FOR A FEW GOOD JOBS?

The percent of unemployed Americans reached 7.3 percent in February, the highest rate since July 1985.



Source: Bureau of Labor Statistics



## REGIONAL REPORT: CALIFORNIA

CALIFORNIA BUSINESS leaders have subdued expectations for the economy, according to the Federal Reserve. When polled as to the economic outlook in their states, 31 percent of respondents in the 12th district (which includes California) expected output to decline in at least two of the next four quarters. An additional 56 percent expected the economy to expand, but at a rate below 2.5 percent.

On the real estate front, the housing market has stalled, with prices of some upper-end homes dropping 10 percent to 15 percent from their previous peak.

Larry Rohlfs, communications director for the California Landscape Contractors Association, said the state got hit unexpectedly hard by the recession. "We were surprised by the extent of the recession. It hit a little later than the rest of the country and we'll probably come out of it later."

Cuts in defense spending and weakness in the financial sector were among the chief factors leading to economic decline.

Rohlfs said that 1991 was an especially tough year for landscapers due to the combined effects of the economy, the drought

and a slump in construction. "Landscaping trends follow construction," he said. "If construction does well, we do well; but construction has been way off. Most people say it's going to come back in 1992."

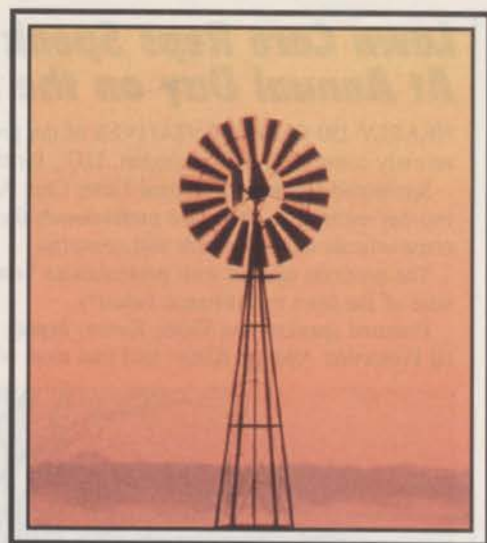
Rohlfs added that the economic outlook is mixed and a modest recovery is forecasted. "Most of our members seem to be pretty busy, but they don't have the big backlog of jobs they used to have."

Wayne DuBois, president of Mission Landscape Services, Orange County, said that growth in his region has leveled off. "We're maintaining," he said. "We're not growing a lot. Prices seem to be coming down on some bids."

DuBois said his strategy is to stay with quality rather than lower prices. The company is also getting "smarter on recycling," through the recycling of green wastes and cutting down on disposal costs.

In Sacramento, Hal Edmonds, president of Lawn Green Services Co., said he hasn't really felt the effects of a down economy. In fact, his lawn care business just grew with the acquisition of two branches. Nevertheless, he finds it more difficult to add business today than prior to the downturn.





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# News in Brief

## NEWS DIGEST

### **ALCA Relocates National Headquarters**

The Associated Landscape Contractors of America is relocating its offices effective May 1. The association's new address is 12200 Sunrise Valley Drive, Suite 150, Reston, VA 22090; 703/620-6363. Fax: 703/620-6365.

### **Burkeen Acquires Bobcat Trencher Line**

The Melroe Co. of Fargo, N.C., sold the assets of its Bobcat trencher product line to Burkeen Manufacturing Co. of Olive Branch, Miss.

With the addition of Melroe's line of trencher products, including two walk-behind models and two riders, Burkeen will greatly expand its presence in the trencher market.

Parts and service support for current Bobcat trencher products in the field will be handled through Burkeen.

### **RISE Membership On the Upswing**

Membership in the Responsible Industry for a Sound Environment continues to increase. The total now stands at 60, including 18 basic manufacturers, 13 formulators, 11 distributors and 18 associate members.

The association hopes to increase membership to 75 this year.

Additionally, RISE will hold its next board meeting May 20-21 in Indianapolis and its second annual conference Sept. 11-14 in Washington, D.C. All members are encouraged to attend these meetings.

For more information, contact RISE at its new phone number, 202/872-3860. Or write to: Responsible Industry for a Sound Environment, 1155 15th St., NW, Suite 900, Washington, D.C. 20005.

### **Hall of Fame Award Goes to Hermes**

The Lenexa, Kan., Chamber of Commerce awarded the Business & Industry Hall of Fame Award to Hermes Landscaping, a family-oriented business founded in 1965.

Hermes Landscaping of Lenexa specializes in residential and commercial landscaping, sprinkler design and lawn maintenance. Known for quality plants, Hermes grows many of its own varieties at tree farms located in both Olathe and Shawnee, Kan.

## **Lawn Care Reps Speak Out At Annual Day on the Hill**

NEARLY 150 REPRESENTATIVES of the professional lawn maintenance industry recently converged on Washington, D.C., for the group's third legislative Day on the Hill.

Sponsored by the Professional Lawn Care Association of America and DowElanco, the two-day event gave lawn care professionals the opportunity to meet with legislators and to communicate industry needs and concerns.

The program opened with presentations bringing attendees up to date on the regulatory state of the lawn maintenance industry.

Featured speaker was Victor Kimm, deputy assistant administrator for the Environmental Protection Agency. Kimm said that most of the EPA's efforts now are focused on pesticides used in agricultural applications. However, the agency has "great interest" in pursuing the quantitative benefits of turfgrass, he said.



Lawn care professionals traveled to Washington, D.C. for legislative Day on the Hill. Spokespersons like Mark Laube of Lawnmark (right) shared concerns with congressional representatives.



Among areas of immediate scrutiny: guidelines for the registry of chemically sensitive people, approaches to posting and notification, label improvements, advertising guidelines and preemption.

Ed Graves, senior consultant with Capitoline International Group, offered strategies on "How to Make a Successful Call on Your Legislator."

"Don't be afraid of the reception you'll receive," he said. "Most members and staff will be courteous — they're elected to serve their constituents."

Graves told his audience to exploit local angles. "Remember, their first consideration is 'what do people in my state or district think?'"

The following day, attendees visited the offices of their representatives and senators to ask for support of H.R. 3850 and its companion bill, S. 2085, "The Federal-State Pesticide Regulation Partnership Act of 1991"; as well as voice opposition to S. 849, "Notification of Chemical Application Act of 1991."

Legislative Day on the Hill comes on the heels of an especially trying year for lawn maintenance operators. Last June, the U.S. Supreme Court unanimously ruled that the Federal Insecticide, Fungicide and Rodenticide Act does not preempt local governmental regulation of pesticide use.

Since that decision, nearly 100 cities, towns and counties across the United States have

(continued on page 14)

## **Indiana Takes Charge Of Pesticide Regulation**

A little proactive work goes a long way. That's what Indiana's green industry is advocating after its strategic win in the state's General Assembly.

The Indiana State Lawn Care Association introduced, engineered and steered a bill putting the regulation of pesticides solely in the hands of the Indiana Pesticide Review Board. The measure passed last month.

Efforts to introduce and pass the bill began immediately after the U.S. Supreme

Court ruled that local governments may enact their own pesticide use regulations different from — and potentially more stringent than — what may already be required by state or federal laws.

Some states have legislation establishing the state as the governing force behind pesticide use; but prior to Indiana's win, only West Virginia law clearly stated that cities and towns cannot dictate pesticide usage.

Indiana's law now states: "A political subdivision...does not have authority to regulate by ordinance the use or application of pesticides..."



No Indiana cities made immediate moves to pass such legislation, but green industry associations wanted to grab the spotlight before it became a controversy.

"We thought Valparaiso might introduce something this spring," said Bob Andrews, executive vice president of the ISLCA.

"We wanted to get it done and through the system as a governmental concern rather than an environmental concern."

With a common goal in mind, the ISLCA and representatives from pest control, nurserymen, forestry, landscape and Christmas tree grower associations, banded together to write a simple bill — two paragraphs — get it sponsored and see it through the legislative process.

"It helped because we all agreed we would act in concert with one another. We were successful, because we got others involved. We might not have been able to pull it off if we hadn't pulled together a wide variety of groups," Andrews said. "We all had reps available at a moment's notice."

The worthiness of the bill was initially questioned by the General Assembly since there were no efforts to initiate local legislation, but in the end, the group of lawmakers — most of whom are up for re-

election this year — wanted to show its constituents that it could get something done, Andrews said.

The ISLCA is now working with other states interested in proposing similar legislation to their legislators.

## House Reviews Preemption Ruling

THE HOUSE AGRICULTURE subcommittee on Department Operations, Research and Foreign Agriculture (DORFA) recently heard arguments from professional pesticide users and Environmental Protection Agency officials opposing the June 1991 Supreme Court decision that gives local governments the right to regulate pesticide use. The hearing was restricted to a limited number of witnesses.

Members of the lawn care and pest control industries have undertaken an active campaign to have Congress overturn the Court's decision through passage of H.R. 3850 and its companion bill, S. 2085. The proposed legislation would preempt or restrict local pesticide regulation under the auspices of the Federal Insecticide, Fungicide and Rodenticide Act.

Testifying on behalf of pesticide user groups was former National Pest Control Association president Robert Dold, currently president of Rose Exterminator Co., Chicago. Dold told the subcommittee that the industry believes in the rigorous regulation of the manufacturing, sale and use of pesticides by the state and federal government, not by units of local government.



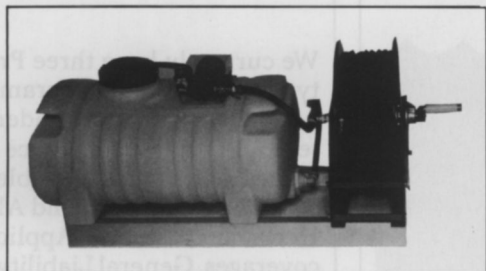
"We understand the desire of local governments to participate in pesticide policy-making and encourage that participation," Dold said. "However, we believe the ultimate authority for pesticide regulation should rest with the federal and state governments."

Dold cited the enormous difficulty and high cost of being aware of and complying with a different ordinance in each locality as the primary reasons behind industry's objections to the ruling.

In a vast departure from its previous position, the EPA and the Bush adminis-

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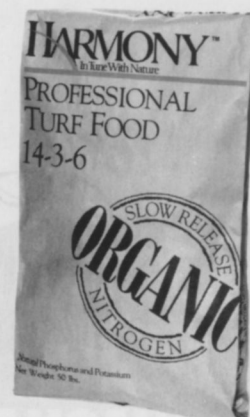


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**USE READER SERVICE #11**

tration announced that it opposes the right of local government to regulate and control pesticide use. Victor Kimm, EPA deputy assistant administrator for pesticides, told the subcommittee that it is important to maintain a balanced, responsible partnership among federal, state and local governments in regulating pesticides.

"States and local governments play a critical role in helping protect people and the environment from pesticide risks," Kimm said. "However, governments must administer and enforce laws governing pesticide use in a manner that protects public health and the environment without undue burdens on users and commerce."

Kimm further testified that states are in the best position to address pesticide regulation issues, and the EPA believes that states will play a more active role in overseeing the sale and use of pesticides. He added that in making decisions regarding pesticide use at local levels, the state and local agencies should consider the benefits of pesticides as well as the risks.

Rep. Steve Gunderson, R-Wis., backed up the testimony of Dold and Kimm, saying environmental regulations are necessary but need to be resolved on a much wider scale. "We shouldn't cut off the

local input, but for national issues like pesticide regulation, a national answer must be found."

## ChemLawn Offers New Customized Service

ChemLawn Service Corp., Columbus, Ohio, is now offering EcoScape by ChemLawn, a new program designed to give clients customized landscape options including personal consultations and an extensive menu of service options for lawns, trees, shrubs and flower beds.

**ECOSCAPE**  
PREMIER

"We asked people what they wanted from a lawn and landscape care company," said David Siegfried, ChemLawn president. "Overwhelmingly, they want a comprehensive landscape service that gives them choices. We designed EcoScape to meet their needs."

The EcoScape program begins with a meeting between the customer and a ChemLawn technician. The customer reveals what is desired for the landscape and then receives a list of options ranging from landscape installation to controlling weeds in flower beds.

Both liquid, dry or a combination of formulations are still available through EcoScape. Additionally, ChemLawn's company-owned branches are offering a 100 percent natural organic fertilizer as an option this year.

## Etiquette, Not Bans Should Contain Battles

After two years of controversy, blower bans continue to reach extremes in California. Most recently, the San Francisco suburb of Los Altos, restructured an ordinance which not only forbids the use of gas-powered blowers in its community, but rescinds decibel levels previously deemed acceptable.

After discovering that some commercial blowers do come within the 75 dBA operating levels established by the Los Altos city council, the group voted to restrict

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USE READER SERVICE #12

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We currently have three Property and Casualty Programs for Lawn Care Operators underwritten by A+ rated insurance companies. Coverage is available in all states except Hawaii and Alaska. Herbicide/Pesticide Applicators coverages, General Liability, Property, Inland Marine, Commercial Fleet, Workers Compensation and Umbrellas are available.

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Columbus, OH 43215  
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Attn: Richard P. Bersnak,  
President

USE READER SERVICE #13



gas-powered blowers across the board. Although gas-powered vacuums are permitted in the city, only electric-powered blowers are now sanctioned.

If considered an isolated incident, most contractors can work within the restrictions. However, several nearby cities have watched the debate closely and are now contemplating similar action.

"It's typical of small political groups. The vast majority have no opinion, but four or five vocal people can be very persuasive," said Steve Clark of Golden Eagle Distributors, West Sacramento. "Banning is not the right alternative. Emotions prevailed over reason."

Landscape contractors are reacting differently to the ordinance — some pricing their services as much as 30 percent higher to cover the use of alternative methods to clearing debris, according to Frank Kurose, a Los Altos equipment dealer.

Dealer/distributor business hasn't been severely affected as sales of electric-powered blowers and gas-powered vacuums have picked up.

"They (vacuums) aren't as effective, but they're not banned," Clark said. "In my opinion they make more noise (than blowers)."

The noise controversy boils down to an issue of etiquette in most cases. If landscapers better regulate the hours their power equipment is in use, they're less likely to receive complaints. Representatives of the green industry are actively promoting sensible use of blowers, and hope to convince other municipalities that what's happening in Los Altos is an aberration.

### Benlate Update: Claim Settlements Rise

Claim settlements for Du Pont's Benlate reached \$235 million in March. More than 70 percent of all claims originated in Florida.

The fungicide is alleged to have caused plant damage in 40 states. In March 1991, Du Pont recalled all dry flowable formulations of Benlate 50DF, Benlate 1991 DF and Tersan 1991 DF fungicides. No cause for the contamination has been determined.

Many Florida growers have reported serious losses from the alleged contamination, and the number of claim settlements continues to rise. To date, Florida payments total about \$205 million. About 75

percent of the Florida claims have been resolved with about 65 percent of the claims reaching final settlement and another 10 percent being resolved by other means, such as withdrawal of claim or denial. An additional 10 percent of the claimants have received interim assistance payments.

Nationwide, the number of claims now exceeds 1,600. The amount of the settled claims ranges from a few hundred dollars to a few million dollars.

In addition to the claim settlements, Du Pont may have to contend with an investigation into possible health problems related to Benlate use. According to a recent report by *The Wall Street Journal*, Florida agriculture department officials have asked the state's health department to look into complaints about Benlate's possible adverse health effects on humans.

Clyde Roberts, U.S. sales manager for Du Pont's turf and ornamental products, said the company takes all allegations seriously and is prepared to work with the proper authorities on any investigations.

According to Du Pont spokeswoman Pat Getter, Florida health officials said there are "no reasons to believe health risks existed but are investigating because they think it's the right thing to do."

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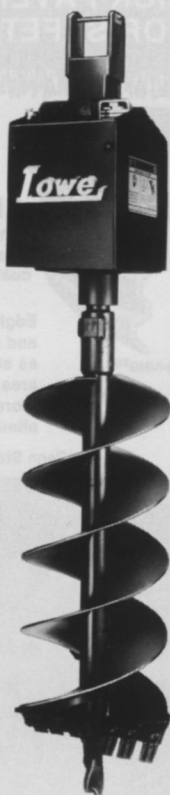


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USE READER SERVICE #14

USE READER SERVICE #15

## Correction

Sterling voluntarily modified its chipper/shredder clutch mechanism as soon as it became aware of possible infringement of the patent held by Tornado Products.

A subsequent lawsuit filed by Tornado, Germantown, Wis., against Sterling, Brooklyn, N.Y., in a New York District Court produced no damage award to Tornado, as erroneously reported in the February issue of *LLM*.

At the time of its chipper/shredder design, Sterling said, a patent search failed to reveal any patents to the Tornado product. Rather than contest the patent in question, Sterling modified and presented to the court a new version of its chipper/shredder. The product was approved by the court and is now sold on the market today. Prior statements about the chipper/shredder and the conduct of Sterling were misleading.

In addition, the court denied an injunction on Tornado's claim of trade dress on the modified product. Sterling's current chipper/shredder does not violate any patent or trademark right owned by any manufacturer including Tornado.

## News

(continued from page 8)

considered adopting or have already adopted their own pesticide regulations.

The proposed legislation, S. 2085 and H.R. 3850, would restore authority for regulating pesticide use to the federal and state governments.

Attendees lobbied against S. 849, the controversial bill introduced by Sen. Joseph Lieberman, D-Conn. If passed, Lieberman's bill would require 72-hour advance notification of lawn care and structural pest control applications to property owners within 1,000 square feet of the application.

The PLCAA opposes that bill, but supports the enactment of a uniform national program of posting and notification.

According to Peter Cavallaro, landscape manager for Reynolds Lawn Care, North Branford, Conn., 29 lawn care professionals from Connecticut met with Lieberman. They explained to him that the proposed legislation, if passed, would put many lawn maintenance companies out of business in Connecticut and nationwide.

Currently, Connecticut has a 24-hour pre-

notification registry for residents of abutting properties. Residents can call the state EPA and request to be prenotified of pesticide applications. To date, 86 people have requested this service.

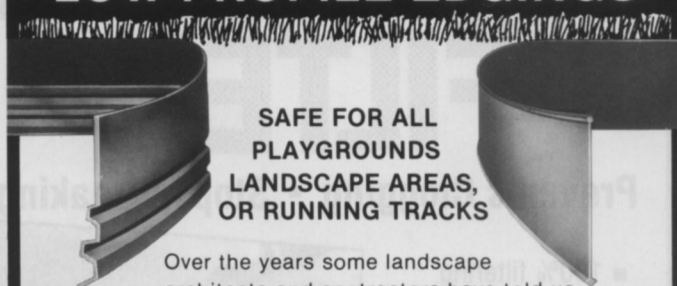
Representing Ohio, Phil Fogarty, president of Crowley Lawn Service, Cleveland, said that Day on the Hill was "one of the best experiences I've had in the business. It makes you a little less unafraid of the system. Once you see how it works behind the scenes, you feel more comfortable."

Another newcomer to the legislative event was Joe Bilskemper, president of Lawn Care Specialists, La Crosse, Wis. Bilskemper said the event was educational and gave him a chance to meet people in the industry. It also gave him a chance to talk with his representative, Steve Gunderson, one of the co-sponsors of the House preemption bill.

Fogarty and Bilskemper both plan to attend next year.

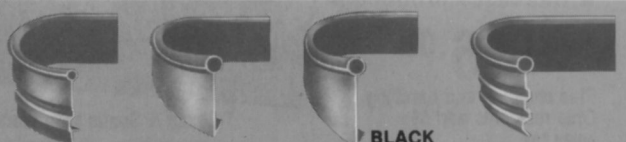
Tom Delaney, director of state government affairs for PLCAA, said he was pleased with this year's legislative day, but would like to see more states represented. This year, lawn care professionals from 24 states attended.

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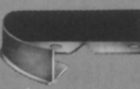
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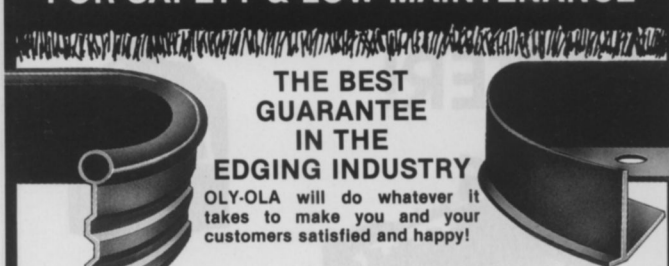
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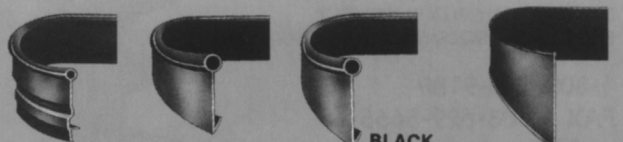


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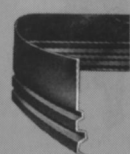
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3. Do you expect your dealer to provide you with value-added services after your equipment purchase?  
\_\_\_\_\_ yes \_\_\_\_\_ no
4. Is so, what? (i.e., routine service, parts replacement, warranty information, new label information, training, etc.) \_\_\_\_\_
5. Do you think the majority of dealers are attentive enough to the needs of the commercial industry?  
\_\_\_\_\_ yes \_\_\_\_\_ no
6. Does your equipment dealer provide you with training and/or service schools?  
\_\_\_\_\_ yes \_\_\_\_\_ no
7. Does your equipment dealer offer overnight parts delivery?  
\_\_\_\_\_ yes \_\_\_\_\_ no
- 8a. How often do you buy equipment directly from a manufacturer?  
\_\_\_\_\_ frequently \_\_\_\_\_ occasionally \_\_\_\_\_ never
- b. How often do you buy equipment from a mass merchandiser?  
\_\_\_\_\_ frequently \_\_\_\_\_ occasionally \_\_\_\_\_ never
9. How do you select your dealer? (i.e., location, referral) \_\_\_\_\_
10. What is your primary business within the industry? \_\_\_\_\_
11. In what state do you operate? \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

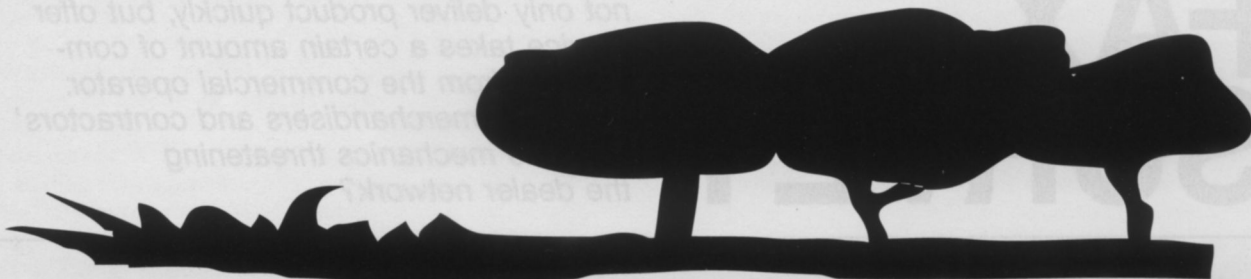
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# Association News



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### IA

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### ALCA

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PLANS ARE UNDER WAY for the first Midwest Grounds Management Conference, co-sponsored by the **Professional Grounds Management Society** and the Midwest Association of Physical Plant Administrators. The conference will be held at Miami University in Oxford, Ohio, June 17-18.

Several keynote speakers will share the floor, including Ben Bolusky, regulatory and governmental representative for the American Association of Nurserymen; Mike McCartney of The Andersons; and Glenn Sample, assistant athletic director of the University of Cincinnati.

Other presentations include Tim Bolland of Michigan State University, on crabapple selections; Jim Buckley of Miami University, on recycling; and Kathy Walker of In-site Inc., on maintenance by design.

Seminars are also planned on contracting services, use of CADD for landscapes, integrated pest management, color in the landscape and trees and shrubs.

Exhibition booths, outdoor equipment demonstrations and tours of the university round out the program. An optional tour to AmeriFlora '92 in Columbus, Ohio, takes place after the conference.

The **Irrigation Association**, a member of the Non-Point Source Alliance, signed a letter to all 100 senators objecting to key provisions of S. 1081, legislation which would revise the Clean Water Act of 1987.

Through the alliance, the IA and other groups are expressing opposition to the non-point source amendments of the 1987 act, and urging Congress to support sufficient funding for Section 319, which covers existing non-point source programs.

The Clean Water Act was enacted to control water pollution from point and non-point sources. Point sources of water

pollution are those which come from a specific location such as a pipe or channel. Non-point sources comprise the remaining sources, including pesticide leaching into groundwater and agricultural runoff.

Last May, Sens. Max Baucus, D-Mont., and John Chafee, R-R.I., introduced S. 1081, which calls for materials substitution and process changes and a reduction in the use of chemicals deemed toxic. The legislation also mandates that the Environmental Protection Agency and states charge fees to dischargers to underwrite the cost of developing new effluent limits and water quality standards.

According to Martha Lindauer, director of communications for the IA, "The amendments — if enacted — are a lot more stringent than they need to be. Also, the act needs more time to see how workable it is."

Lindauer added that the new legislation doesn't necessarily solve the problem of non-point source pollution any better than existing legislation.

The **Ohio Nurserymen's Association** has produced a 12-minute videotape, "Landscape Laws that Work." Eleven other Ohio green industry organizations provided financial support to the project.

The video is intended for presentation to city councils, zoning commissions, shade tree commissions, chambers of commerce and other social and civic organizations. Its purpose is to encourage city leaders to consider adopting a landscape ordinance in their communities.

"Landscape Laws that Work" illustrates the benefits of sound land management through effective landscape design. The accompanying written material includes information on "How to Use This Video

(continued on page 20)

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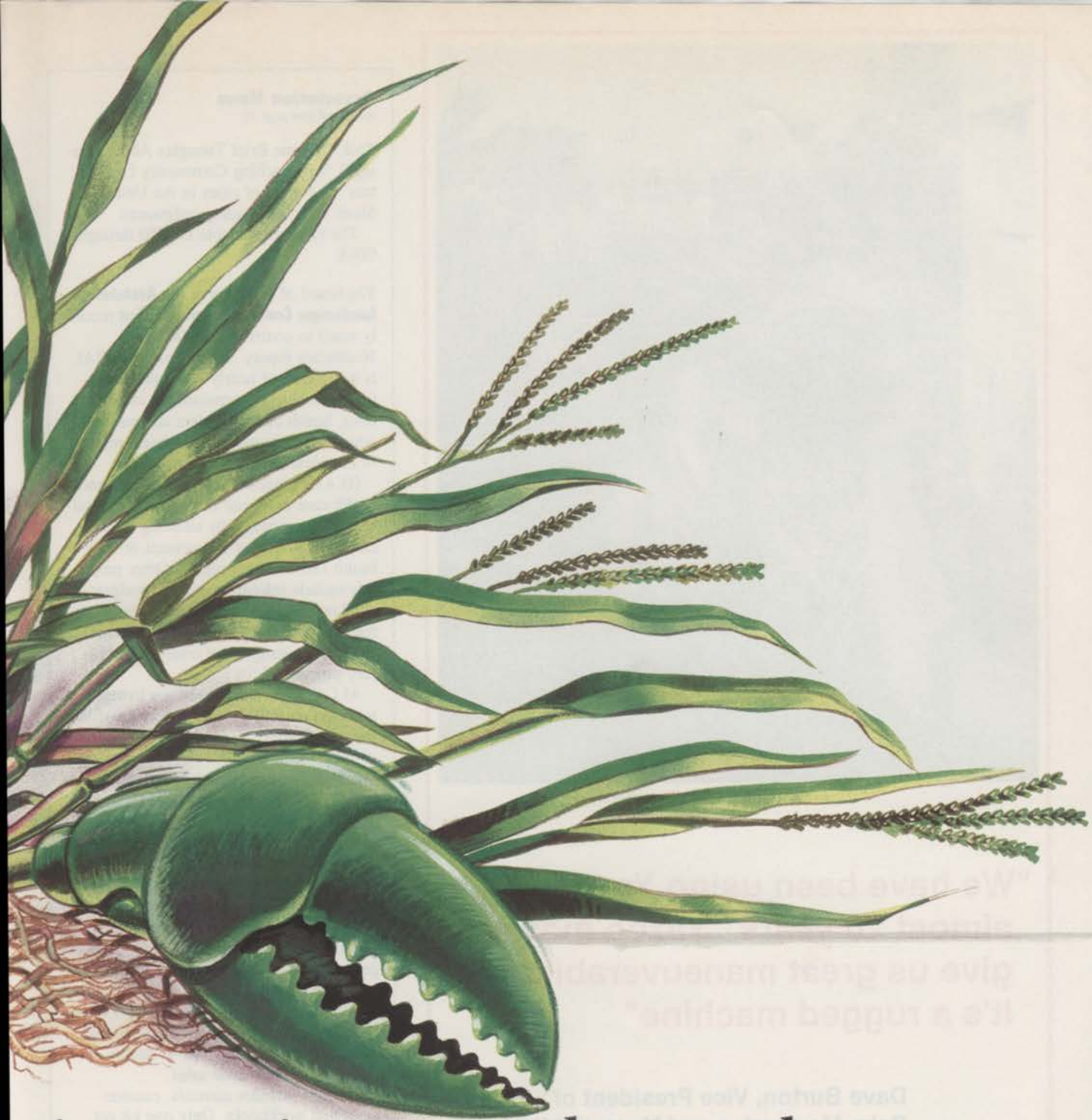
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## **Association News**

*(continued from page 17)*

Tool," "Some Brief Thoughts About Zoning," "Approaching Community Legislators" and a list of cities in the United States with landscaping ordinances.

The video is available for \$50 through ONA.

The board of directors of the **Associated Landscape Contractors of America** recently voted to contribute \$1,000 to the Healthcare Equity Action League. HEAL is a coalition of nearly 400 small and large businesses, corporations, associations, health care providers and insurers which supports many of the basic reforms in President Bush's health care plan.

HEAL's proposed reforms would control health care costs and make coverage available to more people by allowing the self-employed to deduct 100 percent of their health insurance premiums. Other proposals include reforming medical malpractice laws; and preempting state laws that restrict cost-saving managed care plans and require coverage of costly, unnecessary procedures.

ALCA's contribution ensures its representation on HEAL's steering and legislative committees.

The **National Landscape Association** is offering a home study program on telephone techniques for landscapers. Developed by Eric McCarty of Management Concepts, Dayton, Ohio, the kit offers more than 150 examples of what to say in various business phone conversations.

The kit is divided into three sections. The first section instructs owners/managers on how to audit and help improve an employee's phone practices. The second section is for secretaries and receptionists; and the third section is for the landscape salesperson, including how to qualify leads and how to close sales.

Each kit includes manuals, cassette tapes and workbooks. Only one kit per company is necessary.

The **Bergen County Landscape Contractors Association** recently held its first equipment swap meet and sale. The event was open to all landscapers with used equipment to sell or trade.

According to John Blazier, president of John Blazier Landscape Contracting, turnout was good considering the late publicity the event received. About 100 landscape contractors participated. Plans are already under way for a second swap meet in 1993.

Shemin Nurseries hosted this year's event and provided equipment storage at its warehouse facility. ■





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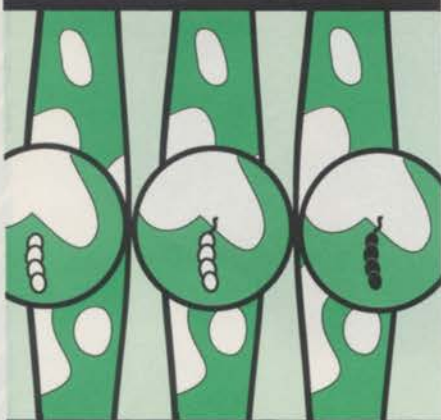




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# Landscape News

## AMERIFLORA '92: AN INTERNATIONAL LANDSCAPE CELEBRATION

TUCKED AWAY ON 88 acres of heavily wooded land, AmeriFlora '92 makes its six-month appearance in Columbus, Ohio, April 20 through Oct. 12.

Designated as "America's Celebration of Discovery," the \$94 million exposition offers elaborate landscape and garden displays from international and domestic horticultural experts.

Because of the enormity of the event, the site is arranged into zones representing various landscape themes.

The centerpiece of AmeriFlora '92 is the Franklin Park Conservatory, a 70,000-square-foot complex that includes the historic Franklin House, climate-controlled conservatories and an exhibition hall.

Landscape architect Pieter van Loon of the Netherlands designed a multi-sensory exhibit at the complex, which allows visitors to encounter the world's various climates, plant forms, rocks, waterfalls, vistas, caves and clouds.

Included is a Himalayan Mountain and bulb display, low-land tropical rain forest, desert, bonsai courtyard, Pacific Island water garden, tree fern forest and tropical cloud forest.

Elsewhere at AmeriFlora '92, visitors can walk through "America's Backyard," a 2 1/2-acre showcase of more than 20 gardening concepts, including year-round color, native plants and wildflowers, backyard recycling, turf varieties, landscaping for environmental controls and low maintenance gardening.

In the "Community of Nations," lakes and waterfalls share space with an international amphitheater and exhibits from more than 12 nations. Gardens from such countries as Australia, Canada, Japan, Italy, Korea, Russia, Holland, Ireland and the African Nations are represented.

At "America Presents," the Grand International Indoor Horticultural Exhibition and Competition runs from April 20 to May 3. In the 30,000-square-foot Pavilion of the Seasons, horticultural producers from around the world have entered their best foliage, flowers, trees and shrubs



The indoor conservatory showcases diverse world climates.

in competition for recognition by the International Association of Horticultural Producers. The AIHP sanctions such events only once every 10 years in any country, the best known being Floriade and the Floriales.

Countries represented in the competition include Australia, Canada, Colombia, Italy, Jamaica, Japan, Malaysia, Taiwan, the United Kingdom and France. The United States is represented by major associations and industry groups, including the Ohio Nurserymen's Association, the Southern Nurserymen's Association, the Oregon Nurserymen's Association, the Florida Nurserymen's Association, the Conard Pyle Co. and representatives of the floriculture industry.

Following the two-week competition, the pavilion will feature the Smithsonian's "Seeds of Change" exhibit presenting 500 years of biological, ecological and cultural advancements.

Other major landscape attractions include the maze garden, a re-creation of the famous puzzle gardens popular in Europe during the 18th century; and the rose garden, a display of more than 4,000 roses on a 3/4-acre site.

In addition to exhibit sites, AmeriFlora '92 brings 25 of America's top gardening experts to its Great Gardeners of America Lecture Series.

Beginning April 25, Saturday lectures on a variety of landscape topics are scheduled.

(continued on page 24)



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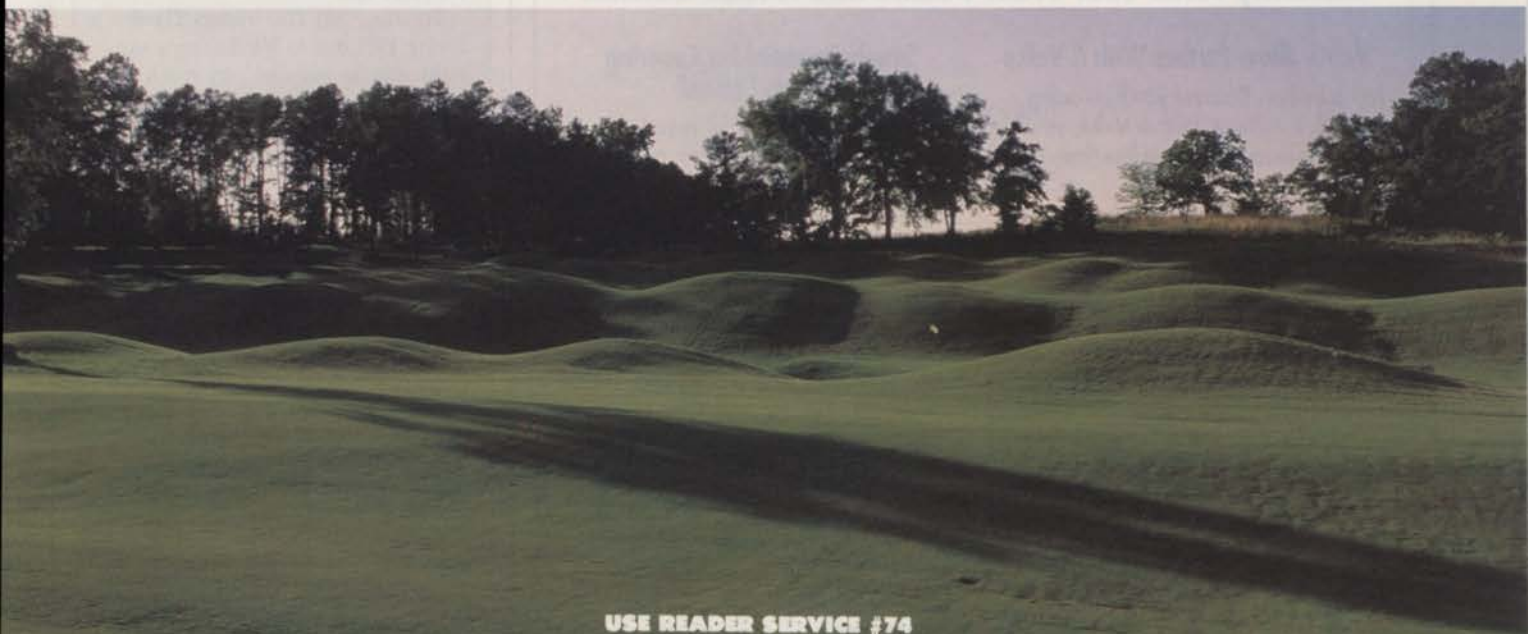
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## Landscape News

(continued from page 22)

uled at the Franklin Park Conservatory. Among the distinguished speakers: William Flemmer III, president of Princeton Nurseries, Princeton, N.J.; David Northington, executive director of the National Wildflower Research Center, Austin, Texas; Allen Paterson, director of the Royal Botanic Garden, Hamilton, Ontario; Roger Swain, host of The Victory Garden, Newton Highlands, Mass.; Linda Yang, columnist for the New York Times; and

James Van Sweden, landscape architect, Washington, D.C.

AmeriFlora '92 closes with a chrysanthemum festival. From mid-September to closing day, the expo will be home to the world's largest mum display — 114,000 square feet of flower beds.

Daily admission to AmeriFlora is \$19.95, adult; \$16.95, 60 years and older; and \$9.95, children 4-12 years. Admission is free to infants up to 3 years.

For more information, contact AmeriFlora '92, 1995 East Broad St., Columbus, OH 43209-1679; 800/BUCKEYE.

## Former Victory Garden Host Is AmeriFlora Envoy

BOB THOMSON, former host of public television's The Victory Garden, and national spokesman for AmeriFlora '92, has a long history in the landscape maintenance field.

"I grew up in the Great Depression," Thomson said. "I was always taking care of somebody's property, doing landscape jobs in the neighborhood."

The entrepreneurial Thomson set out his first shingle at age 13, offering mowing and tree and shrub pruning.

"When I graduated from high school, I went into the grounds maintenance business full time."

Thomson grew his business until the Korean War, during which he served three years in the Army.

Upon his return to Boston, he opened Thomson's Nursery and Garden Center. "Over time, I developed a good-size landscape contracting business and a good-size nursery. That led to production growing fields where we grew and developed all kinds of plantings, from annuals and perennials to trees and shrubs."

Thomson also has hosted a radio show on a CBS affiliate for 32 years.

Thomson joined The Victory Garden in 1979, when Jim Crockett, the original show host, became ill. Crockett passed away shortly after, and Thomson suddenly found himself in a new career with The Victory Garden. Because two careers was more than he could handle, he sold his Massachusetts landscape and nursery business six years ago.

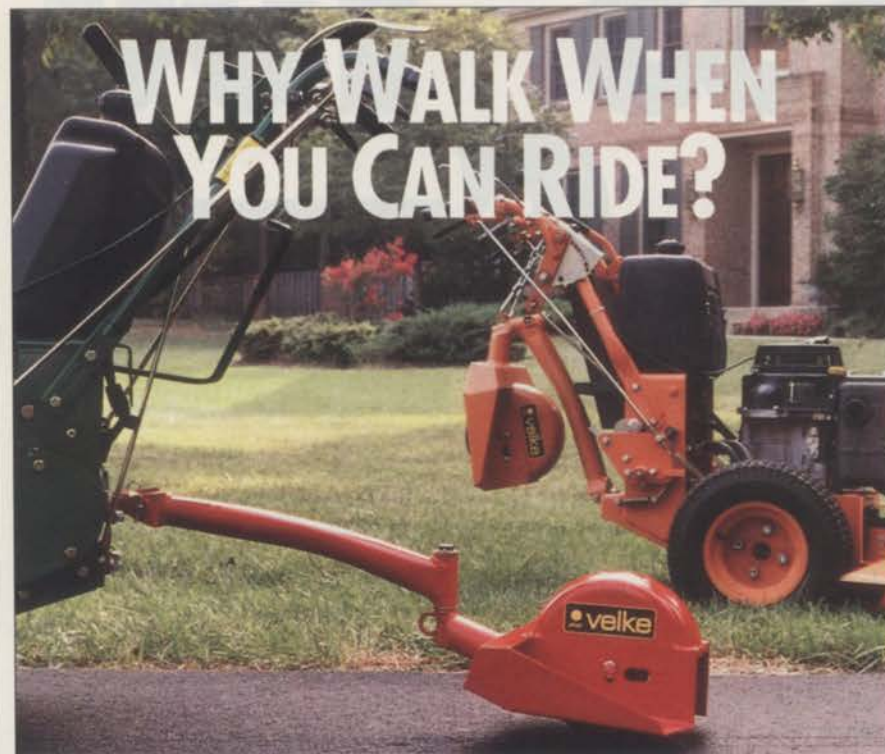
Thomson left The Victory Garden in spring 1991 due to his declining eyesight. But he remains very much involved with the green industry.

AmeriFlora '92 was the next logical step for someone with Thomson's media experience.

AmeriFlora '92 gives the public an opportunity to meet members of the landscaping industry, Thomson said, and "get a good feel as to what the business is all about."

After the show closes, Thomson plans to serve as company spokesman for several landscape product manufacturers.

"I've been in the trade for a long, long time and I don't want to leave it," he said.



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\*Comparison based on an average man working a 10 hour day.

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# NO SURPRISES

**GUARANTEED**

*His frank manner and dedication to his customers have earned Andy Wright the top spot at Muellermist Lawn Sprinkler Systems, and an evolving role in the national irrigation industry.*

*By Kevin Tanzillo*

DON'T LOOK for Muellermist Lawn Sprinkler Systems to come in with the low bid on most jobs. That's not the way Andrew Wright's company does business.

Wright knows that with a union shop he can't expect to compete with "the guys who work out of their cars," so Muellermist goes with its strength — a quality job done by trained people.

Muellermist, based in the Chicago suburb of Broadview, Ill., is a nationally known company thanks to a number of high-profile commercial installations. But it is also now re-emphasizing the importance of regional residential work.

Wright, 35, has led Muellermist since 1983, after growing up with the company that his uncle and father, Dan and Bernard Wright, started in the late 1920s. He didn't get the president's job by birthright, though.

"I had no intention of getting involved in the company," Wright recalled thinking as he served in the Marine Air Wing after high school. "I remembered being out in the fields forever and ever, and how we'd be working under truck headlights until 3 or 4 in the morning, picking up pipe."

"The last thing I wanted to do was get involved. With all the things you had to do because you were the boss' son, it really didn't hold any glamor for me."

However, Wright found himself being drawn back in once he started filling in when other staffers were unavailable. He worked in design, sales and service, and then the opportunity came along to take charge.

While Muellermist started out as a family-run business, at the time Wright sought the president's chair there were no family members serving as officers. He had to earn the job.

In nine years, Wright has proven himself as president. Revenue was just under \$2 million a year when he took over. This year it should reach \$5 million. The company has more than 90 employees and about 30 trucks, with an office and warehouse area covering 18,000 square feet.

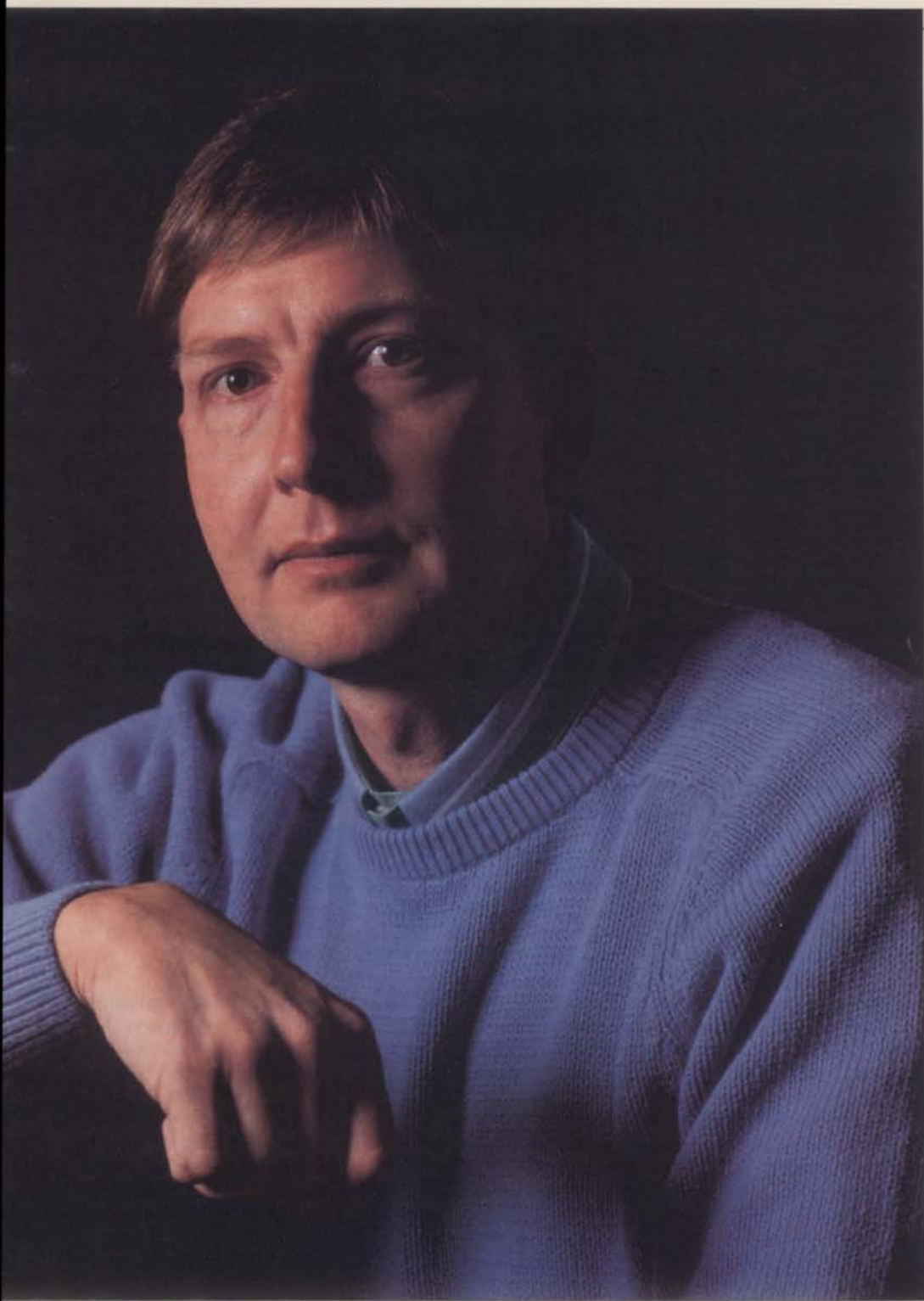
**AN EASY SELL.** Muellermist is an easy sell. It has its longevity plus the name recognition from such high-visibility irrigation projects as Arlington National Cemetery, the Broyhill homes in North Carolina, the Air Force Academy, the British Gardens atop Rockefeller Center in New York City, Comiskey Park and the Chicago White Sox training facility in Florida.

"We can barely keep up with the inquiries we get," Wright said. "We do marketing only in the residential end because people don't perceive us as a residential company."

Most of Muellermist's jobs come from architects and referrals, Wright added, which is an edge that 64 years' experience provides.

Commercially, the company goes anywhere, including the royal family's soc-





cer fields in Saudi Arabia and a 7,000-acre banana farm in Belize in Central America. Residential work, a growing segment of Muellermist's business, is concentrated largely within a 60-mile radius of Chicago.

"Residential is a good portion of our business. It's what we started with way back when," Wright explained. "We got away from it with a lot of high-profile jobs, but we always had it in the background.

"With the union, our pricing was never really competitive with someone working out of their car. But we made a concerted effort starting three years ago. Last year, we put in close to 200 residential systems. We anticipate doubling that this year."

Not only does Muellermist pay its crews union scale, but it trenches all its systems, which takes up to twice as long as the more popular method of pulling pipe.

"We don't use poly pipe, which

is contrary to the thinking of most people now," Wright said. "We trench the system. We make the extra effort. We know the base of our trench is clean and free of debris. We also pitch our system to drain in most cases. If he chooses, the homeowner can go out there with his drain key, turn a couple of drains and he's done for the year. He doesn't need to lug out a compressor."

Because Muellermist crews can see exactly where their pipe is go-

ing, it guards against the damage that can happen to pipe and wire that are frequently pulled through an unseen path.

"If you're looking for longevity, trenching is the way to do it," Wright declared.

"There's more pulling now because it's less labor intensive. These guys can pull pipe in a day, where it takes us a couple of days to do it. Their cost is less, but it's not a permanent solution. People have to decide what they're

---

## **MUELLERMIST LAWN SPRINKLER SYSTEMS**

**HEADQUARTERS:**  
Broadview, Ill.

**FOUNDED:**  
1928

**OWNER:**  
Employee-owned  
with Andrew Wright  
as major  
stockholder

**PRIMARY SERVICES:**  
Irrigation  
installation and  
maintenance

**EMPLOYEES:**  
15-18 year-round,  
90 seasonal

**1991 NET SALES:**  
More than  
\$4.5 million

---



looking for. In some cases we're 100 percent higher than someone pulling in a system."

**NO PRICE COMPETITION.** The cost of doing a job the Muellermist way does scare off some residential customers, Wright admitted, but he can live with that.

"We qualify our customers from the beginning. If someone calls us and is just looking for price, we can pretty much solve it in that first conversation.

"We make no bones about it; we are not going to be the low-priced guy on the job. We tell customers if they're looking for a system to be there a few years — then they're going to sell the house and just want to be able to say they have a lawn sprinkler — they should put in one of these other systems. If they're not going to have to live with it, save the money.

"But a lot of people are getting into expensive homes and plan to stay there. They should look at a system that will be there forever."

He has a point. The first residential irrigation system that Dan and Bernard Wright installed in 1928 is still operating.

Muellermist also offers long-term service contracts. The systems are simple enough that the owners can maintain them themselves, but most people don't want to do that. Wright said he believes Muellermist's responsive service, with radio-dispatched trucks, is a selling point.

Muellermist lands its large commercial jobs "because we know how to put big projects together," he said.

"On the large scale you have to know how a job should progress. When we bid a job, I know we're higher than a lot of people, but our price is an inclusive price. People will pay a little extra if they're not going to have any surprises, for a job that's going to last.

"Other companies come in and try to lowball a job to get in on the ground floor, then they nickel and dime you to death with extras. People we bid to know this is our final price and there won't be any surprises.

"With our number of people and our equipment they know they'll have the job handled at whatever pace it needs to be handled. Some of these jobs are fast-track jobs. They need to see a lot



of bodies and get a lot of things done."

**LITTLE COMPETITION.** As far as the competition, Wright said, there are only a couple of other companies locally, and one other company nationally.

"Strictly in irrigation, we're probably the oldest one in this area. But these fellas have been in there 30 or 40 years and are union contractors, licensed and all. They are good competition; they're good quality people, not somebody who will be here today and gone tomorrow.

"Nationally, there is one guy I enjoy going up against. It seems, at least in the Southwest, that on any project of half a million to a couple of million dollars, it's just him and me on that."

Landscape contractors generally aren't considered competitors for Muellermist, Wright said, because in Illinois only licensed plumbers can install irrigation systems, and few landscapers maintain such licenses.

Wright likes that licensing requirement, but is concerned with national attempts, to date, to standardize testing in a complex field.

For instance, the Certified Irrigation Designer program offered by the Irrigation Association is OK in states where there's no such program in place. But it shouldn't

be regarded as the final authority, he said.

"We're lucky in Illinois because we have the state to monitor and administer tests," Wright added.

Among his concerns are that new testing efforts are good for irrigation, but not for the lawn sprinkler industry. As a matter of fact, it's a step backward in those states that already have licensing requirements, he said.

"We're a member of the Irrigation Association, but I don't agree with this. They put out these tests and all of a sudden these people are certified irrigation designers. A lot of people can pass that test, but never have any practical knowledge.

"It's a slap in the face to the rest of us. We see people out there who have gotten every possible certification. They've read books and gotten the 'merit badges,' but they've never installed a system. Because these kinds of certification are available, people take them for more than they're worth."

Wright also tees off on the subject of backflow prevention. He's waging a battle against state and federal requirements for RPZs, or reduced pressure principle backflow preventers. He said it's an extreme answer to a minuscule problem.

"For years we were the big proponent of backflow prevention.

**Muellermist's responsive service is a selling point.**

There were the old atmospheric backflow preventers and the pressure vacuum breakers; they were simple, but thorough items.

"Now they come up with these RPZs as a cure-all for cross-contamination, because of fertilizer injections. But the actual incidence of people putting fertilizer injectors into a lawn sprinkler system is rare. The RPZ they are proposing is meant for high-hazard contamination, somewhere like a hospital or a mortician's office or a chemical plant.

"A lawn sprinkler is not a high-hazard item. The average homeowner with a garden hose who uses these sprayer systems gets back-siphonage, with no protection whatsoever, but they haven't addressed that. Yet in those situations where the percentages are so minute, they go with this big contraption.

"Not only is it costly because the item is all brass, but with the friction loss it creates, we lose anywhere from 8 to 12 pounds. In most cases the pressure is already minimal, so then you have to put on a pump and depending on your demand, you might have to have additional sections. It's overkill for what they are trying to accomplish."

**LABOR RELATIONS.** A union shop can easily become an us vs. them battleground between management and the workers. Muellermist doesn't let that happen.

"We're basically employee owned," Wright said. "I own a good percentage of the stock, but any employee can participate by buying stock. A lot of people take us up on it.

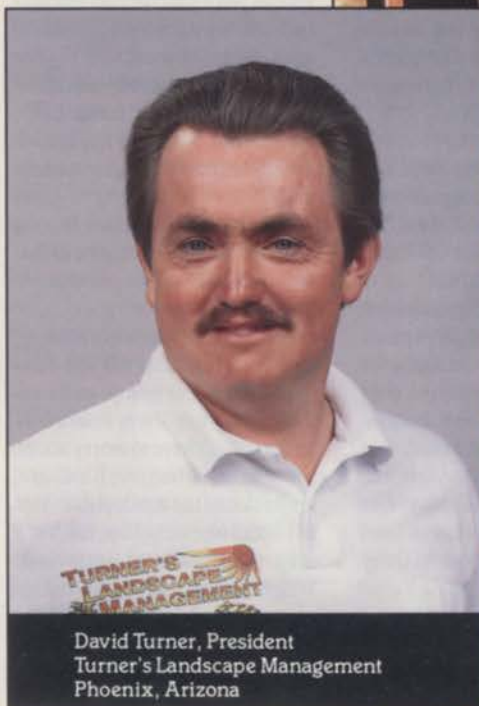
"When the employees are out in the field, they are directly involved in the bottom line of what is going on. They make sure things are right and they don't have to go back."

The union plumbers, operators and electricians that make up Muellermist crews wouldn't get an opportunity to be part of the company at most places. That opportunity, Wright said, "allows us to keep our people year after year. They're getting more than they'd get working out of a union hall situation."

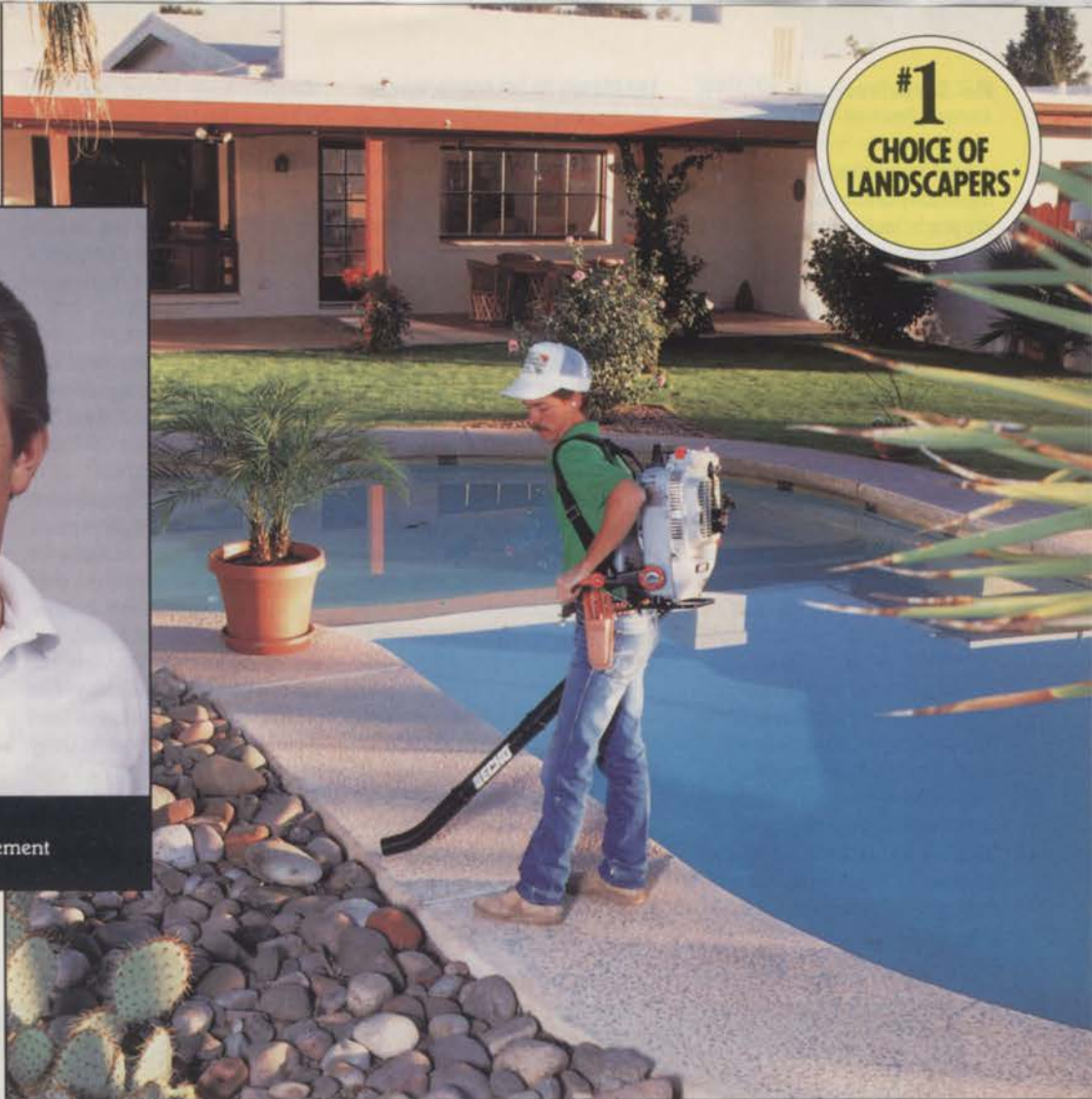
*(continued on page 30)*



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David Turner, President  
Turner's Landscape Management  
Phoenix, Arizona



## "AFTER 9 YEARS, OUR ECHO BLOWERS ARE STILL GOING STRONG."

"In our business, it's not unusual to have to replace power tools every two or three years," says Dave Turner of Turner's Landscape Management. "So the fact we're still using the same Echo blowers we purchased back in 1982 is really something."

"And we don't handle these blowers with kid gloves either. They're used day-in and day-out and get bounced around a lot."

Mr. Turner, whose company has 38 employees and a fleet of 10 trucks, adds, "We're also long-time users of Echo line trimmers. Like the blowers, they not only do a great job but are very dependable."



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"That's important when you've got customers who demand top-notch work at all times, such as the Biltmore Commerce Center and the luxurious Pointe Residential Properties here in the Scottsdale area."

"We like to keep spare parts on hand, and with Echo they're easy to get. But the way these tools are holding up, our supply of replacement parts gathers a lot of dust."

**ECHO**  
THE RIGHT TOOL



## No Surprises

(continued from page 28)

Muellermist goes so far as lending money to employees who are in a pinch, and helping employees with home financing.

"I hate to say it's a big family, because that's too clichéd, but people here are concerned about each other. It works out well," he said.

"Our success all comes down to employee involvement, to employees wanting to come to work and do the work when they are there. They give you input into how you can improve. They participate in making the whole thing work. The company is only as good as its employees.

"When you figure how many trucks we have and people we have, we have a lot of representatives out there. If they're not doing the job, we can easily get a black eye."

In the four-month off-season, Muellermist retains 15 to 18 employees — the office staff, management and a couple of mechanics.

**LEARNING TO DELEGATE.** Wright has evolved from a do-it-all-himself manager into one who feels comfortable delegating responsibility to competent people.

"I wanted to delegate early on, but we didn't have people who wanted to get that involved. We had people who were good at their jobs, but you're not necessarily one of the guys when you become management. We tried to eliminate that bad connotation and to make sure we have a good relationship between management and workers.

"Now there are good people in there who can handle the situation. They're starting to bloom and solve problems, which is great. As we keep growing, the 24-hour day just doesn't stretch any more."

But self-confessed overachievers like Wright aren't that easily cured.

"I am still pretty much a workaholic," he said with a laugh, adding, "I do get to see my house once in a while on the weekends." Fortunately, his wife, Laurie, doesn't have a problem with

Wright's long hours. She is a school district administrator whose job provides its share of overtime too.

They live on a 50-acre spread in Wisconsin, along the Illinois border. For Wright, that means a 67-mile one-way commute — when he can get home.

**ROOF COOLING.** One Muellermist division focuses on roof cooling. This service employs a fine mist which evaporates off roofs, taking the heat with it.

"The cooling effect comes from the evaporation," Wright explained. "If you get any puddling or ponding you defeat the purpose because that water holds the temperature. You ruin the roof, too. But we control ours to such fine misting that it's basically like perspiration. Our clocks run from 10 to 15 seconds per zone to spray this real fine mist.

"With a normal roof temperature of 120 to 140 degrees Fahrenheit, the inside roof temperature is close to 100. As the mist on the roof evaporates, it will bring that temperature down to

the low 80s."

Companies with big warehouses are potential customers. Muellermist installed the system on Nike's factory warehouse in Tennessee, with 1.7 million square feet of roof.

"You could never air-condition that or attempt to control it," Wright said. "This is a way to cool it and improve working conditions."

In some cases, Muellermist can take runoff water from the office air conditioning and use that on the roof.

"We put that water in a holding tank and recycle it. All you have to pay for is the pump, to pump it up to the roof. There's no runoff and you don't have to worry about sewer charges because it's all going back into the atmosphere. You talk about true recycling, that's it."

In the following interview, Wright offers his thoughts on the recession, industry trends and the need for professionalism within the irrigation industry.

**LLM:** What kind of impact are you seeing from the recession?

**WRIGHT:** I don't know if it's re-

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cession-related, but we've noticed a decline in large commercial projects in this area. I think it's because of tax law changes. Limited partnerships are not as lucrative now. They used to create a lot of office projects just to build things. Now they can't have all this office space without tenants and still make money. We've seen cut-backs in a lot of office parks this way. Commercially, there's been a lot of inquiry, but not a lot of movement on it. We're still active in a lot of bid situations, but nobody's spending dollars on the projects right now.

**LLM:** What trends do you see in the industry?

**WRIGHT:** Water conservation will become more prevalent. The problem is, the products out there are not that effective. I don't know what the solution is going to be other than something very complex. Back in the 1950s we came up with the Linomist, a copper-pierced pipe designed mainly to water the bases of rose bushes. I'm looking for somebody to come up with a '90s version of the Linomist.

**LLM:** So what do you do to save water?

**WRIGHT:** A good design is a good water management situation. If you spend water wisely you don't have to feel bad about using it. If you use it sloppily, you should have a guilty conscience.

You have to take cost into account, but in planting beds you could have several different zones, depending on your material. You could accomplish it pretty well with the mist heads you've got out there. Get your water in a short period of time and don't run them 10 minutes a zone; maybe one minute if you design it the right way.

Everyone leaves zones on for a long time to make up for their lack of design because they've got a bad spot. So that one spot takes twice as much water because they didn't take it into account, and the rest of the place floods out. It's not proper management of water due to a lack of consideration at the design point.

**LLM:** What does the industry need right now?

**WRIGHT:** The way to go is refine-

ment. People are going to have to get on the bandwagon and become efficient in their design and installation. They used to be able to get by with slipshod designs. They're going to have to become professionals pretty soon. It is already starting to catch up with the fly-by-night or back-of-the-car guys, just through state and federal regulations. Anybody who wants to stay in the business will have to become truly professional.

**LLM:** What is Muellermist doing to improve professionalism?

**WRIGHT:** We are one of the few companies with comprehensive testing and ongoing education. Our tests range anywhere from three to five hours, just on the written test. Also, Weathermatic, one of our suppliers, has a thorough two-week course on design at its factory in Dallas. Anybody who comes in here from the sales or design end of things automatically goes down to that. They get a good feel for the proper way of doing things.

**LLM:** Where do you see Muellermist in the next five years, and how will it get there?

**WRIGHT:** I'd say we'll be at \$7.5 million a year. We have a good track record for our increases. We're already getting a bigger percentage of residential customers. I see us picking up the growth there. There will also be more emphasis on ballfields. We have built several golf courses. We have built athletic fields, too, from top to bottom. Growth in this area seems to be coming along naturally for Muellermist.

**LLM:** By the way, where did the company name come from?

**WRIGHT:** Muellermist took its name from our early use of pipe and heads from the Mueller Brass Co. in Port Huron, Mich. Now we're a longtime customer of Weathermatic. We use their controllers, valves and spray heads. On rotary heads, especially for athletic fields, we use Hunter heads. But we buy from and have good relations with all the manufacturers. We get truckloads of equipment every couple of days during the season. ■

*The author is a free-lance writer based in Norwalk, Ohio.*

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THAT SHE'S CALLED BACK

THREE TIMES, OR THAT

SHE PROBABLY WON'T RENEW.

THE WORST PART IS THAT

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# SELLING THE BENEFITS OF IRRIGATION

IRRIGATION maintenance and installation are two of the fastest growing services in the landscape industry. In a 1991 survey of *Lawn & Landscape Maintenance* magazine readers, 34 percent of respondents said they offered irrigation installation and 39 percent offered irrigation maintenance.

Those figures are up a significant 42 percent and 34 percent, respectively, from the previous year.

Of those not offering irrigation installation and maintenance, more than one in four indicated plans to offer those services within the next one to two years.

Supporting those statistics, current trends show that more clients are turning to landscape maintenance firms for their irrigation needs. "We have found that customers like to go with one company for both maintenance and irrigation," said Michael Ritger, water management branch manager for Chapel Valley Landscape Co., Woodbine, Md.

According to Brian Vinchesi of Eastern Irrigation Consultants, Pepperill, Mass., convenience is a major reason clients request irrigation services from their landscape maintenance firm.

"The client only has to deal with one company instead of several companies, and they get billed by one firm," Vinchesi said.

Another factor that favors the landscape contracting firm over an irrigation contractor is site familiarity. "The landscape con-

tracting firm is there on the site, so they can notice any problems and fix them more quickly," Vinchesi said. "I know several companies that were forced into offering irrigation services because their clients demanded it. One is the second largest firm in New England — it was forced into irrigation maintenance when it couldn't find anyone to do the work and meet the company's standards (of quality)."

LLM asked landscape maintenance professionals and irriga-

tion consultants across the United States to share strategies for marketing irrigation services. Here's what they said:

**CERTIFICATION.** "One tool that contractors can use in marketing is to have certification," said Larry Keesen, president of Keesen Water Management, Denver, Colo. "It helps the public to identify that you have certain skills. You can use that in your sales materials and promote that to the client."

Reduced water usage is a valuable marketing tool for irrigation.

"It's very helpful," he added, "especially when your competition may not have that certification in their resume."

Keesen recommended certification programs sponsored by the Irrigation Association, including the certified irrigation designer and the certified irrigation contractor.

Currently, Connecticut, New Jersey and Texas are the only three states to mandate state licenses (called certification in New Jersey) to install turf irrigation systems. Other states have plans to pass irrigation licensing legislation.

Jay Brown, landscape coordinator for D&J Lawn & Snow, East Detroit, Mich., would like to see mandated irrigation certification in his state. He also supports the idea of mandatory inspections by city or county authorities.

"It takes a lot of time to design these irrigation systems, then people just buy on price," he explained.

Brown said that the ever-downward slump in the Detroit-area economy has dumped fly-by-night operators into the landscape and irrigation markets, making it difficult for legitimate contractors to compete on price.

"With a little amount of money, anyone can start a sprinkler system. What happens is that systems are being sold at 40 percent less than what they should be sold at."

(continued on page 34)

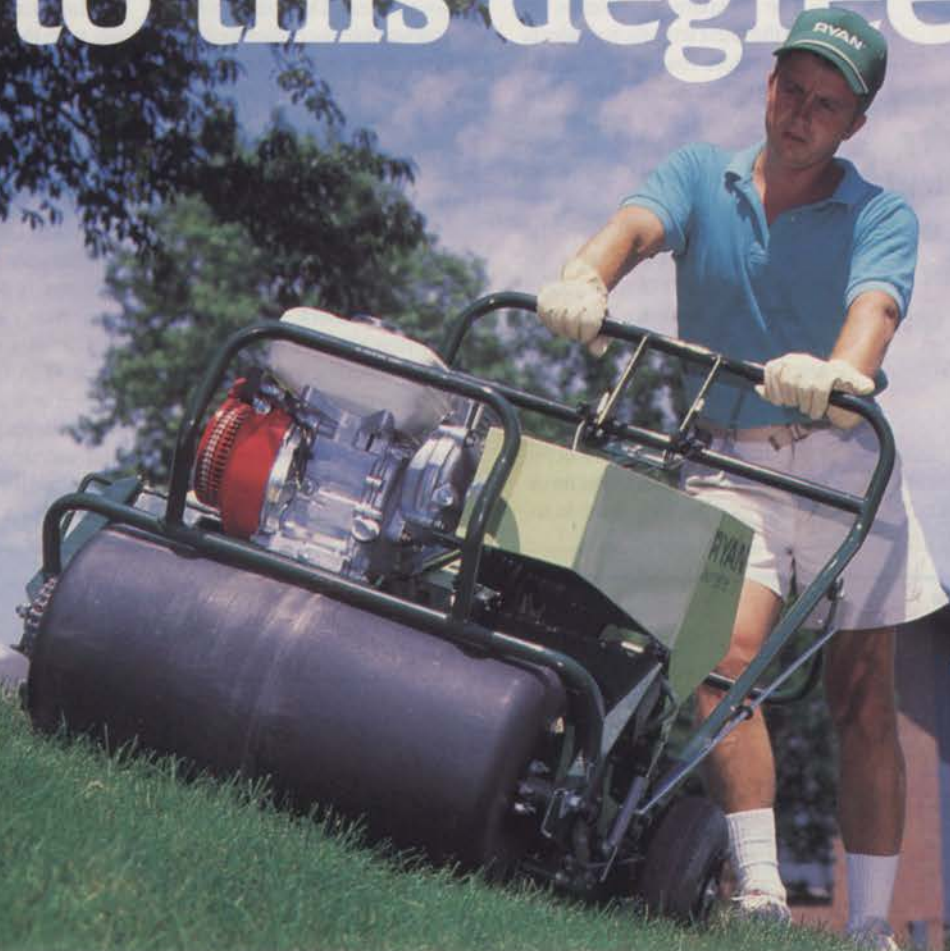


*Irrigation installation and maintenance are fast-rising markets for the landscape maintenance contractor; some well-planned marketing strategies can help clinch those accounts.*

*By Julie A. Evans*



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## Irrigation

(continued from page 32)

They (fly-by-nighters) have no overhead; they're doing it out of their backyards. Yet most people are looking at the bottom line, how much does it cost."

Brown added that the client who purchases irrigation installation from a less than reputable firm loses out in long-term service. He uses that factor to his advantage in sales pitches.

### Convenience and site familiarity are reasons clients prefer hiring one company for maintenance and irrigation.

"They might not be around later. We're in this business hopefully for the next 50 years."

**GREEN MARKETING.** Water conservation is a main selling point for many contractors, especially in the parched western United States. Wayne DuBois, president of Mission Landscape Services, Costa Mesa, Calif., said his company has become wiser and smarter on environmental concerns. Installation of separate meters for domestic and landscape use is one conservation measure he offers to customers.

The company also keeps up with the latest irrigation products that promote low water use, including valve replacements, digital clocks with more settings and drip irrigation systems. He also uses more drought-tolerant materials.

"Irrigation is a 'sell' sell," he said. "You have to explain to the client the benefits of what you're selling, and compare what that client has now with what he'll save."

Clients in the commercial sector are becoming more water-wise, he added. "A lot of commercial clients understand more of what options they have in ir-

rigation, which means a contractor has to be on his toes to get the bid."

In the Northeast and Midwest, water conservation is not always the key selling point, but it helps.

"The public is not nearly as water conscious as it should be," said Bob Dobson, owner of Middletown Sprinkler Co., Port Monmouth, N.J. "The Northeast is not as water conscious as places out West — only in times of drought."

Nevertheless, Dobson employs several water conservation techniques, such as an automatic rain shutoff device on all new systems. He also incorporates many hydro-zones into the design, lumping areas of similar water needs together. "Ours may have more zones than competitors, but the result is better water conservation — substantially more than some of our competitors."


"We now are providing an operational schedule to the client at the time the system is completed," he said. "This brings water conservation into consideration. Many times, a residential customer's main concern is achiev-

ing the healthiest turf with a minimal amount of time on their part," Dobson said.

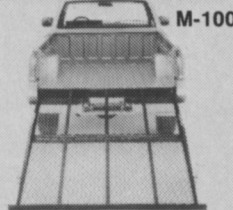
Marketing water conservation to high-end residential accounts is sometimes difficult, said Daniel Skinner, president of Landscape Services, Fort Wayne, Ind. "One problem I've found is that once people buy an irrigation system, they like to see it run. They think that they're getting their money out of it."

"Marketing has been pretty easy with the dry weather we've had the past few years," he said. "Plus a lot of our work is upscale, and they want their places to look as good as their neighbor's place."

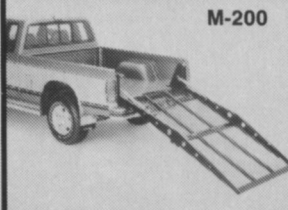
More than water conservation, Skinner sells his clients on lower water costs. Like California's DuBois, Skinner sometimes installs a second meter to keep costs down. Many of his clients pull water from a city or municipal source. With a separate meter designated as a non-potable water meter, clients pay for landscape water use through their utilities rather than through more costly sewer bills.



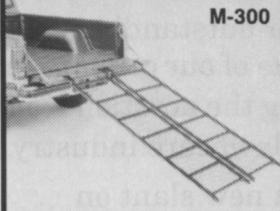
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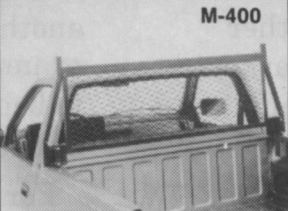
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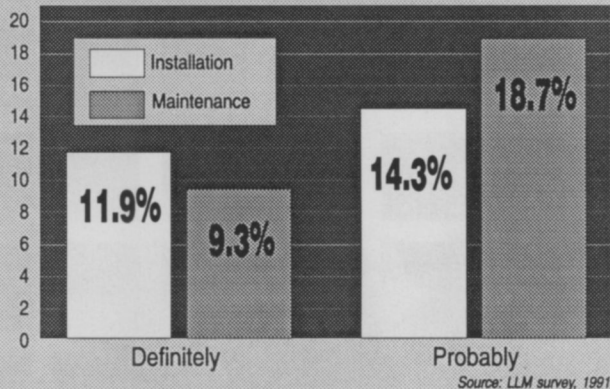


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## IRRIGATION SERVICES

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"(Installation of) the separate meter is more expensive," he said, "but it tends to pay for itself in three to five years."

Chapel Valley's Ritgert also markets cost savings to clients. He compares the costs of an automatic system to the costs involved when the client undertakes the responsibility of irrigation. "It's sometimes a tough sell because it requires a significant outlay of capital," he said, "but

the client saves money in the long run."

**MARKETING TOOLS.** As with most services, irrigation requires some of the basic strategies of a traditional marketing program. Video presentations, company brochures, sales presentations and sales proposals all fall under the big umbrella of marketing.

Keesen suggested a slide show or video presentation depicting

Survey of LLM readers who do not currently offer irrigation installation/maintenance services.

the various stages of an irrigation installation. This provides the client with a greater understanding of the work and costs involved in irrigation. As for marketing the importance of maintenance, he proposed a filmed or photographed comparison of plant material growth on irrigated vs. non-irrigated land.

Dobson said his company, now more than 20 years old, started out by advertising with door hangers and knocking on doors in new residential areas. Job signs posted on the properties he maintained also brought in leads. Dobson cautioned, however, that ordinances in some cities now prohibit such marketing tactics.

The referral, an age-old marketing standby, is still one of the best sales tools. "The best marketing method is word-of-mouth," Dobson said. He attributed much of his company's success to pre-qualifying new accounts through referrals. "If they've been re-

ferred to us or are familiar with our firm, then we'll spend the time to generate a design proposal for them," he said. Clients who "cold-call" his firm from the Yellow Pages are screened more carefully before a design proposal is generated.

This strategy seems to work, as Dobson's firm has a 75 percent closing rate on new accounts.

Keesen also noted that the odds of making a sale increase when the potential client is referred.

Association membership also seems to help landscape contractors clinch a sale. Ritgert, for example, is a member of the Irrigation Association and the Professional Irrigation Contractors Association (a local organization). He uses his association membership to boost the professionalism of the industry, as well as the image of the firm. IA logos are included with all irrigation design proposals.

Dobson, an IA member, offered a different perspective: "We don't spend a lot of time marketing the fact that we belong to various

(continued on page 38)

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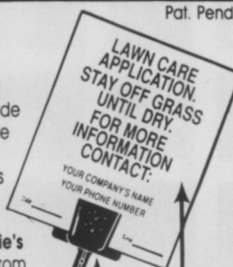
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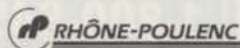


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## Irrigation

(continued from page 35)

associations," he said. "Customers are looking to spend less time maintaining their lawns, and many of them also only want to devote a minimal amount of time talking to irrigation contractors."

"We like to focus primarily on our design work — how it will be installed and how it will function."

**QUALITY SERVICE.** "I think that most contractors don't go out there and sell the quality of their businesses," Keesen said. "They need to sell that and they need to sell the service they provide. People want to know that when they make a call, they can get a response."

Keesen said that quality can be "sold" through references and during the sales presentation.

Dobson said his quality irrigation designs are his best selling point. "Our best marketing tool is the actual design that we do for them."

Skinner sells his clients on the

value of the landscape, and irrigation's role in maintaining that value.

"One of the first things I try to impress on people is that they have a tremendous investment in landscape," he said. "For a typical installation, irrigation is only 5 percent to 10 percent of what they may have spent on plants and sodding and seeding. So at that point, it's easy to impress on them that irrigation is worth it. For a minimal investment, they can ensure that their landscape will hold its value."

In East Detroit, Brown has found that quality service means being attentive to client needs and concerns, and providing certain services at no extra charge.

New installations, for example, are provided with gratuitous winterization and spring startup services. "That demonstrates to the client that we're in the business of irrigation. We're not going to put the system in and leave them stranded," he said.

"We have a 24-hour maintenance crew. If a pipe bursts, we can send somebody out im-

mediately. So that tends to help in selling contracts too."

Brown also emphasizes to clients that D&J Lawn & Snow is a full-service company with

**"Most contractors don't go out there and sell the quality of their businesses."**

knowledge in all aspects of landscape maintenance.

"Clients like to see that we have an irrigation division because we know how much water certain plants need. An irrigation company doesn't necessarily have that knowledge."

**THE EXTRA MILE.** Ingenuity and perseverance are the final ingredients of a successful marketing plan. Some companies simply put more effort into attracting new

clients than others.

For Brown, that means offering an annual flowers program which requires that each bed be watered. "When we sell an annual flowers program, there has to be a sprinkler program in there as well," he said.

Skinner said going the extra mile means getting involved as early as possible in new home construction. To do so, he scans the newspapers for listings of new building permits and keynotes the more upscale transactions. From the builders, he learns who's buying the properties and goes to work from there.

"It's a great way to get work and prequalify your clients," he said.

Skinner typically shuns new home sales below \$200,000 because, "very rarely will homeowners under \$200,000 think of irrigation services. A guy who's building a \$75,000 house is not likely to get anything beyond a landscape."

*The author is Associate Editor of Lawn & Landscape Maintenance magazine.*

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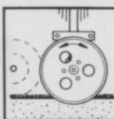
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**USE READER SERVICE #71**





# USERS BEWARE?

As the need for compost increases, the numbers supplying product will also expand. Landscapers should be prepared to demand consistent, quality compost.

By Ron Alexander

OVER THE PAST 15 years, the composting of organic waste materials has become an extremely popular solid waste management tool. The composting of sewage sludge became a preferred mode of management in the '80s, and it's possible the '90s will find the same trend in dealing with leaf/yard waste and municipal solid waste.

The composting of food processing residues, animal manures and other agricultural wastes are also on the increase. Keeping these trends in mind, there is no doubt that the volume of compost available to the green industry will increase exponentially by the end of the decade.

As compost quantities increase, more companies will be trying to sell products. This is a plus, because high quality compost has proven to be a valuable commodity to the landscape industry. Unfortunately, as the volume of compost and the number of compost producers increase, the likelihood of inferior product finding its way to the market also increases.

The benefits of using compost are numerous. Compost:

- is rich in organic matter
- is rich in macro- and micro-nutrients
- improves friability/workability of soil
- improves cation exchange capacity of growing media
- can improve drainage and percolation rate of growing media
- can improve water-holding capacity of growing mix
- can suppress soilborne plant pathogens
- is relatively inexpensive

However, in order to cash in on the benefits of using compost, it is important to understand what is being purchased. By understanding what to look for when



**The screening process:** Compost produced with different levels of refinement have different uses.

selecting compost, the chance of receiving a product which is inferior in quality, or inappropriate for a particular application, will be minimized.

**COMMON MISCONCEPTIONS.** In order to properly use compost products, it is important to understand what they are, what they are used for and to dispel any misconceptions. Composted organic materials are often referred to as "fertilizers" or "artificial topsoils." They are neither.

Fertilizers are purchased and used for their innate nutrient val-

amounts of nutrition and other inerts, in which turf, trees, etc., can be grown.

Compost is not topsoil because it cannot be used in the same manner as topsoil. Generally, it is not a good idea to grow plant materials in 100 percent compost; whereas, most plants can survive in good quality topsoil.

Compost is a material produced from decomposed organic substances which often contain some fertilizer value. Compost is used as an amendment or additive to soils and other growing media because of its positive physical, chemical/nutritional and biological effects.

Another misconception is that all composts are alike. Although many composted materials are similar visually, chemical and biological properties may differ. For example, sludge composts have a higher nitrogen content than municipal solid waste composts, and animal manure and mushroom composts have a higher soluble salt content than leaf/yard waste composts.

Compost produced from different feedstocks and with different levels of refinement, have different specific uses. For example, compost produced from municipal solid waste will generally possess a greater water holding capacity than other composted materials. This is because the waste stream, from which it is produced, contains a great deal of paper. This compost is therefore ideal for use in areas where drought conditions exist (sandy soils) or where low maintenance occurs (roadsides).

**SPECIFICATIONS.** The type of compost used on a specific project will depend on the product's

(continued on page 42)



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## Users Beware?

(continued from page 40)

characteristics and the use for which it is intended. Therefore, it is imperative to understand enough about compost to know which products should be used and where.

Although it is difficult to describe the perfect compost for a particular use, an ideal "general use" compost should possess these qualities:

1. Organic matter content of 50 percent or more
  2. Meets state and federal regulations
  3. Moisture content between 35 percent and 50 percent
  4. Density weight of approximately 1,000 lbs. per cubic yard
  5. pH of between 6 and 7
  6. Carbon/nitrogen ratio of approximately 30:1
  7. Adequately cured/mature
  8. Screened to meet specific needs
  9. Free from weed seeds
  10. Free from objectionable odor and foreign matter
- Understanding why specific



product quality issues are important will help you purchase and use a product which best suits your specific needs.

**Product consistency.** Regardless of the quality of the compost being used, it is important its quality and characteristics do not significantly vary from load to load. Even a "poor quality" compost has specific end uses, as long as its characteristics remain consis-

tent.

Only through the production of consistent product can long-term markets be found for its use. Consequently, both contractors and customers must make sure compost suppliers can guarantee consistent product on an ongoing basis.

**Moisture content.** The moisture content of compost is important to product users because it affects

Plant material feedstocks await composting.

product handling. Compost which is dry, under 35 percent moisture, can be dusty and irritating to work with. If it becomes too dry, it will become hydrophobic and not easily re-wet.

Compost which is wet, more than 50 percent moisture, can become heavy and clumpy, making it difficult to work with. Compost which is too wet can also cause application difficulties and extra expense in delivery.

Avoid using dry compost in plant growing mixes because it may cause the mix to become hydrophobic. Avoid using wet compost on projects where extensive hand work is necessary. Wet compost is probably best used on large soil incorporation projects where the product can be spread and incorporated by mechanical means. Also, note that the composting process can only take place within specific moisture parameters. So, product which is

(continued on page 44)


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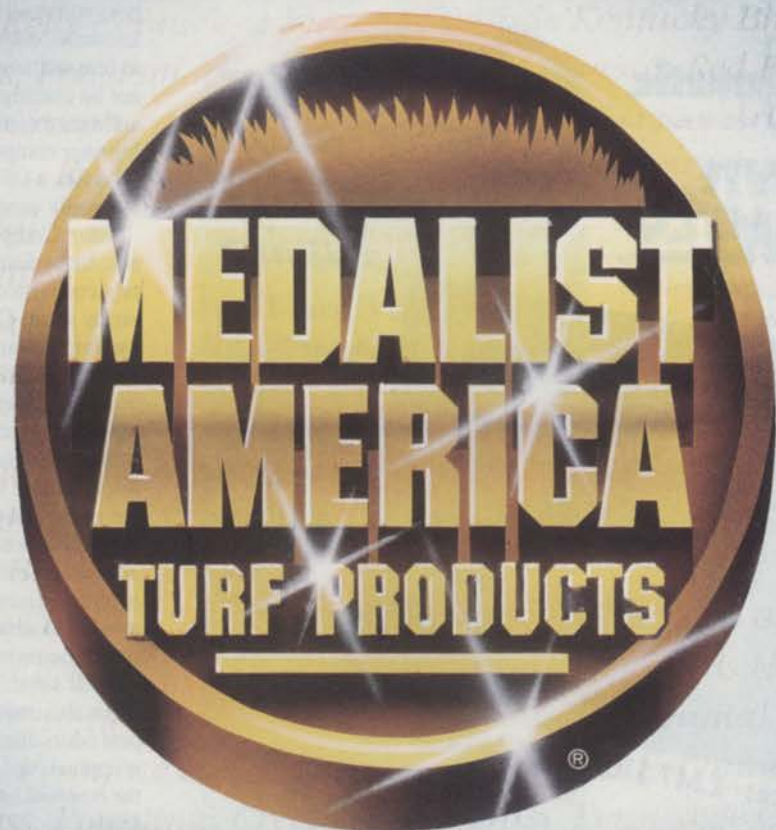
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## Users Beware?

(continued from page 42)

excessively wet or dry, may not be properly composted.

**pH.** The pH of a compost product depends on the compost feedstock, additives (lime), and the composting process itself. Most commercially available composts have a pH of between 5.5 and 7.5. In some products lime is added before or after the composting process.

Unlimed composts are commonly considered more versatile products because they can be used in more applications. This is because limed compost is more difficult to buffer or

more difficult to alter its pH for a specific use. Compost with a lower pH, and ones which are not limed, are better to use in soils which have a high pH or in commercial growing mixes. Most greenhouse and nursery crops are grown in media possessing an acidic pH.

Compost with a higher pH, or ones which have been limed, are better to use in acidic soils or in areas where a more basic growing media is needed. Never use limed compost, or ones that possess a high pH, when growing acid-loving (ericaceous) plants.

**Texture.** The texture or particle size of compost is affected by both degradation occurring in the compost process, and by product screen-

ing. Almost all commercially available composts are screened. This enables the producer to market a product which is consistent in particle size and free from foreign matter.

The size of the screen used depends on both the type of compost being screened and the targeted markets for which its use is intended. Finely screened composts are excellent to use as turf topdressings, and are usually found more appropriate to bag. Coarser products may be used in growing mixes where texture may improve drainage, or in soil incorporation projects where the bulk density of the soil needs to be decreased.

Compost produced from specific feedstocks must be more finely screened to produce a highly marketable product. For example, compost produced from municipal solid waste is known to contain more man-made inerts such as film and hard plastics. These materials cannot be entirely removed before composting, and must therefore be removed through screening after composting is complete. To accomplish this, a 1/4-inch screen (or the equivalent) is usually used.

**Odor.** Compost products, like many products, have a distinguishable odor or scent. Properly composted materials have a discernible earthy scent. Compost should never possess a sulfurous or ammonia-like odor. These odors could be the result of improper composting or of poor storage conditions, and may be unacceptable for certain applications.

Because excessive odor may be the symptom of a more serious problem, it's advisable not to use odorous composts on high valued crops such as nursery and greenhouse plants. To avoid potential complaints, the use of composts possessing objectional odors should be avoided in areas which are highly trafficked such as homeowner lawns or high profile commercial sites.

It is also important to note that normal compost odors dissipate rapidly once the product is applied, and are usually non-existent once the compost has been mixed with other materials.

**Curing.** Proper curing (stabilization) is essential to the production of a high quality compost. During curing, compost has the opportunity to further stabilize, pile temperatures decrease and moisture content is reduced. Curing also allows for the reduction of soluble salts and the continuation of pathogen destruction.

Proper and thorough curing will improve the quality of composts which have not been thoroughly composted. These "immature" composts may stunt plant growth, cause nitrogen immobility and may contain phytotoxic materials. When immature compost is applied and begins to decompose, it uses nitrogen, thus robbing nutrition which could otherwise be used by the plants grown in it.

Immature compost may also contain organic acids which are detrimental to seed germination and plant growth. Tests have been developed which can determine whether a compost

(continued on page 46)

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**USE READER SERVICE #24**



## Users Beware?

(continued from page 44)

is mature or not. Mature composts have a carbon/nitrogen ratio of between 25-30:1.

Keep in mind that product quality is controlled by many factors such as proper composting and curing, storage and environmental conditions, the chemical makeup of the compost feedstock and screening/final processing. It is important to know as much about your compost supplier or producer as possible.

Along with the assurance of product quality, we as customers have other specific needs which are important to discuss.

**CUSTOMER NEEDS.** As more compost is produced and marketed, landscapers will have the task of choosing a supplier. Hopefully, increased competition for business will improve the quality of product available, keep product pricing in check and improve customer service.

It is important to find a reputable supplier. A supplier should have a history of good customer service, be reliable and provide high quality, consistent products. Whether your compost source is a facility or broker, it must be able to provide product when needed. This need is accentuated because of the seasonability of the landscape industry.

In order to assure product availability, it's helpful to know the production and storage capacities of your source facility. How a product is going to be delivered to your site and who will arrange for delivery are other questions which should be considered.

It is important that your supplier not only employ reliable truckers, but truckers with the proper equipment to deliver compost. The size of the truck and the mode of unloading the compost must meet your specific site requirements. Remember, it is often more important to have the product delivered when and where you need it, than it is to get the cheapest price.

Your compost supplier should also be able to supply you with specific technical data and compost use assistance. They should be able to supply you with test data in support of their product quality claims and even arrange a personal visit to the compost facility. Your supplier should also be able to provide research data pertaining to product use, as well as detailed product literature which explains how

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to optimally use the product.

In order to satisfy any of your other product-use needs, your supplier should employ a service-minded staff that can assist you in working through daily situations and problems. Your supplier should also provide you with access to technical representatives who can supply in-depth product-use assistance.

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Bear in mind that there is a cost involved in responding to customer needs, and even many of the quality issues. Buying an inferior product for a superior price is no deal. Also, if a supplier can provide you with the technical assistance and service you desire, don't be afraid to pay for it.

Remember, every compost product is different, every supplier is different and so is every customer. Don't be afraid to find the ones which best suit your company's needs. ■

*The author is the compost marketing/utilization specialist for E&A Environmental/EM-CON Inc. He is responsible for directing all compost marketing studies and use programs at E&A, and is currently managing its compost marketing assistance program.*

**USE READER SERVICE #68**



# After 4 years of U.S.D.A. "No Irrigation" tests, Monopoly bluegrass wins 'The Green Camel'



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For four years running, Monopoly has earned the best average evaluation in U.S.D.A. "No Irrigation" tests. No other bluegrass came close! So, we call water-wise Monopoly "The Green Camel".

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**USE READER SERVICE #70**


**NATIONAL KENTUCKY BLUEGRASS TESTS**  
9 "No Irrigation" Evaluations in 4 Years

	AMES, IA STATION	WASH. D.C. STATION	ILLINOIS (2) STATION	LEXINGTON, KY STATION
Monopoly Rank 1987	2.0	NO TEST	NO TEST	1.0
Monopoly Rank 1988	7.0	3.0	NO TEST	NO TEST
Monopoly Rank 1989	7.5	3.5	NO TEST	NO TEST
Monopoly Rank 1990	8.0	3.0	2.0	NO TEST

**NO. 1 EQUALS HIGHEST RANK, 72 VARIETIES TESTED**

From 1987 through 1990, nine "No Irrigation" tests have been conducted under the National Turfgrass Evaluation Program. During those four years Monopoly Kentucky bluegrass earned by far the highest ranking. So, we named it the "Green Camel"—the winner in low-maintenance, "No Irrigation" evaluations.






You might think using less insecticide means you'll have to put up with more insects. But that's not necessarily the case. Because *how* you use your insecticide is as important as *how much* you use. With

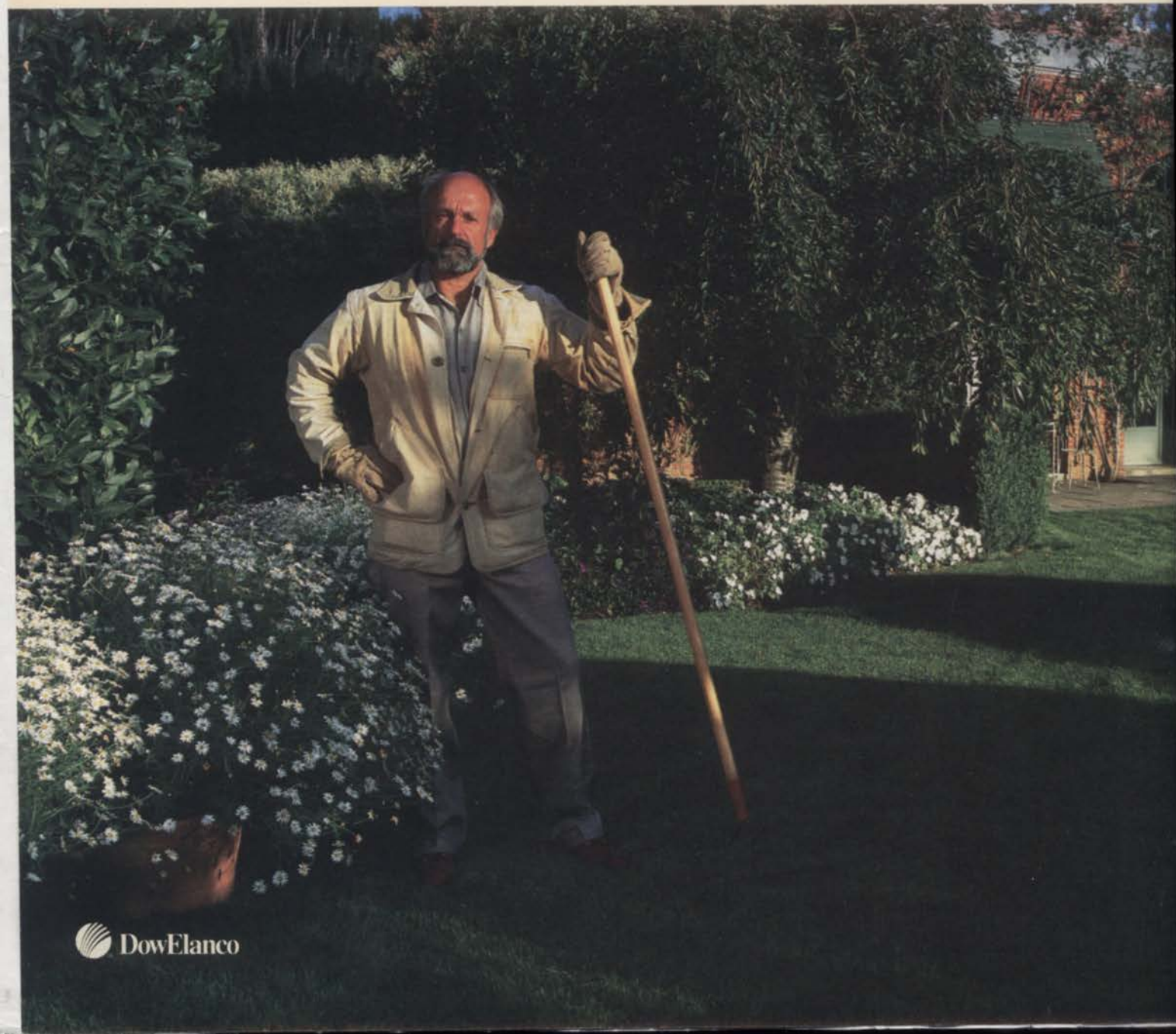
the right tactics, you can use a lot less and still get excellent results.

Here's a good example. By mixing insecticide with insecticidal soap, you can reduce the amount of insecticide you need on your

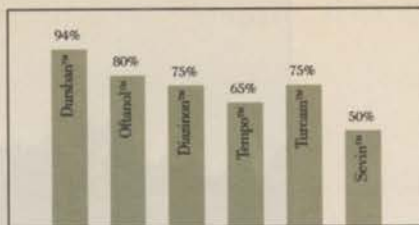


ornamentals by about fifty percent. Insecticidal soap controls most soft-bodied insects and mites. By adding insecticide, you'll also take care of tougher insects, like scales and worms. University studies

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suggest you may get better control than you get with insecticide alone.

Knowing exactly when to apply insecticide helps, too. For example, adult black turfgrass aetiniid are

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first present at the same time the black locust tree blooms. Make your insecticide application then, and you'll get the most efficient, effective control.

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# WORKING WITH WETLANDS

*From clipping hedges to wading through water: Are landscapers succeeding in the transition?*

*By Bob Gitlin*

FEDERAL LAWS ENACTED to protect America's wetlands have created a new business sector for landscapers. Crews that once trimmed hedges are now slopping around in harbor shallows trying to get little plants to take hold, or wading into freshwater shallows to staple indigenous plants to creek beds or doing a host of other work to make sure that commercial development is offset by efforts to put back what was lost — and then some.

John Talley, wetlands manager at Ruppert Landscape, Ashton, Md., supervises tidal and non-tidal mitigation projects. Although they're active in restoring wetlands, Ruppert nurseries do not grow wetlands species. For those, the company goes outside, usually arranging to have them custom-grown. Ruppert has been involved in wetlands mitigation since 1985.

"The problem is the basis for legislation requiring this work is not founded on science, but on politics," Talley said. "Nobody wants to lose wetlands. They improve water quality, control floods and protect wildlife. But the value-laden judgment implicit in the drive to protect wetlands does not translate easily into something we can apply in specific situations."

Ruppert's first wetlands mitigation project was in response to a solicitation. The 45-acre Baltimore Harbor project, intended to correct for a tunnel that was put through the harbor, was a challenge to the Ruppert braintrust, and a backbreaking chore for its laborers.

"We had to furnish marsh plants," Talley said. "Our initial response was, 'We don't have the slightest idea what this is all about.' But we found out not too many people out there knew much more than we did. With a little effort and ingenuity, and some advice to get us over the learning curve, we became successful at it. We're always talking to plant suppliers, government regulators and environmental scientists who design projects."

Some sort of training is recommended for landscapers, although not required, because wetlands mitigation is a tricky business.

"In ornamental landscaping, if you get the basic environment established, the material will set up and thrive," Talley said. "It has a broader range of adaptability than wetlands material. For wetlands mitigation to work, the site has to have just the right grade, hydrology and soil conditions. If any of those three things is miss-

ing, you're looking at a project that'll fail."

Hydrology is the bear. "Critical elevational differences are measured in inches. Even hydrologists feel good talking in terms of feet."

**OPENING NEW MARKETS.** Florida is a hotbed of wetlands mitigation projects, and it's making Brightman Logan quite a successful business owner. He's president of Central Florida Native Flora, a nursery of native materials based in San Antonio, just north of Tampa.

"We grow indigenous centuries-old Florida plants for landscaping and restoration work," he said. He grows plants specified by the Department of Environmental Regulation. "We used to do a lot of installation work before going almost totally to growing. We did swampy areas, lakes and retention ponds."

Retention ponds are common tasks. They serve as settling areas for heavy metals before they penetrate the aquifer.

Marvin Gross's Marvin's Garden & Landscape Service, Sarasota, Fla., buys native species from Central Florida Native Flora to meet the demands of wetlands mitigation projects. But it's a headache business he'd just as

soon avoid. Landscape contractors who win bids on wetlands mitigation projects often find themselves giving the job away, Gross said.

"I did one of the first mitigation projects for beach restoration; we planted half a million two-inch plants on 14 miles of Jacksonville coast." Mitigation phosphate mines is another common project for a landscaper to get involved in, he said. Tens of thousands of seedlings are planted, another labor-intensive job.

**HONEST WORK?** Steve Beeman, president of Ecoshores, Port Orange, Fla., accuses the landscape industry of introducing ineptitude into a legitimate industry. Beeman has been doing wetlands mitigation for 14 years. He grows some of his own stock and buys the rest.

Ecoshores creates and enhances







Wetlands preservation presents new challenges to landscapers. Photo: Ruppert Landscape.

saltwater marshes and swamps, as well as freshwater marshes and hardwood swamps. He calls this "aquatic landscaping." After coming from the University of Hawaii, where his master's in marine biology had keyed on shark studies, Beeman worked for the state of Florida to try to get people to spare wetlands.

Frustrated after four years, he started Ecoshores, concerning himself largely with salt marsh reconstruction and erosion control. "We planted shoreline marshes, such as spartina and mangroves. This controlled erosion, and it was an alternative to building sea walls. It was cheaper; you didn't need a permit. And it was better for the environment, because you created a fish spawning ground."

As wetlands laws were instituted in the middle 1980s, Ecoshores found itself involved

in heavy competition with a lot of others, not all as professional as his own ecologically driven teams, he said. He said 60 percent to 70 percent of the people doing wetlands planting in Florida are not qualified to do so.

Determining the hydrological regime of the system you're trying to copy is the biggest problem. How much will water fluctuate? For how long? During what times of the year? Which plants live in each zone of that fluctuating water level?

"If you're off by six inches in your guess, your entire planting scheme's going to fail," Beeman said.

In Florida, any mitigation plan must be signed and sealed by an engineer. "In a lot of cases, the engineer hires or consults a biologist, who seals his drawings. That makes sense." But many others, even suspecting their own

uncertainty or ignorance, fudge through rather than pay someone for help.

Beeman recently visited a job site in Brevard County, where the plan was to create a five-acre mitigation area for a new state road. One local spartina grass is a salt-tolerant freshwater plant. Another, a salt marsh plant, has to go under water twice a day during normal tides. The engineer had specified the tidal species, a non-indigenous plant.

Beeman had to tell the relevant agencies the plant was wrong and get it changed to specify the salt-tolerant grass.

"The problem results when there's no one to catch it," he said. "The engineering guy doesn't know what he's doing, the planting guy doesn't know what he's doing and certainly the owner/developer guy has no clue. It's planted wrong and the plants die."

At the low end of the ethics spectrum are operators who steal their version of the required plant life from protected woodlands, rather than spend money at a nursery, he added. A lot of unscrupulous contractors — including landscape operators — do not guarantee wetlands mitigation work, he said. If the state cries foul, the developer is asked to redo the work but doesn't always comply.

"A lot of these projects are listed as failures. Because there have been so many in Florida, house and senate subcommittees are looking at changing the rules on mitigation, revoking a valuable tool for putting back what we've lost. It's a system designed to fail."

Florida's DER found last year only 30 percent of mitigation projects succeeded. "I revisited every project I ever planted in this state. It took six months. I documented what had been done, what species had been planted, what we'd done about problems, how we made the project work. Of the 726 acres I'd planted in 14 years, 704 had grown in to the point where you couldn't see the ground. My success rate is 96 percent."

**RE-CREATING NATURE.** David Drylie is a landscape architect whose Green Images of Christmas, Fla., 20 miles east of Orlando, specializes in both growing native plants and wetlands mitigation installation work. Ground Control Landscaping in Orlando subcontracts its wetlands work to Drylie. Actual installation — digging a hole and putting a plant in — is not so different from typical landscape construction, he said. "The problem comes from the fact that they're trying to re-create a natural system, and there are so many precise factors involved: hydrology, slope, pH, etc."

Green Images commonly is asked to supply and install shoreline herbaceous plants and hydric trees such as cypress and black gum. Florida's ample wetlands



often about the well-drained soils of uplands. A developer of 100 acres must, in order to get to the upland acres he wants to build on, put a road over a creek or swamp. Usually Florida is flexible and lets him do that, but replacement instructions of as high as 10 to 1 are not uncommon.

"The county is involved, the city can be involved, the state water management districts, then the DER and Army Corps," Drylie said. "The original permitting process can go on for a year or more."

Rich Akerman, president of Northwest Landscape Industries

in Tigard, Ore., does wetlands projects both for other contractors and for developers.

"We've been involved in stream restoration," he said. "Some streams are heavily overgrown with brush, yet land on both sides has been developed. Some federal or state or county agency deems this a wetland. We go in and work on the creek to make sure drainage is taken care of. We might reconstruct part of the creek bed, working with rocks to speed water movement and clean the water better. And we replant the native plants."

Akerman claims some responsibility for rebuilding the habitat of the once-threatened redleg frogs, who now thrive in his mitigation site. "They've been reproducing for a number of years now," he said.

**RED TAPE.** The difficulty in moving from traditional landscaping to wetlands mitigation is mostly in understanding politics, Akerman said.

"You have to understand all the regulations. You have to work with a lot more governmental organizations. Here in Oregon, our pro-

jects involve the Audubon Society, state forest-service and wildlife-preservation groups and federal and county groups. They're all looking over your shoulder, wanting to make sure the project is done right. Then you have to look out for the developer."

The toughest part of wetlands work, he said, is uniting disparate groups through communications.

Some landscape contractors who want to really learn something about wetlands mitigation take a short course at the Center for Urban Horticulture in Seattle. Professor Kern Ewing, a plant

pedite System Felco Folding Pruning Saw Green Garde Model JD 9-C High Pressure Spray Gun Felco Pruning Shears Hickok Pro Protector Green Garde High Pressure Hose Quinn Gopher Probe Poly 2 Pressurized 1 Quart Sprayer Root Feeder Attach. For JD 9-C Spray Gun Tractor Hitch Spreader Spread Rite G Granule Spreader Turbo Wind Gauge Walk-A-Wick Applicators Warren Spreader Allegro Soil Formula Nature's Cycle Lawn Formula Rich Lawn Lawn Fertilizer Rich Lawn Pro Rich Ringer Turf Restore Ringer Super Greens Res M-1 Insecticide Environmental Stewardship Gnatrol Lime Sulfur Pyrellin™ E.C. 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The Center for Urban Horticul-

Ron Vanbianchi, president of Pacific Wetland Nursery in King-

"There's a lot of call for emergent plants like sedges, carex, rushes, cattails and bulrush," he said. "They're generally referred to as virgin plants because they grow in shallow water from zero to 12 inches. And then for the margin and seasonally flooded areas, we grow a lot of willows, red osier.

Landscape contractors do face what can be a daunting transition, he said. "They've been doing manicured landscapes. Usually mitigation plans specify a wetlands biologist must oversee the work. That helps, but there's a tendency for people who come from manicured traditional landscaping to put things in rows with equal spacing. That's not how things occur in nature." ■

*The author is a free-lance writer based in Cleveland Hts., Ohio.*

53



# STIMULATING PLANT GROWTH

*Fertilizer nutrients are designed to stimulate plant growth, among other things, but shouldn't be viewed as a panacea.*

*By Steve and Suz Trusty*



Nutrients in fertilizers stimulate plant growth and increase flowering or fruiting.

CUSTOMERS OFTEN VIEW fertilizer as a wonder treatment, an instant cure-all for whatever ails a plant. If the lawn is looking less than perfect, fertilize it. If the flowers aren't blooming or the shrubs are getting thin, yellow, or spotted, fertilize them.

In reality, fertilizer is a material used to provide plants with specific nutrients. There are 16, possibly 17, basic elements required for plant growth. Take away even one of these nutrients and the plant will suffer.

Certain of these elements — carbon, hydrogen and oxygen — are supplied to the plant through water and the atmosphere. The macronutrients — nitrogen, phosphorus and potassium — are considered the most basic for plant growth. Fertilizers that contain at least a small amount of these three nutrients are called "complete" fertilizers.

The secondary nutrients are: calcium, magnesium and sulphur. Although essential to plant growth, these nutrients are required in smaller amounts than the macronutrients.

Very small amounts of the micronutrients — boron, chlorine, copper, iron, manganese, molybdenum and zinc — are also needed. Some studies have shown cobalt, the 17th element, to be necessary for the growth of certain plants.

Nutrients in fertilizers are designed to stimulate plant growth, increase flowering or fruiting or to offset soil deficiencies. Fertilizers either supply those nutrients which are not present or are unavailable in certain soils, replace nutrients which the plant has used to support its growth or provide additional amounts of certain nutrients to produce a definite result.

Nitrogen is the macronutrient used in the greatest amounts by the plant. It supports rapid growth and provides rich, green color to foliage and stems.

Nitrogen deficiencies often appear as slowed or stunted overall growth, or actively growing new foliage with yellowed and declin-

ing older leaves.

Phosphorus is used by plants throughout the growing season, but is needed in greater amounts to support flowering, fruiting and seed production. Phosphorus also stimulates root development and is instrumental in the plant's ability to resist diseases.

Since new growth saps available phosphorus from the rest of the plant, deficiencies are usually detected in the older foliage as light, yellowish-green or unusually dark, reddish-green leaves.

Plants absorb potassium, or potash, from the soil in large amounts. Potassium generally helps increase overall plant vigor, helps plants withstand harsh weather and poor soils, assists in disease resistance, and strengthens the plant stem or stalk. Potash deficiency may be difficult to diagnose. Growth is generally stunted, but may appear normal unless compared to a plant of the same type which is receiving adequate potash.

**WEIGHING RATIOS.** The amount of nitrogen (N), phosphorus (P) and potash (K) within a complete fertilizer is expressed by the three numbers shown prominently on the label. For example, a 10-20-10 fertilizer contains 10 percent nitrogen, 20 percent phosphorus and 10 percent potash, for a ratio of 1-2-1. A 24-6-18 fertilizer contains 24 percent nitrogen, 6 percent phosphorus and 18 percent potash, for a ratio of 4-1-3.

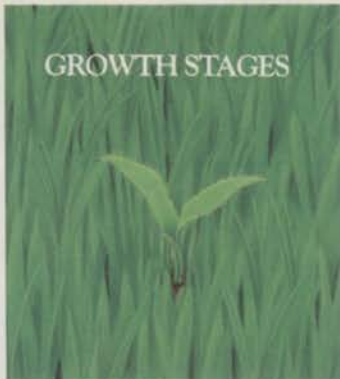
Technical information often refers to suggested fertilizers by the ratio, rather than the specific formula. For example, if a 3-1-2 ratio were suggested, either a 15-5-10 fertilizer, or a 30-10-20 fertilizer, would be appropriate.

To figure the actual amount of the nutrients within a fertilizer, multiply the weight of the fertilizer by the percentage of the nutrient it contains. For example, if the 24-6-18 fertilizer were a granular product weighing 20 pounds, it would contain 4.8 pounds of nitrogen (20 lbs. x 0.24 = 4.8 lbs.), 1.2 pounds of phos-

(continued on page 56)



## GROWTH STAGES



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## Plant Growth

(continued from page 54)

phorus (20 lbs. x .06 = 1.2 lbs.) and 3.6 pounds of potash (20 lbs. x 0.18 = 3.6 lbs.).

If that same 20-pound bag were to be applied to 5,000 square feet, 1/5 of the nutrients, or 20 percent of the nutrient total, would be applied per 1,000 square feet. That figures out to 0.96 pounds of nitrogen (4.8 lbs. x .20 = .96 lbs.), 0.24 pounds of phosphorus (1.2 lbs. x 0.20 = 0.24 lbs.) and 0.72 pounds of potash (3.6 lbs. x 0.20 = 0.72 lbs.).

Fertilizer used to stimulate top growth and deep green foliage would have a higher percentage of nitrogen than of phosphorus and potash. Grasses, evergreens and shrubs grown primarily for their leaf form and color would use a higher nitrogen fertilizer.

If the flowers or fruit are the primary purpose for raising a specific plant, the fertilizer would contain a greater amount of phosphorus. A high phosphorus fertilizer is also used for starting new lawns and raising vigorous root crops.

Where sturdy stems are essential, a higher percentage of potash should be used. Flowering plants, such as delphinium and lythrum benefit from higher percentages of phosphorus and potash.

The type and texture of the soil affect the availability of nutrients.

Sandy, porous soils allow water and nutrients to leach, or wash away. Heavy, clay soils may retain nutrients longer, but tie them up in chemical compounds that make them unavailable to the plant.

**PREPPING SOILS.** Another factor affecting nutrient availability is pH, the degree of alkalinity or acidity. Measured on a scale of zero to 14, 0 is extremely acidic, 7 is neutral and 14 is highly alkaline. The soil's pH also affects the solubility of toxic substances, the growth of soilborne microorganisms and the efficiency of root cells, including their ability to absorb water and nutrients.

Basic analysis of pH and N-P-K levels can be performed using soil test kits. These tests are accurate enough to diagnose minor problems and explain how to correct acidic or alkaline conditions and the amount of nitrogen, phosphorus and/or potash needed



to adjust levels to the requirements of specific plants.

It's wise to have a complete soil test conducted by a testing laboratory when establishing a new landscape, or when plant problems are severe, persistent or widespread throughout the property. The lab will be able to test not only for pH and N-P-K, but also for secondary nutrients and micronutrients. Test results will include a detailed analysis of soil

to be tied up in chemical compounds that make them unavailable for plant use.

Along with a specific ratio of nitrogen, phosphorus and potash, a complete fertilizer may contain selected secondary nutrients and micronutrients. Regionally adapted fertilizers may be formulated to contain specific levels of these minor nutrients to meet area needs.

Secondary nutrients and/or

## There are 16, possibly 17, required elements for plant growth. Take away even one and the plant suffers.

conditions and the breakdown of materials needed to correct any deficiencies.

If soil tests appear normal, yet plants continue to decline, a tissue sample can be sent to the testing laboratory for further analysis. Tissue testing will reveal deficiencies within the plant itself. Nutrients may be present in the soil and register high enough readings in soil tests to satisfy plant needs, yet, because of soil types or pH,

micronutrients may also be offered alone, or in combinations, designed to correct certain deficiencies. For example, iron is often tied up in chemical combinations in heavy clay soils, or those which are highly alkaline. The leaves of trees and shrubs show iron deficiency as dark green along the veins and pale, yellow-green throughout the remaining area. Chelated iron, a readily available form of the micronu-

No matter what form fertilizer takes, it must be accessible to the plant. Photo: Albin Dearing, The Davey Tree Expert Co.

trient, is frequently applied to affected plants.

**FORMULATIONS.** Fertilizers are available in a wide variety of forms. Granules, pellets or powders may be used for dry applications made with fertilizer spreaders; scattered over the soil surface and worked into the top layer of soil; placed into the planting holes; or distributed in holes augered around the plant's root zone.

Dry fertilizers may consist of a blend of different ingredients, or as a homogeneous mix in which all of the fertilizer ingredients have been broken down and combined into uniform particles. Fertilizer may be formed into solid pellets or spikes for inground application.

Granules, powders, tablets or capsules may be soluble for mixing with water and applying in liquid form. Liquid fertilizers may be premixed, or designed for further dilution prior to application.

Fertilizer may be concentrated in specially coated capsules or tubes for injection directly into the plant. Some liquid and capsule water-soluble fertilizers are designed for application through inground sprinkler systems or drip irrigation systems.

Some fertilizers are applied to the soil in solid or liquid form for later absorption by the plants. Other liquid forms of fertilizer are applied directly to the plant as a foliar spray. Some fertilizers are injected into the plant tissues.

No matter what form of fertilizer is applied, it must be placed in an area accessible to the plant and must be able to break down into the basic nutrient compounds that are usable to the plant.

Fertilizers may be organic — made from natural plant and animal materials or from rock minerals — or inorganic (also called chemical) — made of synthetic compounds derived from resources such as coal, natural gas or acid-treated rock minerals.

Organic fertilizers are bulkier and contain a lower percentage of N-P-K than inorganic fertilizers. Their nutrients are released slowly, lessening the changes of over-application. Most organic fertilizers also contain microor-

(continued on page 58)



A BLEND OF FOUR PREMIUM PERENNIAL RYEGRASSES FROM TURF-SEED, INC.  
FOR WINTER OVERSEEDING, LAWN RENOVATION, ATHLETIC FIELDS AND PARKS.

# Alliance

BLEND

*Dark Green, Drought Tolerant, Insect  
and Disease Resistant Turf... Naturally!*

## Citation II

- Contains a high level of endophyte that enhances insect resistance.
- Very good resistance to leaf spot, brown patch, crown and stem rust, tolerance to red thread.
- Rich dark green color with good mowing quality.
- Excellent heat and wear tolerance.

## Saturn

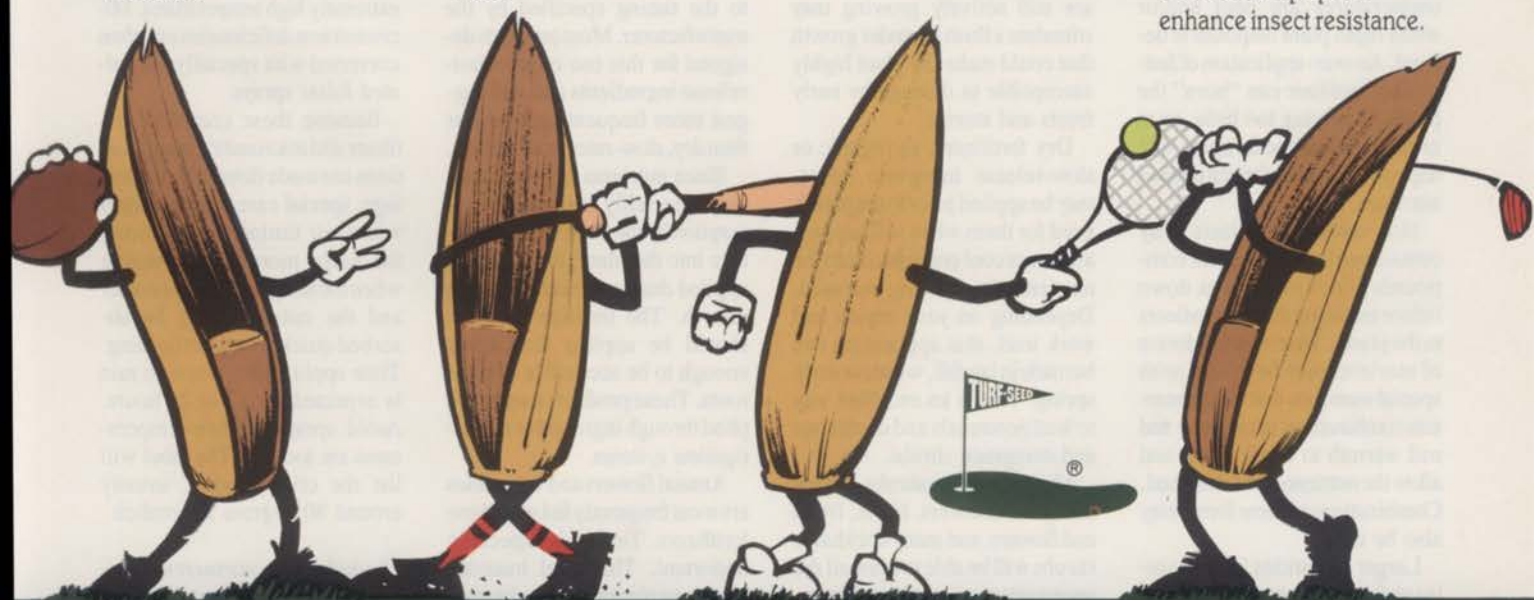
- The number 1 variety in the 1986 National perennial ryegrass trial.
- Dark blue-green colored low growing variety.
- Improved heat tolerance, and resistance to leaf spot, brown patch and stem rust.
- Very good performance in California overseeding trials.

## Charger

- Improved resistance to leaf spot, brown patch, stem and crown rust. Tolerance to red thread.
- Good performance under low fertility and improved color and growth under cool weather conditions.
- Early maturity and tested as 2HH.

## 246 Sunrye

- Very dark blue-green colored turf-type variety.
- Dwarfier growth habit than other varieties in overseeding trials in Palm Springs area.
- Improved resistance to leaf spot, brown patch, and stem rust.
- Contains a moderately high level of endophyte to enhance insect resistance.



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USE READER SERVICE #77



ganisms that are beneficial in making the nutrients available to the plants and which help to improve soil quality.

Greater amounts of organic fertilizer must be applied to reach the same levels of N-P-K found in inorganic fertilizers. Organic fertilizers depend on adequate moisture and warm soil temperatures to stimulate the microbial action necessary for them to become effective. If soil temperatures are erratic and moisture inadequate, the nutrients remain locked in, waiting for conditions to improve.

Liquid formulations of organic fertilizers, such as seaweed and fish emulsion, are more readily available to the plants, but still require adequate moisture and soil temperatures for complete absorption.

Inorganic fertilizers are classified as fast-release, or water soluble; slow-release or water insoluble; or a combination containing a percentage of both fast- and slow-release nutrients. These terms may refer only to the nitrogen sources in the fertilizer, or to all of the nutrients it contains. Read the label carefully to determine which form you are using because each acts in a different manner.

Fast-release fertilizers are completely soluble in water and immediately available to the plant. These fertilizers are best applied in the early spring, while soil temperatures are cool and/or when rapid plant response is desired. An over-application of fast-release fertilizer can "burn" the plants. Applying too little, or at intervals spaced too far apart, will deprive the plants of much needed nutrients.

Slow-release fertilizers may contain nutrients in complex compounds which must break down before releasing their ingredients to the plants. Water soluble forms of nutrients may be coated with special materials that require certain combinations of moisture and soil warmth to break down and allow the nutrients to be absorbed. Combinations of these forms may also be used.

Larger quantities of slow-release fertilizers may be applied at one time since the nutrients will be made available to the plants

over an extended period of time. Applications are thus needed less frequently. Because moisture and soil temperatures play a role in the release of nutrients, availability may be somewhat unpredictable at times.

Fertilizers are best applied according to each plant's natural growth cycle. Ideally, the fertilizer should be put into place just as

soils, may not even need fertilization this often.

Perennial flowering plants grown from bulbs, corms or tubers are best fed with an organic or slow-release inorganic complete fertilizer after the season's blooming has been completed. Timing may be delayed until mid to late summer for certain plants. The fertilizer should be available

## **A seasonal anticipation schedule for timing fertilizer applications can benefit annuals, perennials and shrubs, as well as turfgrasses.**

the plant has depleted available nutrients and is able to use more. This allows maximum usage of nutrients with the least loss to runoff or leaching.

**TIMING IS EVERYTHING.** Many landscape contractors use a seasonal anticipation schedule in their turf maintenance programs to time fertilizer applications to meet the needs of the various grasses with the most effective combination of nutrients for that growth period. Using the same methods for annuals, perennials and shrubs can be equally beneficial.

In northern regions, fertilizer applied during the fall when plants are still actively growing may stimulate a flush of tender growth that could make the plant highly susceptible to damage by early frosts and storms.

Dry fertilizers, as organic or slow-release inorganic forms, may be applied prior to the plant's need for them when soil temperatures are cool enough to keep the nutrients from being released. Depending on your region and work load, this application can be made in late fall, winter or early spring. This is an excellent way to feed perennials and deciduous and evergreen shrubs.

Most evergreen shrubs, perennial ground covers, herbs, fruits and flowers, and many deciduous shrubs will be able to draw all the necessary nutrients from this single feeding. Established plants, growing in well-balanced, fertile

for the roots to pull nutrients into "storage" within the bulb to nourish the next season's flowers.

Because phosphorus moves slowly in the soil, bulb foods and/or bone meal (an organic source of phosphorus) are placed in the bottom of the hole at the time of planting.

Applications to establish bulb plants are placed in augered holes or worked into the top 4 to 6 inches of soil in plant beds.

Liquid fertilizer applications may be made to the soil around the root zone of individual plants or over a planting bed. Certain products for commercial use incorporate slow-release nutrients, and should be applied according to the timing specified by the manufacturer. Most products designed for this use contain fast-release ingredients and will suggest more frequent applications than dry, slow-release fertilizers.

Since nutrients in these products are readily available for absorption by the plant roots and uptake into the plant, they are best applied during periods of active growth. The fertilizer solution should be applied thoroughly enough to be accessible to plant roots. These products may be applied through inground or drip irrigation systems.

Annual flowers and vegetables are most frequently fed with these fertilizers. Timing is especially important. The label intervals have been planned to provide nutrients just as the previous nutrients have been depleted. Stretching the

intervals too far apart may decrease flower or fruit production. Making applications too close together may force lush, unnatural growth and weaken the plant.

Be sure to match the nutrient levels to desired results. Fruiting and flowering plants require more phosphorus than nitrogen. Feeding them with a high nitrogen fertilizer may produce beautiful foliage, but few flowers or fruit.

Certain liquid fertilizer products may be applied directly to the plant leaves as a foliar spray where they are absorbed through the leaf pores. Any material that falls to the ground will be absorbed by the roots. When making foliar applications, spray the plant to the drip point, wetting the foliage thoroughly with material until it just begins to drip from the leaf surfaces. Remember that the undersides of the leaves contain the greatest number of pores, so wet them thoroughly as well.

In certain instances, larger shrubs may be fertilized or receive micronutrients through injection directly into the plant. This method is most frequently used with trees.

Foliar sprays are used for annual flowers and vegetables and to achieve certain results or correct specific deficiencies in perennials and shrubs.

Foliar applications are most beneficial during critical stages in the plant's growth, when nutrients are needed at once. Such stages include shortly after transplanting, flower or fruit set, drought periods and stretches of extremely high temperatures. Micronutrient deficiencies are often corrected with specially formulated foliar sprays.

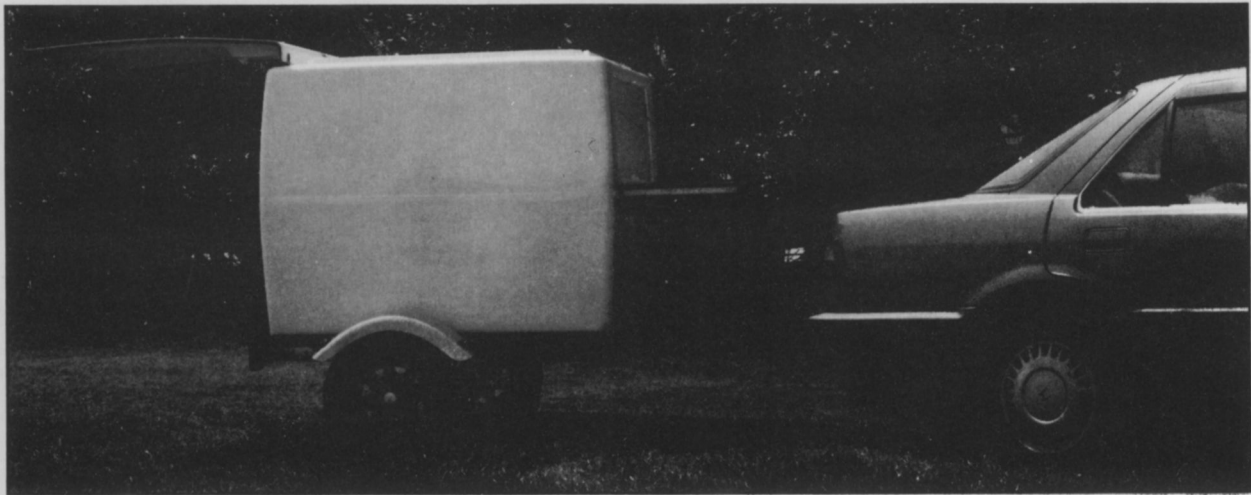
Because these complete fertilizer and micronutrient applications are made directly to the foliage, special care must be taken with their timing. Spray during the early morning or evening when the temperatures are cooler and the nutrients may be absorbed quickly without burning. Time applications when no rain is expected for 12 to 24 hours. Avoid spraying when temperatures are too hot. The label will list the critical point, usually around 80 degrees Fahrenheit.

*The authors are partners in Trusty & Associates, Council Bluffs, Iowa, and are consultants to the horticulture trade.*



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down from generation to generation. While the 300 and 400 Series Tractors can't lay claim to the larger one's 200 horses, they do carry heavy-duty gas and diesel engines with an impressive 16-20 horsepower range.





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For more about the 300 and 400 "family," see your local John Deere dealer. Or call 1-800-544-2122.



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**USE READER SERVICE #88**



# CAN MOWING BE SUBCONTRACTED SUCCESSFULLY?

*Before getting involved with subcontracting, it's best to establish cost controls and job responsibilities.*

*By William Troy*

IF YOU'RE THINKING of subcontracting your mowing operations, give it some thought and then think it through again.

That's the advice of lawn and landscape maintenance operators around the country. Many, in fact, find subcontract mowing a poor business move rather than an opportunity. Most of the no-no's seem to center around quality control, customer retention and profitability.

"If we subcontracted our mowing, we'd face a total loss of control on our accounts," said Bruce Church, of D.R. Church Landscape in Lombard, Ill., a full-service operation. "We have a very hands-on approach to our work and unless our foremen have weekly contact, we'd begin to lose touch with our customers."

Church said he believes that subcontracting mowing leads to decreased profitability. "If we shared the business with someone else, we might wind up with all the responsibility and only a small portion of the profit. Besides, when you cut grass, if you're well-trained in landscape maintenance, you have a chance to closely inspect the condition of the lawn itself."

Church said that you can't just weigh economics in terms of today's dollars, either. "The more important factor is weighing in the cost of customer satisfaction. Without that, ultimately there won't be any dollars to count."

The only area where he does subcontract is in pruning or removing branches from large trees, where the insurance to cover such

activities, he said, is prohibitive.

In his service area, a number of companies who perform only lawn spraying have, on occasion, subcontracted their mowing operations. To his knowledge, the results of those relationships were not encouraging.

**HIGH VISIBILITY.** "Mowing is an important function with us," said Arnie Sieg of The Bruce Co., Racine, Wis., "and it's also the most visible thing we do. We've been contacted by a number of chemical companies to do subcontract work, but we're a full-service company as it is. If we started doing subcontracting, we'd become our own competition."

Tom Hofer of Spring Green Lawn Care Corp., Plainfield, Ill., said he sees mowing as a much different business from landscape maintenance and lawn care. His company has some 90 franchises in the Midwest, and "on occasion, those franchises might recommend someone to do straight mowing." But the franchises shy away from actual subcontract participation, he said. "It just isn't profitable."

Problems surrounding subcontracted mowing seem to run a little deeper with Sam Russo, of Sam Russo Landscaping, Bayville, N.J. A sideline to his mowing business is a power equipment dealership. It puts him in close touch with contractors who offer a mowing-only business.

"All you need to go into the lawn-cutting business is a few pieces of equipment and a vehicle," he said. "At least that's what many people think. So they go out



Is subcontracting mowing an ill-advised business move? Many contractors say 'yes.'



# JOB COST ESTIMATE FORM

Date \_\_\_\_\_ Estimator \_\_\_\_\_  
 Customer name \_\_\_\_\_ Customer address \_\_\_\_\_  
 Phone number \_\_\_\_\_ Lawn size \_\_\_\_\_  
 Special lawn features \_\_\_\_\_

## SERVICES REQUESTED

*Examples: Could be mowing, trimming. Could be seasonal lawn additions: aeration, overseeding, leaf raking. Could be applications: fertilizer, herbicide, insecticide. Could be additional services: snow removal, tilling, pruning, planting.*

MACHINERY	COST PER HOUR	HOURS USED ON JOB	MACHINE COST
1. Truck	_____	_____	_____
2. Trailer	_____	_____	_____
3. Mowing unit #1	_____	_____	_____
4. Mowing unit #2	_____	_____	_____
5. String Trimmer	_____	_____	_____
6. Blower	_____	_____	_____
7. Aerator	_____	_____	_____
8. Dethatcher	_____	_____	_____
9. Spreader	_____	_____	_____
10. Sprayer	_____	_____	_____
11. Other	_____	_____	_____
TOTAL MACHINERY COST (total #1 through #11)			_____

LABOR (SHOW JOB PERFORMED)	COST PER HOUR	HOURS WORKED	LABOR COST
<i>(Break down by employee wage rate. May have crew leader at one wage rate and crew members at one, two or more wage rates).</i>			
12. _____	_____	_____	_____
13. _____	_____	_____	_____
14. _____	_____	_____	_____
15. _____	_____	_____	_____
16. _____	_____	_____	_____
TOTAL LABOR COST (total #12 through #16)			_____

LABOR (NON-BILLED TIME)	COST PER HOUR	HOURS USED	LABOR COST
<i>(Include this if not added to wage figures as efficiency factor multiplier 1.1 or 1.2 - or in overhead figure. Show function performed).</i>			
17. _____	_____	_____	_____
18. _____	_____	_____	_____
19. _____	_____	_____	_____
TOTAL NON-BILLED LABOR COST (total #17 through #19)			_____

MATERIALS	QUANTITY	UNITS	PRICE PER UNIT	MATERIALS COST
<i>(Include this category if providing services or making applications)</i>				
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
TOTAL MATERIALS COST (total #20 through #22)				_____
TOTAL DIRECT COSTS (Combined total of total costs of machinery, labor [billed & unbilled], materials)				_____

## OVERHEAD AND CONTINGENCIES

23. General overhead (shown as a predetermined % of direct costs)	_____
24. Any overhead changes related only to specific jobs	_____
TOTAL OVERHEAD COSTS (total #23 and #24)	_____
TOTAL JOB COST ESTIMATE (total direct costs plus total overhead and contingencies)	_____

*(Can break this down to get total of mowing or any of the other services offered. Add the totals of that portion of the machinery, labor and materials costs. Multiply the total by the overhead percentage, and add any contingencies).*

To use this form as an in-house guide for client charges — add your predetermined profit figure.

Or, if profit is expressed as a % on all work, divide the total job cost by 100 minus the percentage of profit you want to make.  
 (For a 10% profit divide the total costs by .90 (100 - .10 = .90))

If total job costs were \$200, to make 10% you would charge  
 \$222.22

To make 5%, you would divide by .95, charging \$210.53  
 To make 20%, you would divide by .80, charging \$250.00  
 To make 25%, you would divide by .75, charging \$266.67

You may wish to make one profit percentage on machinery use, a different profit percentage on labor and a different profit percentage on materials.

You may wish to use different profit percentage for different job functions — making one profit percentage for mowing, a different profit percentage on applications, a different profit percentage on aeration, tilling or snow blowing.

The same principles apply — break down the total costs of that function and divide that total by 100 minus the percentage you wish to make.



and sell their cutting services for anything they can get, without ever trying to properly analyze their job costs. If you get involved with one of these people you can lose your shirt."

Contract mowers who don't analyze their costs can also destroy the market, Russo said.

He tells this story: Several years ago a mowing operator came into Russo's equipment store to make some purchases. He told Russo he had just received a contract to perform mowing for a group of apartment properties for \$70,000 annually. Russo instantly recognized the name of the property owner. Several years earlier he himself had had a contract with that owner to mow the same properties, at an annual price of \$140,000. And on this project, Russo's raw costs had been in excess of \$100,000.

"I felt genuinely sorry for this guy," Russo said, "so I took him upstairs to my office, got out my files on that account and reviewed my actual costs with him. There was simply no way my customer could make a dime on that con-

tract at \$70,000. The way I figured it, he stood to lose at least \$30,000, and probably a lot more."

Russo said he doubts his lecture did much good. "The man never came back in my store," he said, "either as a friend or a customer."

**INTO THE 20TH CENTURY.** Uninformed price slashing also sets a dangerous precedent with the

customer, Russo said.

"If I make a bid on an annual mowing contract at \$125,000," he said, "and another ship comes in with a price of \$95,000, the customer always uses the lowest price he's heard as a future criterion. If he gets poor service from the cut-rate mower, and renegotiates

**Subcontracting can aid operators who are servicing remote geographic areas.**



with me the next year, he starts from his earlier cut-rate price.

"It's a monumental selling job to get him to pay fairly for the service he demands. It's what I call trying to bring them out of the dungeon."

Subcontract mowing inevitably involves too many negotiators, Russo said. Four parties can be involved — the property owner, the property manager, the landscape maintenance service and the subcontracting mower. This can lead to situations where no one is happy with the results.

"Property owners are getting a lot smarter about these things lately," he said. "The tendency now is to stipulate contracts which forbid any kind of subcontracting. The responsibilities simply become too hard to define."

Dale Dunn of Executive Lawn Care in Columbus, Ohio, is about to begin subcontracting his mowing, but under rather special circumstances. He recently sold his mowing business to a former employee and is no longer actively soliciting mowing business. But

(continued on page 66)

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Cheaper cements may save less than one cent per joint... a very penny savings if the result is a costly repair of \$100.00 OR MORE.

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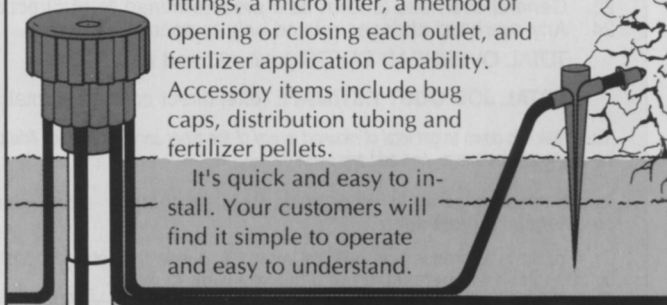
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  - Turn on the water!
- \* Back flow prevention required in compliance with local code.

The OLSON EH-12 contains 12 individually flow-regulated outlets with micro-tubing fittings, a micro filter, a method of opening or closing each outlet, and fertilizer application capability. Accessory items include bug caps, distribution tubing and fertilizer pellets.

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Poly-S technology provides higher nutrient efficiency than SCU fertilizers with the capability for a consistent, programmed linear nutrient release and the flexibility of "dialing" the release rate appropriate to different applications.

This efficiency also provides virtually no unreleased nitrogen or "lock-off." The result: more value from the fertilizer you apply, with an overall improvement in turf quality.

It is the most efficient — and cost-effective — turf fertilizer technology ever developed. And it's available now — only from Scott.

For more information about Poly-S fertilizers and their performance advantages, contact your Scott Tech rep. Or call 1-800-543-0006.



USE READER SERVICE #69

Growing Better Through Technology



## DON'T KNOW WHICH MODEL TO BUY?

Compare units first by the cost per year of operation:

TYPE OF UNIT	Cost of Unit (with finance costs included)	+	Portion of Unit Cost Allocated per Year of Use	+	Annual Maintenance and Repair Costs	+	Annual Fuel Costs	+	Annual Labor Costs	=	Total Annual Cost of Unit Operation
--------------	---	---	---	---	-------------------------------------	---	-------------------	---	--------------------	---	-------------------------------------

Then take your total annual cost of unit operation and compare units by the cost of operation per thousand square feet (or acre)

TYPE OF UNIT	Total Annual Cost of Unit Operation	+	Days of Unit Operation per Year	+	Total Area Mowed by Unit per Day	=	Cost of Unit Operation per 1,000 sq. ft.
--------------	-------------------------------------	---	---------------------------------	---	----------------------------------	---	--

Annual costs and operational costs should be considered before making buying decisions.

### Subcontracting (continued from page 64)

when he encounters a customer interested in mowing, he will subcontract to the person who purchased that part of his business.

"It gives us a chance," he said, "to scratch each other's backs. When an account opportunity comes along that has landscaping service needs at all, we'll simply give him the account." In turn, Dunn's former employee sometimes subcontracts other landscape services to Dunn. Will

the arrangement work? "I wish I knew," Dunn said.

**WHO TAKES CHARGE?** According to Steve Glover of L & L Landscape Services in Santa Clara, Calif., there just isn't much of a market for subcontract mowing at the present time. He said his company used to do it for a related firm and on occasion, his firm performs subcontract mowing for an installer/landscape contractor for a period of 60 to 90 days.

"But the definition of shared responsibilities is always difficult

to determine," he said.

Bruce McQuay's Maintain Inc., headquartered in Fort Worth, Texas, covers a 50-mile radius service area with 24 trucks.

"We've started to look at subcontract mowing," he said, "because in some cases we can more easily cover weekly calls for operators who are remote from this area geographically."

In some regions, McQuay said, today's economy lends itself to subcontracting, a boon to companies who can make greater use of their equipment.

"It's very difficult to maintain control of a repetitive service like mowing," said Frank Puglese of R. B. Stout, a full service operation in Akron, Ohio. "For that reason alone, we almost never subcontract mowing services. The important thing to remember is that the sub you hire has no obligation to your customer. His work becomes your work. And that can cost you a lot more than the few dollars you make on the job."

*The author is a free-lance writer based in Cleveland, Ohio.*

## THE WALKER TOUCH



**The Perfect Touch** Many operators are finding the mid-size Walker Mower is the perfect size for their jobs – a compact, maneuverable tractor for small areas, combined with open space productivity of a rider, saves time.

**The "Midas" Touch** Walker Mowers are moneymakers; one owner explained why he was buying a second Walker, "The first one made me money – I like to make money."

**The Finishing Touch** To please the most discriminating customer, Walker delivers a beautiful mowing job and with the exclusive GHS grass collection option, the turf is vacuumed clean and manicured.

### The Mid-Size Walker Line

*Ride a Walker*

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**Everett Mealman**  
Chairman and  
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PBI/Gordon Corporation

The *environmental age* weed control program being used by Roger Albrecht is typical of progressive turf professionals.

Albrecht is president of Nitro-Green Corporation, which has 38 lawn care franchisees scattered over 15 different states, and he manages two locations in California for his own hands-on experience.

"Our goal is to eliminate all broadcast spraying of herbicides on the ornamental turf we manage, and replace it with spot treatment as necessary," says Albrecht. "We want to be pro active on environmental issues and be able to assure our customers that we are using the absolute minimum requirement of chemicals."

Albrecht goes on to explain that such a

program takes time to implement because the turf needs to be so healthy and thick that weeds cannot easily germinate.

"The elimination of the pre-emerge broadcast is the critical step," says Albrecht, "because, no matter what, some crabgrass is going to appear, and since crabgrass is a major cause of complaints, we must be able to eliminate it fast with no discoloration."

Trimec Plus provides the safety net that enables Albrecht to eventually eliminate pre-emerge. "We have absolute confidence in Trimec Plus to handle any crabgrass or nutsedge that shows up," says Albrecht.

And, of course, the same spot sprayer filled with Trimec Plus that Albrecht uses to control crabgrass and nutsedge also controls the other grassy and broadleaf weeds that can germinate throughout the year. "Having one herbicide for all of our spot treatment is a major factor in our program," says Albrecht.

But if Trimec Plus is ideal for spot treatment, it is also unsurpassed for broadcasting when the need exists. Listen to George Toma, the executive turf consultant for the Royals, Chiefs, and NFL:

"My son, Chip, the groundskeeper for the Truman Sports Complex, used a broadcast of Trimec Plus on the out-of-sight, unirrigated perimeters of the complex, which was loaded with every conceivable weed, and

Trimec Plus absolutely took out everything except the bluegrass."

According to Toma, it would have taken four different selective herbicides to do the job that Trimec Plus was able to do... but even more important, Toma says that Trimec Plus did a better job on all of the individual species than a narrow spectrum selective could have done.

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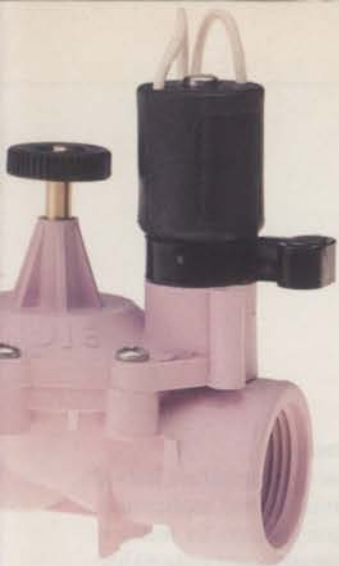


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# MANAGING PESTS WITH DECISIVE METHODS

*By achieving a thorough awareness of key pests and key plants, maintenance operators can more effectively and efficiently manage customers' landscapes.*

*By Dr. David Shetlar*



A soap flush turns up black cutworm larvae. Photo: David Shetlar.

INTEGRATED PEST management alternatives (chemical, biological and cultural controls) and pest monitoring and sampling are often discussed and recommended by university scientists. In reality, however, few *complete* IPM programs in turfgrass exist.

The few IPM programs for turf have had to be supported by government funding and operated under the direction of university scientists. In short, most companies have not been able to implement turf IPM programs.

From its earliest beginnings, landscape IPM has assumed that only highly trained technicians, through intensive sampling, could accomplish the task of pest monitoring and control decision making. Companies attempting to make a profit usually cannot compete by making such investments in training and sampling time.

So, how can one undertake an IPM program in a market which will not support the additional costs? This question has given rise to the concepts of: targeted applications to key pests and key plants, and pest mapping.

**APPLICATIONS.** At present, too many companies simply fill the largest tanker available with a "pesticide cocktail." These contain fertilizers, herbicides and insecticides for treatment of all turf areas. Even dry applications (including the products for do-it-yourselfers) contain fertilizers and herbicides (preemergent or post-emergent) or insecticides. The problems with using these cocktails as preventive cover applications are:

1. Most lawns will not get damaging insect numbers.
2. Thin turf in sunny areas will get most of the crabgrass, while thick turf or shady turf will get little crabgrass.
3. Sparse, short cut turf will get most of the broadleaf weeds; while thick, taller turf will have

few weeds.

Some companies have learned to deliver targeted applications. Injection systems, for instance, allow the applicator to place a herbicide or insecticide into the spray when pest problems are noted in a specific area of turf. Applicators of dry products can take two spreaders and apply fertilizer only in the shady or dense turf, and apply fertilizer plus herbicide in the sunny, thin areas as well as around driveways and walkways.

A third bag on the truck can contain an appropriate insecticide for surface or subsurface insects. Since it takes additional effort to make the second pass with the insecticide, chances are the application will not be made unless necessary.

Of course the problem of short cut turf should be handled by educating the customer. Some companies even provide a lawn mower maintenance service for their clients in which they sharpen the blade every season and adjust the mower to the proper height.

Targeted applications can be improved by using the concepts of key plants, key pests and pest mapping.

**KEY PLANTS.** Key plants are those which require special attention or are known to be constantly attacked by pests. In the northern states, white-barked birches are always attacked by birch leaf-miners and bronze birch borers. This is a key plant. In the South, azaleas planted in the sun are always under attack from lace bugs, scales and mites. This is a key plant.

On the other hand, red oaks in the North and live oaks in the South are under constant insect pressure, but damage is rare. These trees do not need to be sprayed and are not key plants.

Though the term key plants was developed for trees and shrubs, it has meaning in turf. Fine fes-





cue planted on a sunny slope is very likely to be attacked by chinch bugs. Centipedegrass or St. Augustinegrass planted in a shady area with irrigation is likely to be attacked by spittlebugs. Therefore, within these special conditions, these grasses qualify as key plants.

By understanding the concept of **key plants**, the turf manager should take every opportunity to use the ultimate solution — eliminate the key plant. When fine fescue in the sun is obliterated by chinch bugs and Kentucky bluegrass is killed by billbugs, replant with resistant turfs.

Too often, turf managers simply replant with the same type of grass. Or even worse, the least expensive grass "blend" is planted. These managers are doing themselves and their customers no good. Of course, replacing susceptible turf with resistant turf is using IPM.

**KEY PESTS.** Key pests are those which will greatly damage, or even kill, their host plants. Borers in trees and shrubs are key pests and need special attention. White grubs and mole crickets in turf are key pests. However, a few caterpillars in a tree or a few chinch bugs and leafhoppers in the turf is nothing to warrant immediate treatment.

Therefore, mole crickets and white grubs should receive more attention in sampling and mapping than chinch bugs and leafhoppers. The same can be said about weeds. Ground ivy and spurge are likely to take over large patches of turf and are then difficult to control. These are key pests. Dandelion and plantain are usually patchy and are easy to control. These are not key pests.

Key pests, as with some of the key plants, can often be eliminated by using non-chemical tactics. If chinch bugs, sod webworms and

billbugs are common problems, replant with endophyte enhanced fescues or perennial ryegrasses. Proper mowing, correct irrigation and fertilization amounts can reduce, eliminate or mask numerous pests such as chinch bugs, bermudagrass mites, spittlebugs and mole crickets.

Unfortunately, key pests do build up in the turf and cause significant damage. Learning how to handle these special situations as efficiently as possible without resorting back to cover sprays is imperative. One method is to use pest mapping.

**CHARTING THE COURSE.** Pest mapping arose from early attempts at landscape IPM. These studies relied on careful record keeping and monitoring.

It soon became apparent that certain neighborhoods had similar pest problems. If you look through neighborhoods, they usu-

**Twolined spittlebug adult, a common pest of turfgrasses in shady and moist conditions.**

ally have the same types and ages of turfgrasses. You would expect this, especially in newer neighborhoods. In short, a developer usually contracts with a seeder or sodder to install turf when homes are purchased. Because of this type of contracting, practically everyone in the neighborhood receives the same blends or cultivars of grasses.

Likewise, the soils under neighborhoods are often similar. In the North, neighborhoods are built on old farm land or in wooded lots. Billbugs, sod webworms and chinch bugs can be found in neighborhoods established on agricultural lands and white grubs near the wooded areas. In the South, neighborhoods are often built on old agricultural lands, in wooded lots or along waterways.



The neighborhoods next to waterways are obviously going to be most susceptible to mole crickets while the wooded areas will have spittlebugs.

Turf managers who learn to "map" their pest problems can target controls better. In most cases, pest mapping is nothing more than careful record keeping.

Some companies which use this technique maintain a large service map in their facility. Each day, when the technicians return from their routes, color-coded pins are placed on the map. A color is assigned to chinch bugs, billbugs and white grubs; or even weeds.

After a short period of time, it soon becomes evident that there are certain "billbug neighborhoods," "white grub neighborhoods" or "mole cricket neighborhoods." During the next season's routing, these neighborhoods are scheduled for treatments during the best possible control window.

Pest mapping also allows for better marketing of services and pricing. There is no reason to charge customers for white grub

control if they live in a chinch bug neighborhood. Seasonal employee numbers can be better managed if the work loads are estimated in advance. If 80 percent of the customer base are billbug neighborhood customers and the correct billbug treatment window is only three weeks, part-time applicators are going to be needed for that short window of opportunity.

**TIMING PEST CONTROLS.** Unfortunately, most turf insect controls are applied as *preventive* applications. These are marketed as "grub proofing," "guaranteed insect control" or "pest-free" programs which *require* a pesticide application.

While it is understandable that crabgrass control is best accomplished by using a preventive application of a preemergent herbicide, few insecticides need to be used in this manner. In fact, it is better to save the insecticide for use when it's needed. Unwarranted applications of insecticides have led to enhanced microbial degradation and possible resis-

tance (especially in the southern chinch bug). In either case, a useful pesticide is lost.

The second most commonly used technique for timing an insecticide is a "reactive" application. This means that the pest was missed before visible damage occurred; the customer, raccoons or armadillos did the discovery. Of course, the major problem with reliance on reactive applications is the customer is dissatisfied with your service.

So, how does a turf manager reduce preventive applications without increasing reactive applications? Pest mapping will help reduce the number of preventive applications, and improved timing techniques will improve the efficacy of the controls applied.

In order to improve timing, pest monitoring techniques and predictive models need to be used.

**MONITORING TOOLS.** Most turfgrass IPM programs have failed because pest monitoring and sampling take too much time. No customer is going to pay for a specialist to sink a steel cylinder

into their turf, fill it with water and count the number of chinch bugs which float to the surface in 15 to 20 minutes.

On the other hand, if pest mapping has been done, monitoring of pests in one location of the service area can predict what stage the pest is in for all of the customers' lawns. The following techniques have proved useful.

1. Visual inspection: By looking in several places in the turf, one can rapidly assess many pest problems. If you separate the turf canopy in three to five places in the turf and each time several chinch bugs are observed, treatment is probably warranted.

For billbugs, do the "tug test." In early June, grab hold of the turf and lift upward. If several grass stems break off and are packed with the billbug, sawdust-like frass, billbug controls are probably warranted.

2. Pitfall traps: Placing cups or cans sunk into the turf to capture crawling insects such as billbug adults and mole crickets can help monitor activity. A 16- to 20-

(continued on page 74)

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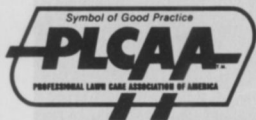
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## Managing Pests

(continued from page 72)

20-ounce plastic cup is easily inserted by using a golf course cup cutter. Be sure to place the trap along the edge of the turf, along a flower bed or in the mulch line of a tree, so as not to "capture" the ankles of children. One or two traps in a neighborhood can help gather information on when billbug adults are up and active or when mole cricket nymphs have hatched.

3. Light traps: "Black lights" are very attractive to sod webworms, cutworms, armyworms and many of the white grub adults. Using a trap can assist in determining when the adults of these pests are flying. You can then estimate when the larvae would be present in lawns.

Most of the white grubs are at their most susceptible stage 30 days after peak flight, and most of the turf caterpillars are controlled 10 to 15 days after peak flight.

4. Pheromone traps: These traps contain the sex and/or attractant chemicals used by sod webworms, cutworms and Japanese beetles. These traps can be used like the light traps for determination of insect activity. In fact, the cranberry girdler (subterranean sod webworm) in the western states is often controlled after monitoring for adult pheromone trapping.

5. Disclosing solution: A soap flush using two tablespoons of liquid dish washing detergent in two gallons of water can be used to "disclose" insects in turf. Simply spread two gallons of the mix over a one-square-yard area and any turf caterpillars will soon pop to the surface. In the southern states, this is the method of choice for monitoring mole crickets. However, a double application may be needed to obtain emer-

gence of adult mole crickets.

6. Sound traps: Electronic beepers or recorded sounds of mole crickets can be used to attract adult mole crickets when they are flying in the fall or spring. Though these are not very useful in determining population sizes, they can alert a turf manager of adult activity.

Often, customers are more concerned about the tunneling of the adults than the root damage caused by the nymphs. A well-timed notice could be sent to customers explaining about the migration and possibility of tunneling. Proper control timing would be targeted later, for the hatching nymphs.

**DEGREE-DAY MODELS.** Predictive models are usually developed by monitoring the weather's effect on insect development. Though these models help determine better timing windows, they still do not determine where damaging pest populations will occur. Degree-day models help determine if the season is earlier or later than normal. This should help even those managers who are still using preventive, calendar date applications.

Predictive models have been produced for the hairy chinch bug, bluegrass billbug, masked chafers, Japanese beetle and several of the sod webworms. Unfortunately, only the chinch bug, billbug and sod webworm models are easy to use. Masked chafers are also sensitive to soil moistures and are better monitored with light traps. The Japanese model requires complicated soil temperature monitoring.

Check with your Cooperative Extension Service office to see if they are monitoring degree-days, and have the turf insect models in operation. ■

The "tug test" reveals grass stems eaten by billbugs.  
Photo: David Shetlar.



The author is a landscape entomologist at The Ohio State University, Columbus, Ohio.



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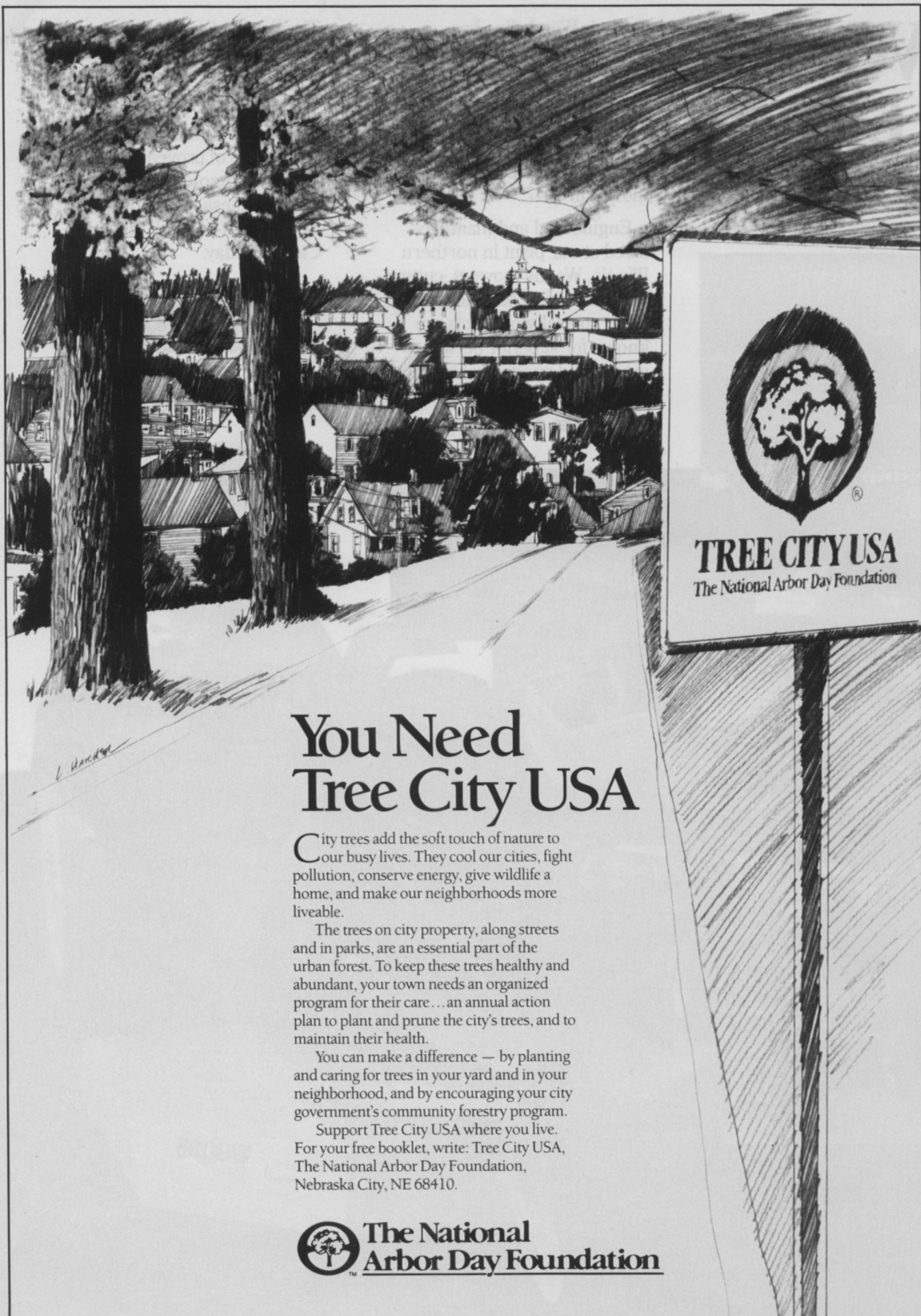


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# Hands On

*Editor's Note: Hands On is a new feature in LLM to provide our readers with ideas and resources for running their businesses. We need you to share ideas and lessons learned with your peers. Submit your hands-on stories to: Hands On, LLM, 4012 Bridge Ave., Cleveland, OH 44113. Or if you want to phone us with your tips, call 800/456-0707.*

## Retaining Employees

THE ELGIN, Ill.-based firm of Tecza Environmental Group is eagerly looking forward to whatever 1992 brings its way. While 1991 was not considered a banner year by many in the green industry, it was the year Tecza realized its business practices had merit.

It's uncommon for Midwest landscape firms to maintain a status quo in their employee population throughout the year, given the seasonal nature of the business. Yet here is a company that works to keep its employees working year-round.

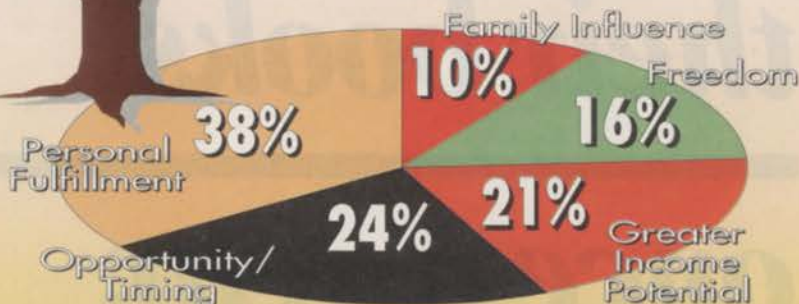
While not adding to core staff during peak season, a policy of flexible hours and reassigning of responsibilities during the slower season make up for many 14 to 16 hour days. The company also strives to solve landscape issues with a team approach and charts its growth on a collective basis.

Ed Reier, sales manager for Tecza Brothers, the maintenance division of the group, said it takes a lot of vision and scheduling know-how to keep everybody working and productive, but the result is employee retention and productivity, and clients who appear more satisfied in the continuity of service, and the level of familiarity to their particular needs. — *Tecza Environmental Group*



## BRANCHING OUT

Many contractors once worked for someone else and decided that they could do as well or better by opening their own lawn maintenance business. Here are the major reasons why small business owners started their own firms:



\*Total exceeds 100% due to multiple responses.  
(Source: MasterCard)

## Customer Service Comes First

BEFORE PAUL Berg's employees could improve their service to customers, they needed to learn how to communicate better with one another. To get them talking, Berg, CEO of Enterprise Builders, asked them to conduct some internal market research.

The summer before last, during a company picnic, Berg handed each of the 13 employees at his Avon, Conn., construction company written instructions that asked them to consider themselves "customers" of one another.

Each employee went around to the others one at a time and asked them to list their 10 greatest needs as customers. They then agreed on an action plan to meet each need. Later, employees looked at all the responses they'd gathered, identified those needs mentioned most frequently and made them immediate goals. They also agreed to meet in a month to discuss progress on the problems.

The exercise "sanctioned workers to identify what didn't work right," Berg said, and to fix it instead of excusing it as "the way things are done." During the exercise, senior project manager Steve Buccheri heard about a lot of frustration with the job-cost reporting system. So he worked with six users to develop a better model, then brought it to the accounting department. The improved system is now in place.

"In our business there are so many levels of customers. I wanted our people to understand service in a personal way, so we started on the inside, and we'll work our way out to every layer of customers." — *Inc. magazine.*



## Securing Customer Satisfaction

EXPERTS AT the National Association for the Self-Employed say if you want to maintain customer loyalty you have to handle complaints properly.

Bennie Thayer, chairman of the board for NASE, said to handle complaints quickly and effectively. Otherwise, you run the risk of losing a customer and word-of-mouth recommendations to new customers.

Additional tips from the NASE to ensure customer satisfaction:

- Handle the problem yourself, on the spot. Don't try to pass it



off to someone else.

- Make sure you understand the problem completely and restate it positively. Don't imply the customer is exaggerating or wrong.
- Take full responsibility for the problem.

Remember the customer's always right.

- Don't ever say, "It's not our policy," or, "Sorry, but there's just nothing I can do."

- Be friendly, no matter how provoked you are. Even the hottest-tempered customer will cool off and may wind up your greatest ally. — *National Association for the Self-Employed*



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# Trees & Ornamentals

## GROUND COVERS TAKE HOLD EASILY AND SPREAD QUICKLY

**TURF IS TOPS.** Nothing is as versatile and effective as an overall, general-purpose ground cover than grasses. They control soil erosion and water runoff, provide a pleasing base for the landscape scene and withstand foot traffic.

But, there are situations where grasses need help. Steep slopes covered with turf may pose a mowing hazard. Tight budgets may call for less trimming around trees and shrubs. Dense shade may block out too much sunlight for grasses to thrive. Deeper rooted plants may sap available moisture. The landscape may need transitional plants to bridge the gap between ground-hugging turf and tall trees and shrubs.

Ground cover plants can solve these problems.

Many plants can be classified as ground covers: perennials, ornamental grasses, deciduous and evergreen shrubs, wild-flowers and even annuals. The usefulness of the plant in a specific situation is the



Lamium ground cover. Photo: Steve Trusty.

primary consideration.

The first step in choosing ground covers is to select plants that thrive in the existing conditions. To work effectively, the plants must take hold easily and spread quickly.

Light requirements will range from full sun to dense shade, while moisture may

vary from drought conditions to bog-like saturation. Fortunately, there are plants to accommodate any combination of needs.

Define the microclimate as accurately as possible. A seemingly shaded spot could receive good filtered light, or two to three hours of early morning or late afternoon sun, greatly expanding the range of available plants. Reflected light from patios, walkways or buildings can open semi-shaded locations to full-sun varieties.

Air movement is a critical factor in any season. Plants with limited cold-hardiness may do well in areas where chilling winter winds are blocked by surrounding buildings or vegetation. Plants with dense foliage will be more susceptible to diseases where air circulation is minimal and humidity is high.

Assess the soil type and water availability. Sandy soils that drain rapidly, but are served by a sprinkler system or receive frequent rains, can support a wider range of plants than sandy soils where moisture



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is limited. Heavy clay soils may hold water so long that only moisture-loving plants will survive.

Check with local nurseries or extension service personnel to narrow the choice to those varieties best adapted to your region.

The second consideration is the attractiveness of the plant. Ideally, ground cover plants should add beauty and/or interest to the landscape throughout all seasons.

Plants as tall as three to four feet may be used for ground cover. The most popular choices range in height from six to 24 inches. Ground cover plants can fill the gaps between turfgrasses, ornamental shrubs and trees, mimicking nature's layering effect.

Visualize the look of the plants in their setting. As well as size, consider the form or shape of the plant, the size and texture of its foliage and the color or colors it offers. Color can vary through the early shading of spring, mature growth of summer, fall displays and winter hues.

Some creeping evergreens take on a purplish-cast during colder weather. Ornamental grasses may fade to tan or brown, yet continue to bring movement and texture to a winter scene. Foliage may hang throughout the winter or drop to reveal

interesting bare branches. Flowers and fruit may be bright and showy, or muted and inconspicuous.

Choose plants to contrast to, or blend with, neighboring plants. A fine-textured lawn and small-leaved shrubs may be complemented by a ground cover with a fine texture that blends into the setting, or one with a coarse texture to contrast and call attention to the individual plants.

Use color shadings and variations to create the same effects. Different ground cover plants can be used within a grouping to add further contrast. Or, all the trees and shrubs in one area may be surrounded with the same ground cover variety to create a connected look.

Third, consider ease of maintenance. Ground cover plants should lessen the work load, not add to it.

Space new plantings according to the plant's growth rate and how rapidly the exposed area will need total coverage. The closer the plants, the more quickly open spots will be filled.

As with any new plantings, time and effort will be needed to ensure the plants get off to a good start. Proper soil preparation, watering, mulching, fertilization and insect and disease control are essen-

tial. Weeds should be eliminated, at least until the plants are well established. Once established, ground covers will crowd out most weeds, requiring only preemergent applications and occasional spot treatment of persistent perennial weeds.

Check the requirements of individual plant varieties for specific maintenance needs. In general, ground covers will need occasional thinning, or plugging to fill in bare spots. Trimming may be needed once a season, either in late fall or early spring, to remove dead and damaged leaves and stimulate new growth.

Lastly, look for additional benefits the ground cover might provide.

Steep slopes planted with ground covers will eliminate mowing hazards. Using plants that are rhizome (form roots along creeping below-ground stems) or stolon (form roots along creeping above-ground stems or branches) can be ideal for erosion control. Ground cover plants surrounding trees and shrubs not only keep weeds down, but eliminate trimming and protect trunks from mower or weed whip damage. ■

*Steve and Suz Trusty are partners in Trusty & Associates, Council Bluffs, Iowa.*



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Drawing #4 shows bottle in position with tool ready for use.

#### APPLICATION

Water area to be treated so soil is moist and easily worked. Using locations determined by measuring, press tool firmly into soil with foot upon the extended plate, just above the points of the tool. Try to insert tool as vertically as possible.

Pull the tool up about one inch, turn the handle on ON and count slowly to six before turning to OFF. Be certain handle indicates OFF and remove tool from soil. Repeat this procedure around the tree to complete applications. If the complete distance around a tree cannot be covered because of blockage by a sidewalk, building or other obstacle apply the remaining amount to cover evenly the area available.

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**USE READER SERVICE #29**



# People

**JOHN SHIELY** was elected executive vice president, administration and general counsel, by the board of directors of Briggs & Stratton. In his new position, ShIELY is responsible for corporate planning and development, purchasing, research and engineering, human resources and technology.

**Humberto Lopez** joined the agriculture division of Miles Inc. as the Southern California and Arizona-area sales representative.

Also within the division, **Stephanie Gotberg** was named Chicago-area sales representative; and **Rob Fleshman** was named Indiana-area sales representative. Lopez, Gotberg and Fleshman represent the division's line of specialty chemicals used in the commercial lawn and pest control industries.

The Toro Co. appointed **Mark Painter** to residential marketing manager, irrigation division. Painter has been with the division for two years, serving as district sales and specification manager.

**Mark Melvin** was promoted to vice

president of finance and chief financial officer for the Garick Corp. Also, **Lynn Borian** was promoted to assistant marketing manager.

ICI Professional Products announced the following changes to its management team: **James Petta** was named product manager for turf and ornamentals; **William McClellan**, national technical director; and **Doug Mills**, communications manager.

**Dr. James Forbes Hadden** joined ISK Biotech as technical representative. Previously, he was extension specialist with the University of Georgia.

Hadden is responsible for field development of proprietary and experimental products in Florida, Alabama and southern Georgia.

Dixon Industries recently added two sales regions and managers. **Max Stickelman** is the new northeast region manager; and **Mike Harrell** is the western region manager. Both were previously territory managers.

Dixon also announced four new territory managers: **Mike Wood**, Washington



ShIELY



Petta

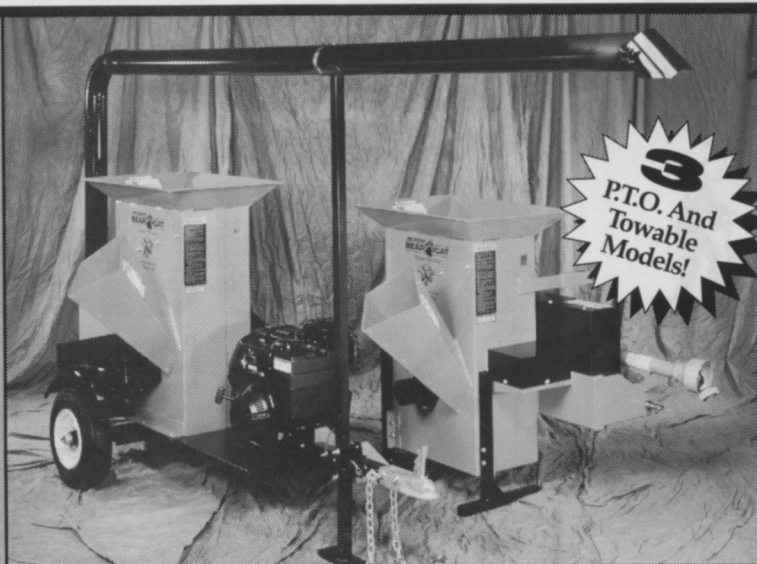
and Oregon; **Carl Jacobs**, Ohio; **Chris Gravius**, New England and eastern New York; and **Bob Hake**, eastern Pennsylvania and New Jersey.

The Peter Selmer Loft Memorial Scholarship Awards were presented to eight Rutgers University students at the New Jersey Turf Expo.

Recipients include: **Christopher Boyle**, **Suichang Sun**, **Karen Plumley**, **Victor Nemeth**, **Mirta Guglielmoni**, **James Campbell**, **Lora Betts** and **Chan Seok Oh**.

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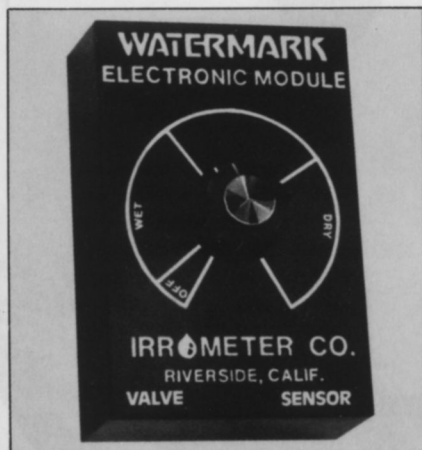




# Products

**IRROMETER CO.** OFFERS a new version of its Watermark electronic module for use with the Watermark soil moisture sensor to control individual valves on an automatic irrigation system.

The module can be added to any existing 24-volt (AC) control system without having to run additional wiring to the field. Benefits include reduced water use, lower



## Product Spotlight

**Tree Technology Systems** offers the ArborX tree injector. To prevent leakage, the feeder tip of the injector and the feeder section are welded to the barrel. A special "O" ring seals the plunger in both the shipping and pressurized position, and the plunger locks into position when pressurized.

The company offers injectors packaged with Orthene® insecticide, Bayleton® fungicide and Nutriject™ proprietary fertilizers.

**Circle 125 on reader service card**



maintenance and energy costs and less fertilizer lost to leaching.

**Circle 126 on reader service card**

**DecoChip Corp.** offers hardwood chips for indoor and outdoor applications. Deco-Chips are manufactured from oak by-products of the lumber industry. They are available in red, brown and orange; custom coloring is also available.

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The 50-gallon utility sprayer from **The Broyhill Co.** is designed to fit in the box of many popular utility vehicles.

Features include choice of roller or piston pump, pistol grip spray gun with 25-foot hose, locking lid, anti-siphon and 3-h.p. engine.

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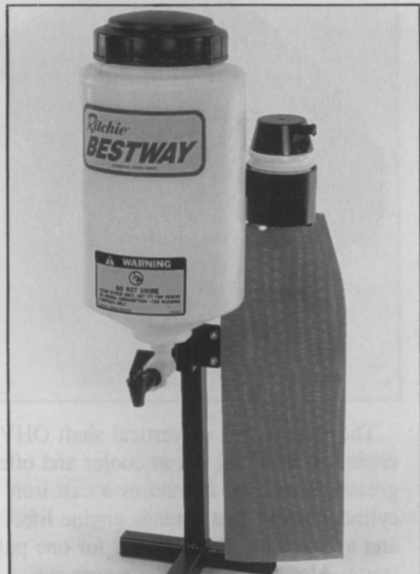
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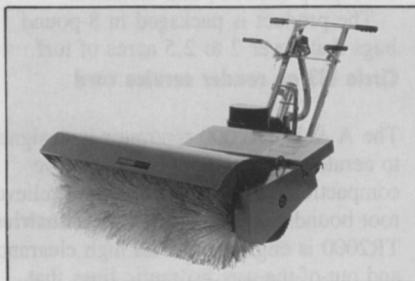


A portable wash tank from **Ritchie Bestway** can be bolted directly to any piece of equipment. The 2.5-gallon poly tank has a 5-inch fill and a spring-loaded valve that can be positioned as a constant flow or



auto shutoff. Included is a universal pump soap dispenser and a detachable hand towel.  
**Circle 129 on reader service card**

**Garlock Equipment** now offers a self-propelled sweeper with a 36-inch brush that adjusts to sweep left, right or straight



ahead. Brush selection includes choice of 100 percent poly or steel; or a poly/steel combination.

Model 86 sweeper features a 5-h.p. I/C engine with cast iron bore, solid-state ignition and remote air cleaner.

**Circle 130 on reader service card**

The **F.D. Kees** 48-inch walk-behind commercial mower offers responsive handling on most terrains. The adjustable front wheels are designed to make changes in cutting height easy. A scissors idler allows for a positive steerable reverse while eliminating downhill runaway.



Standard features include belt guide plates for blade belt adjustment and replacement, higher rear deck for extra ground clearance and a five-speed transmission.

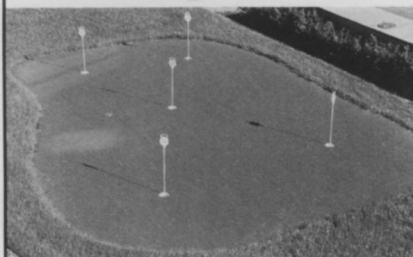
A 36-inch model is also available.

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The AC Sensor from **Santronics** senses voltage through insulation and does not require disconnections, current flow or



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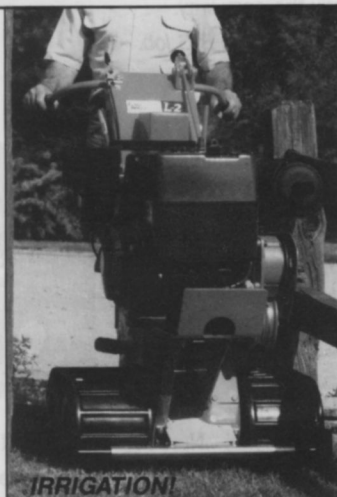
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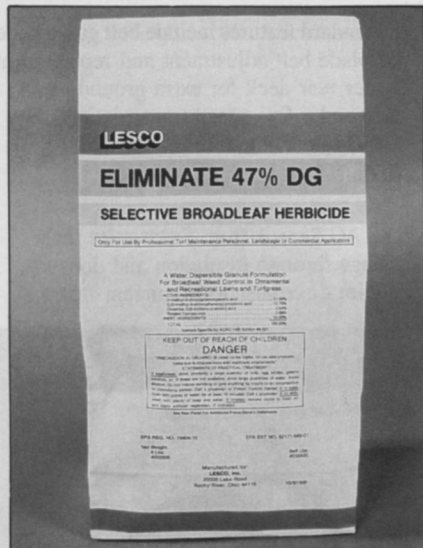
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contact with conductors for operation. The pen-sized, UL-listed sensor is designed to prevent accidental electrical shock and troubleshoot circuits.

**Circle 132 on reader service card**

New from **LESCO** is Eliminate 47/DG selective broadleaf herbicide for broad spectrum, postemergent control of more



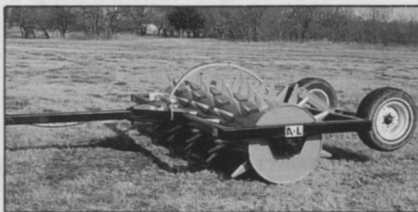
than 35 turfgrass weed species. Eliminate is a dry, water-dispersible granule formulation. Active ingredients are MCPA, Mecoprop (MCP) and dicamba.

The product is packaged in 8-pound bags that cover 2 to 2.5 acres of turf.

**Circle 133 on reader service card**

The A & L TR2000 renovator is designed to aerate soil, retain moisture, relieve compaction, activate fertilizer and relieve root boundness. From **Parham Industries**, TR2000 is engineered with high clearance and out-of-the-way hydraulic lines that allow precise depth penetration from 1 inch to 8 inches.

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able in drum widths of 63, 90 and 117 inches.

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**Briggs & Stratton** added an overhead valve design and European styling to its high-end line of lawn mower engines.



The Europa 147 cc vertical shaft OHV engine is designed to run cooler and offer greater durability. It features a cast iron cylinder sleeve that extends engine life, and a One-Start™ carburetor for one-pull starts. Also standard is the power cut mechanical governor. A dual lubrication system bathes all internal parts.

**Circle 135 on reader service card**

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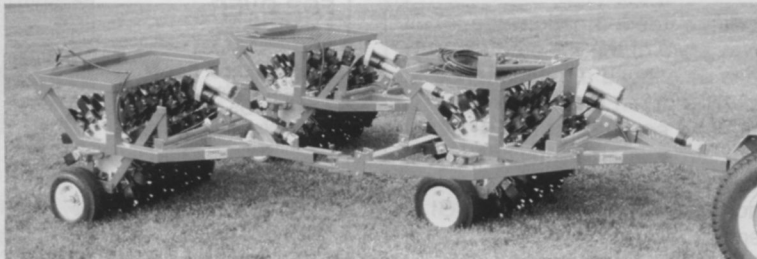
The Terra T98 is the BIG little aerator — built like the big ones only with smaller dimensions. This unit will fit through a 36" gate, can be pulled with a 12HP tractor and will aerate 1 acre per hour. It is an excellent unit for the landscaper who likes to make money the easy way.

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**Circle 136 on reader service card**

The power injector from **Cutler Engineering** uses a stream of high-pressure water and air-powered controls to place water-absorbing polymers into the root structure of trees, shrubs, bushes and other plantings.

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**Circle 137 on reader service card**

A lightweight hydraulic pole pruning saw is available from **Husqvarna Forest & Garden Co.** The 15.5-pound Highcutter PSS0 incorporates a telescopic shaft constructed of fiberglass and reinforced polyester. It is available in five different lengths, ranging up to 20 feet.



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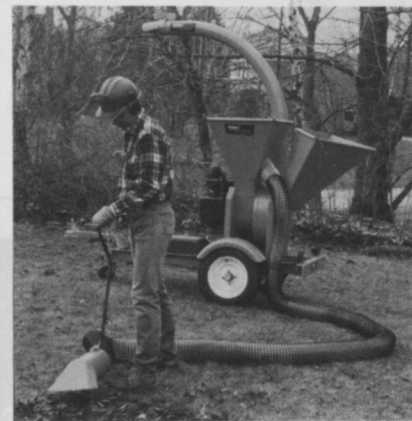
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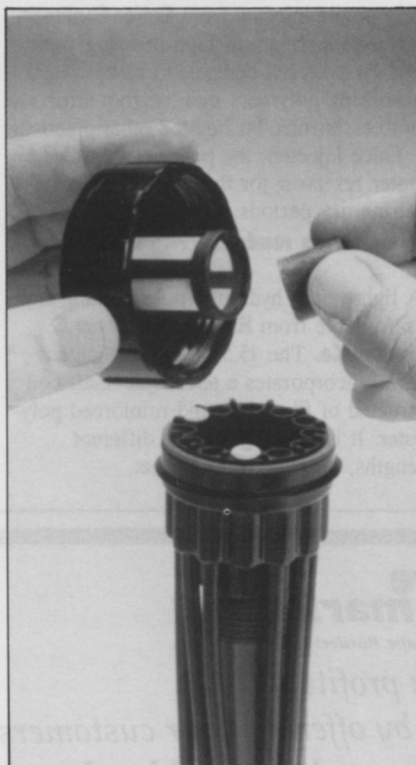
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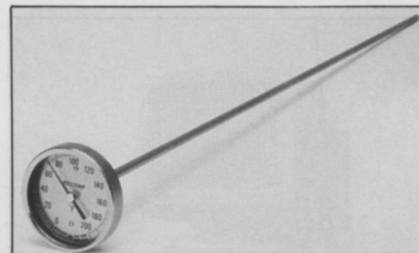


composition, the fertilizer has 5 percent humus with 1 percent humic acid.

The pellets are formulated for monthly use. Irrigation cycles should be at least 30 minutes for pellet dissolution.

**Circle 139 on reader service card**

The **Reotemp** compost thermometer is designed to monitor the interior temperatures of compost piles and windrows with a temperature range of 0-200 degrees Fahrenheit. The thermometer is hermetically sealed to prevent fogging. It is available



with pointed stems in lengths of 12 to 72 inches.

**Circle 140 on reader service card**

**Yazoo** has added the SV24B-2 to its line of mowers. The self-propelled mower



features a 5-h.p. engine, high wheel design and optional mulching attachment.

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## FYI...

**Aquatrols offers business-building brochures.** Aquatrols offers a pocket-size, two-color brochure to help lawn maintenance professionals sell customers on the benefits of AquaGro soil wetting agents.

**Circle 142 on reader service card**

**Software aids in environmental compliance.** The ChemCheck™ computer software program from Gaia Systems cross-references user-created chemical inventories to more than 8,000 chemicals listed in federal and state environmental regulations. A brochure describes the software.

**Circle 143 on reader service card**

**Wall chart details tool selection.** V & B Manufacturing Co. offers a user's guide that matches its Groundbreakers landscaping tools to nearly 30 job applications. The guide also specifies tool sizes and weights by job type.

**Circle 144 on reader service card**

**Shop by mail.** The Greenline '92 catalog features landscape maintenance replacement parts and supplies at wholesale prices. Most orders are shipped within 24 hours.

**Circle 145 on reader service card**

**From one small business owner to another...** *Lawn Aeration: Turn Hard Soil Into Cold Cash* shows how to start a lawn care business with a small capital investment. Author Robin Pedrotti owns a San Diego lawn aeration firm.

**Circle 146 on reader service card**



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# Calendar

**APRIL 20-OCT. 12:** AmeriFlora '92, Franklin Park, Columbus, Ohio. Contact: AmeriFlora '92, 1995 East Broad St., Columbus, OH 43209-1679; 800/BUCKEYE.

**APRIL 28-30:** 1992 Florida Agri-Business Computer Conference, sponsored by the University of Florida Cooperative Extension Service — IFAS, Seminole Community College, Sanford, Fla. Contact: Uday K. Yadav, 250 W. County Home Road, Sanford, FL 32773; 407/323-2500, ext. 5559.

**APRIL 29-30:** GreenTech '92, sponsored by the California Landscape Contractors of America, Long Beach Convention Center, Calif. Contact: CLCA, 2021 N St., Suite 300, Sacramento, CA 95814; 916/448-2522.

**MAY 18-20:** Controlling Sediment from Construction Sites, presented by The College of Engineering, University of Wisconsin — Madison/Extension. Contact: Dept. of Engineering Professional Development, 432 North Lake St., Madison, WI 53706; 608/262-2061.

**MAY 21:** Insect Pests of Conifers, sponsored by the Center for Urban Horticulture, Seattle,

Wash. Contact: Center for Urban Horticulture, University of Washington, GF-15, Seattle, WA 98195; 206/685-8033.

**MAY 27-JUNE 12:** Site Grading Workshop, Cornell University. Contact: Landscape Architecture Program, Cornell University, 440 Kennedy, Ithaca, NY 14853; 607/255-1801.

**JUNE 17-18:** Midwest Grounds Management Conference, co-sponsored by the Midwest Association of Physical Plant Administrators and the Professional Grounds Management Society, Miami University, Oxford, Ohio. Contact: Ken Havens, Miami University, Cole Service Bldg., Oxford, OH 45056; 513/529-6786 or Allan Shulder, PGMS, 10402 Ridgland Road, Suite 4, Hunt Valley, MD 21030; 301/667-1833.

**JULY 1:** Cornell Turfgrass Field Day, Pine Island, N.Y., co-sponsored by the Hudson Valley Horticulture Agents, Orange County Sod Growers Association and the New York State Turfgrass Association. Contact: NYSTA, 800/873-TURF or 518/783-1229.

**JULY 7:** Focus on Wetland Plants, sponsored by the Center for Urban Horticulture, Seattle,

Wash. Contact: Center for Urban Horticulture, University of Washington, GF-15, Seattle, WA 98195; 206/685-8033.

**JULY 23-27:** American Association of Nurserymen Annual Convention and Nursery Industry Trade Show, Grand Hyatt Hotel, Columbus, Ohio. Contact: Lisa Harmon, AAN, 1250 I St. NW, Suite 500, Washington, DC 20005; 202/789-2900.

**JULY 26-28:** International Lawn, Garden and Power Equipment Expo, Kentucky Fair and Exposition Center, Louisville, Ky. Contact: Expo '92, 6100 Dutchmans Lane, Sixth Floor, Louisville, KY 40205; 800/558-8767 or 502/473-1992.

**AUG. 7-9:** TAN-MISLARK Regional Nursery & Garden Supply Show, George R. Brown Convention Center, Houston, Texas. Contact: Texas Association of Nurserymen, 7730 IH-35, Austin, TX 78745-6621; 512/280-5182.

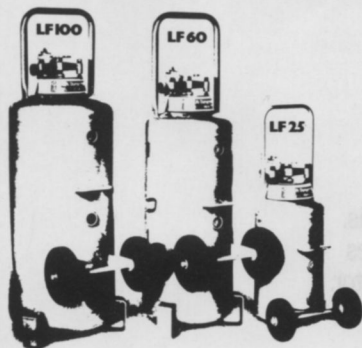
**SEPT. 20-23:** Florida Turfgrass Association, Annual Conference and Trade Show, Prime F. Osborn Convention Center, Jacksonville. Contact: FTGA, 302 S. Graham Ave., Orlando, FL 32803-6399; 407/898-6721.

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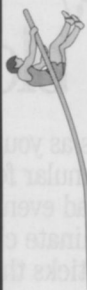
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## Ad Index

ALCA	83
American Cyanamid*	76,77
Andersons	74
Aquashade	10
Arcadian	72
Bandit	17
Bell Tree	81
Blackburn	82
Brush King	92
CBS Software	35
Carlson	64
Century Rain Aid*	80
Ciba-Geigy	30,31,*73
CoRon	5
CompuScapes	90
Crary	82
Creative Curb	89
Cushman	33
Customer Solutions	92
Deere & Co.	68,69
Dillaware	84
DowElanco	48,49
Echo	29
Elchem	64
Green Genie	35
Green Industry Expo	16
Green Pro	35,90
Hardie Irrigation	60,61
Harmony Products	9
Hoechst-Roussel	55
Hunter	39
Isuzu	21
F.D. Kees	38
Knox	47
Lawn-Wright	24
Lebanon	7,91
Line-Ward	87
Low	13
MFP Insurance	10

Medalist America	43
Metko	34
Millcreek	84
Monsanto	18,19,79
Nor-Am	75
O.M. Scott and Sons	65
Oldham	9
Olson	81
Oly-Ola	14
PGMS*	80
PLCAA*	73
PBI Gordon	67
Pennington Seed	23
Pepco	95
Peterson	41
Prentiss	46
ProSeed	34
Putting Green	87
Regal	22
Rhone-Poulenc	36,37
ROOTS	25
SPS Consulting	89
Salco*	80
Scag	96
Stihl	2
Strong	80
Terracare	88
Tornado	89
Tuflex	59
Turf Products	13
Turf-Seed	57
Turco	38
Walker	66
Weather-matic	44
Wilbur-Ellis	52,53
Woods	45
Yazoo	20

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