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In this issue: Opportunities in Composting Seed Harvest Report Computer Networking Vehicle Trends

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Down, BUT NOT OUT

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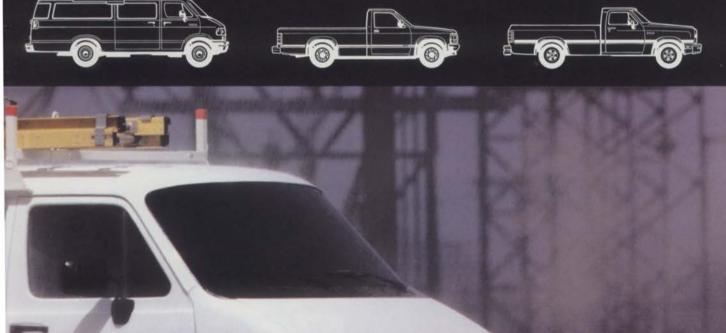
*Magnum engines available on all models except Caravan C/V. Tool certificate offer ends December 31, 1993. Always wear your seat belt.

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VOLUME 14. NUMBER 9

Cover Photo: Robin Pendergrast, McHenry, III.

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Cover Story: Down, **But Not Out**

The rains and subsequent flooding are just the tip of the iceberg. The true mortality rate won't be evident until next spring when turf, trees and ornamentals may fail to produce growth.

30 Opportunities In Composting

Making the most of Missouri's yard waste predicament, a St. Louis landscaper launched his own compost

Lawn & Landscape

facility. The operation handles not only the landscape firm's waste, but that of private waste haulers and other area landscapers.

Prices Stabilize; J4 Seed Supplies Fall Short

Heavy rains delayed seed harvests and reduced some vields. But the physical damage looked worse than actual seed losses, according to growers.

9 Networking: Joining The Computer Age

Contractors rely more on computers to do their busy work. Finding suitable software is half the battle.

Managing Your **U** Truck Fleet

Price, personal preference and fleet purchasing power are among the main factors influencing truck and service vehicle buying decisions.

Lesson 15: **The Right Stuff**

A little preventive maintenance goes a long way toward maintaining irrigation systems in the landscape.



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SEPTEMBER 199

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Editor's Focus

TOURING THE FLOOD-ravaged Midwest gives one a better appreciation of the trauma and difficulties its residents are experiencing. Although the most devastated locations are off-limits to the media and general public, I did get a taste of the ferociousness of the flooding in St. Louis and its suburbs.

The lifeblood of many businesses was wiped out by the submersion of public access to their facilities. Moving past the flooded entrances, equipment, nursery stock and compost piles were seen sitting and/or floating aimlessly in the dark waters. Water, normally a friend to the lawn and landscape industry, is almost a forbidden word in the saturated Midwest.

Believe it or not, some good has come out of this devastation. Manufacturers, suppliers, landscapers and lawn maintenance operators are pitching in to help stack sandbags, move equipment to higher ground, provide financial assistance and to console those who lost their homes and businesses.

Too often in this column, I take the time to tell you what you can and should be doing to promote the image of the green industry. This month I'd like to congratulate all those who have come through this flood saga with plenty of courage and support for one another. Although there are too many names to mention, the stories will warm your heart.

This month's cover story brings you coverage of the flood. And although landscaping isn't the first priority in returning the Midwest to normal, we attempted to gain a perspective of the long-term impact of the Great Flood of 93 on the lawn and landscape industry. With information and statistics changing daily, it is too early to report the entire picture.

One thing is certain, however. Both this fall and next spring, lawn maintenance and landscaper contractors will find themselves with plenty of new work such as the removal of silt from turf, lawn renovations including seeding and aeration and the replanting of trees and ornamentals where needed.

As evidenced by the events of these past few years — Hurricane Andrew, Hurricane Iniki, the Great Flood of 93, the Blizzard of the Century and so on — we are reminded just how large a role weather plays in the lawn and landscape business. And although we have little control over the weather and its related effects, we can gain a better understanding of warm and cool fronts, precipitation fluctuations and changing trends by taking a proactive look at the weather.

Beginning with this issue, we've added a weather page with 60- and 90-day outlooks as well as forecasts of expected temperature and precipitation averages. This weather in-



formation will appear monthly on the same page you find Business Watch. We'll gather information from the National Weather Service, the Farmers' Almanac and other credible sources tracking weather trends.

As you are aware, the process of composting as well as the use of composted materials is becoming more prevalent in the lawn and landscape industry. This is largely due to government mandates restricting the dumping of yard waste into landfills. Nevertheless, composting is slowly becoming an accepted alternative as topdressing on turf or as an additive in bedding plant areas.

We encourage the growth of this trend. The truth is, the environmentally responsible lawn and landscape firms will either become actively involved in establishing themselves as composters, buyers of compost and/or educators of the compost process.

It makes perfect sense for landscape professionals to start their own composting firms. Contractors already know who their markets and potential markets are. They know who will bring their wastes in for recycling, and they know who to market the compost to in the community. The biggest hurdles generally involve how to market the material; how to educate the public on the benefits of compost, including the odor issue; and how to handle the finances.

Contractors are encouraged to establish relationships with those who are already involved in composting. There are some credible composters successfully handling thousands of yards of yard waste annually. Initiating ties with your local township or municipality may also give you a source to lean on and grow with as you delve into the world of composting. — *Cindy Code*

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> Cindy Code is on the board of trustees of the Ohio Turfgrass Foundation



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"There were lots and lots of foreign attendees at last year's conference and exposition. We expect more in San Diego and are looking forward with anticipation to the international exposure."

WADE MANUFACTURING CO. FRESNO, CALIFORNIA

and western Grea

es are expected with a setions of Oklahoma, a and the Upper

eater then median precipit ed for eastern Colorado, uska, much of Kansas,

Business Watch

AS THE GRAPH at the right shows, inflation evaporated into thin air in June; the U.S. Labor Department's consumer price index dipped to 0.0, marking the first time in more than two years consumer prices have not increased. The Labor Department put the inflation rate for the first half of 1993 at 3.1 percent, about the same amount consumer prices rose during all of 1992. Analysts now say the rest of 1993 should pass without any major price increases, and that interest rates won't be subjected to a goose from the Federal Reserve. This news bodes well for the green industry, because it may give consumers confidence to spend more on "luxuries" like landscaping.

Taking advantage of stable prices, consumers did spend more in June with retail sales rising 0.4 percent, according to the Commerce Department. Inflation and sales reports indicate the economy is growing, but not to push up prices.

"There's no boom and no bust," said Paul W. Boltz, an economist with T. Rowe Price Associates in Baltimore, Md. "It's not very exciting, but it's better than a kick in the teeth."

PRODUCER PRICE INDEX*

JUN.

JUL.

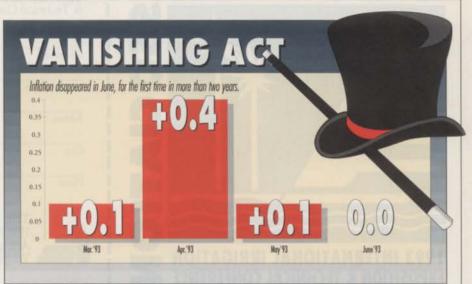
+0.6 +0.0 -0.3 -0.2 *Percent change from preceding month (seasonally adjusted).

MAY

APR.

UNEMPLOYMENT RATE

| MAY | JUN. | JUL. | AUG. |
|-----|------|------|------|
| 6.9 | 7.0 | 6.8 | 6.7 |



Source: Bureau of Labor Statistics



WEATHER REPORT: HIGH TEMPERATURES, MORE RAIN

THE NATIONAL WEATHER Service's 60-day outlook for September and October calls for at least a 55 percent chance of above-normal temperatures in areas to the west and east. The likelihood of above normal temperatures rises to at least 60 percent in the West over northern and central California and extreme southwestern Arizona, and in the East over eastern New York and southeastern New England, the middle Atlantic coast states, the Carolinas, eastern sections of Tennessee and West

Virginia, northeastern Alabama and much of Georgia.

Probability of extra warmth rises to at least 65 percent over central California, southern Virginia, the Carolinas and northeastern Georgia.

There is at least a 55 percent probability of below normal temperatures in a band extending from northern Texas across Oklahoma, northern sections of the middle Mississippi Valley, including much of Nebraska, southeastern South Dakota,



northwestern sections of Illinois and Missouri, northnortheastward to Minnesota and the central and western Great Lakes.

Within this area below-normal temperatures are expected with at least a 60 percent probability in northern sections of Oklahoma, the eastern two-thirds of Kansas, Wisconsin and the Upper Peninsula of Michigan.

At least a 55 percent probability of greater than median precipita-

tion is predicted for eastern Colorado, southern Nebraska, much of Kansas, northern sections of the northern panhandle of Texas, northwestern Oklahoma, eastern Iowa, much of Wisconsin, extreme northern Illinois, Michigan and much of New York.

Temperatures across the United States are predicted to stay above average.

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Letters

Organic Choice

Because of my interest in the lawn maintenance industry and my awareness of changing attitudes among lawn care professionals and customers, I am particularly unhappy with parts of Bob Gitlin's article, "Organic Fertilizers Gaining Ground," in your May issue.

Despite its headline, the article is mostly a pro/con debate on the issue of organic- vs. pesticide-based lawn care. How long will the industry, commercial applicators and even editors keep twisting the legitimate questions of customers into a bitter debate rather than seeing they signal a possible growing market area? The green industry was originally developed for pesticidebased lawn care. Will we resist the opportunity to develop another market?

I applaud sincere efforts of the media to positively promote the advantages of both types of lawn care and to rationally evaluate the drawbacks of each. However, in this article, I see no negative aspects to the chemical lawn care program, and I take issue with at least two of the drawbacks associated with organics.

Boasting Reclaimed Water

Your article, "Irrigating with Reclaimed Water: Not Just for Large Turf Anymore," in the April issue is excellent, comprehensive and mostly accurate. Articles such as this are a great service to a society which increasingly needs to make water efficiency a way of life.

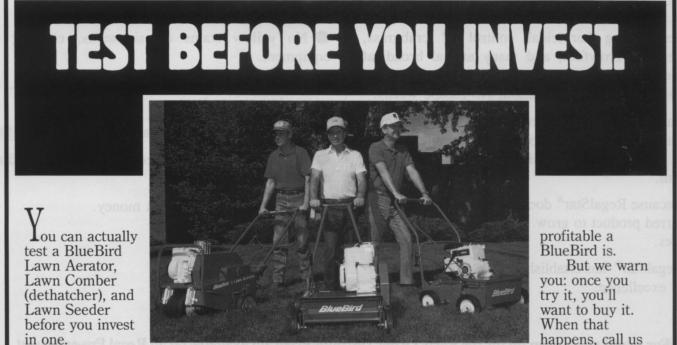
The statement, "Most contractors and many water district officials contend tertiary treated water is harmless," is right, but the warning that follows, "it can contain pathogenic bacteria and viruses," is essentially false, unsubstantiated and misleading.

No one has ever isolated a pathogenic bacterium or virus from an operational tertiary treatment effluent. This is born out with the results of thousands of bacteriological and virological samples analyzed at numerous tertiary facilities in California. The state Department of Health Services considers tertiary treated reclaimed water, produced under title-22 restrictions, to be virtually pathogen-free and virus-free. In part because of the excellent health record of tertiary reclaimed water, the state legislature is now moving toward adoption of Assembly Bill 365 which will allow local agencies to require individuals to use tertiary reclaimed water for irrigation in landscaping.

Perhaps your source was referring to gray water, secondary or lesser treated effluents. I would like to challenge any water recycling detractor to point to a single case of a public health problem attributable to the use of reclaimed water (even secondary effluent, which can potentially contain viruses). No such claim has been verified.

Bahman Sheikh, Ph.D., P.E. Director, Office of Water Reclamation City of Los Angeles

Ed. Note: Dr. Ali Harivandi, Univ. of Calif. Cooperative Extension, stated "the potential for disease transmission through treated effluent water reuse remains a concern."



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Bob Andrews commented that the industry and customers see organic ideas "as being a lot of smoke." As a reader, I would be more inclined to believe him if he offered some statistics to validate his statements about organic "smoke." I challenge Andrews to ask the next 20 people he meets their opinions of the organic issue. In addition, I invite him to come discuss organics with any of my clients to get their evaluation on this issue.

Andrews also criticized organic fertilizers because of possible putrefaction. His statement that fish fertilizer would putrefy on a lawn scares me — not because of the fish, but because the statement betrays a complete ignorance of the oxidation process, which makes putrefaction impossible.

Education and information are vital for those in the industry as well as those taking advantage of their services.

I urge editors to keep up your articles on organics, but I request that you remember your unique opportunity to influence the attitudes of professionals. In the lawn maintenance industry, I see no immediate or future threat to the proper use of chemicals. There definitely is a marketplace for pesticides, so we must continue our effort to educate professionals and homeowners about pesticides and their uses. At the same time, let's promote the positive aspects of nonpesticide use as well. Let's eliminate the debate and leave the customer to choose what he wishes.

> Brent Flory President Freedom Lawns Delphi, Ind.

Perennial Perplexity

The large picture illustrating your article on perennials in the April issue was mislabeled. The lovely lavender plant in the foreground is part of a bed of Russian sage, Perovskia atriplicifolia. The picture was taken at the University of Minnesota. It is illegal to grow or sell Lythrum (purple loosestrife) here due to its invasive nature and the problems it is causing in our wetlands.

> Deborah Brown Minnesota Extension Service St. Paul, Minn.

Your article, "The Perennial Advantage," in the April issue misidentifies the purple flowered perennial. The perennial is Perovskia, Russian sage, not Lythrum purple loosestrife. Other perennials in the photograph include Festuca blue fescue, in the foreground; Calamagrostis, feather reed grass behind the Perovskia; and what appears to be Sedum "Autumn Joy" and Rudbeckia "Goldsturm" in the background.

It is important the Lythrum not be mistakenly planted for Perovskia. Perovskia has purple-blue flowers, gray-green foliage and is well-adapted to dry sites. Purple loosestrife has purple-pink flowers, mediumgreen foliage and is best adapted to moist sites but tolerates dry sites.

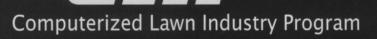
For many years it was mistakenly thought that certain garden cultivars of Lythrum were sterile, and thus, no threat to wetland habitats. Recent research at the University of Minnesota by Dr. Neil Anderson has shown all known garden varieties to be capable of setting seed. Thus, even in states where sale and cultivation of Lythrum has not already been banned, environmentally responsible landscape contractors and nursery personnel should not be using purple loosestrife.

> Denny Schrock Cooperative Extension Colorado State University Brighton, Colo.

Ed. Note: We apologize for the misidentification and thank our readers for setting us straight on this issue.



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NEWS DIGEST

LESCO Acquires Atwater Strong

LESCO, Rocky River, Ohio, purchased the assets of Atwater Strong, Akron, Ohio, including commercial blowers and vacuums.

LESCO will add Atwater's Lo-Blo[®] and Lit-R-Blo[®] lines of maintenance equipment to its professional line. LESCO will continue to supply current dealers and distributors of Atwater Strong equipment under the Atwater label. The products will also be marketed under the LESCO label.

Barefoot Sets First Quarter Revenue Record

Barefoot Inc., Worthington, Ohio, reported sharply higher net income and revenues for the 1994 first fiscal quarter ended June 30.

Net income in the first quarter rose 43 percent to \$5,740,000 from \$4,008,000 in the three months ended June 30, 1992. Net income per share for the current quarter was (continued on page 20)

News in Brief

Plans for the Green Industry Expo Unfold

MORE BOOTH space will be available than in previous years at the Green Industry Expo which takes place Nov. 15-18 at the Baltimore Convention Center in Maryland.

The show has 52,000 square feet available for exhibits. About 42,300 net square feet was sold by early August. About 255 companies are expected to exhibit, and 2,500 to 3,000 people to attend. Once again the show is being held in conjunction with educa-



tional conferences by the Professional Lawn Care Association of America, the Associated Landscape Contractors of America and the Professional Grounds Management Society.

The Expo opens with a keynote presentation by Ty Boyd, a dynamic speaker and recipient of the CPAE Award for platform excellence and the Cavett Award from the National Speakers Association. His address is titled "Change...Meeting the Challenge!"

"We had a well-known sports figure (Bobby Knight, head basketball coach at Indiana University) keynote last year's show, so we decided to try something a little different," said Ann McClure, show manager and executive vice president of PLCAA. "Ty Boyd is supposed to be a very motivated speaker. We hope people will feel really uplifted before the Sneak Preview."

The Sneak Preview, which provides a pre-show glimpse of the tradeshow, is scheduled 3 to 5 p.m. on Nov. 15, and will be followed by the GIE Reception. Another highlight, the Outdoor Equipment Demo, is scheduled 9 a.m. to noon Nov. 18 at nearby Carroll Park.

Floor plans have been altered this year to provide wider island exhibits, McClure said. "The bigger islands — up to 30 and 40 feet wide — are near the entrance of the hall. They give the feeling of depth as you walk in."

Show organizers note increased diversity in services represented this year, particularly by (continued on page 20)

Olathe Model 837TG Tub Grinder The cost effective solution to launching your composting operation.

The cost encentre solution to humening your composting opera

If you're in a landscaping operation, you've probably noticed that disposing of your trimmings, leaves, and clippings is getting to be more and more difficult not to mention expensive. The demand for premium organic materials—like mulch and top soil, is on the rise. For some, these trends are a problem, for others, they are an opportunity.

If you see the advantages of starting your own composting or wood waste processing operation, but aren't sure where to go next, you owe it to yourself to call Olathe Manufacturing—the source for equipment and management expertise in composting.

Introducing the Olathe 837TG Tub Grinder—the system designed specifically for operators who need full



scale processing power on a limited, or even start-up budget.

Compact and portable.

This unit can easily be towed behind a one ton truck, and set up only in a fraction of the time of competing systems—making it ideal for portable operations.

Designed for the novice operator as well as the novice budget.

The 837TG is designed to put you at ease in a heavy equipment environment. Our Self Compensating Material Management System, automatically synchronizes the tub rotation, hammer mill, and discharge conveyor, for the specific material you're processing.

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EXPO Records First Sellout

A new floor plan, an emphasis on new products, optimism throughout the industry and special 10th anniversary events all worked to make this year's International Lawn, Garden & Power Equipment Expo a success.

More than 24,500 exhibitors and visitors, including a 10 percent increase in lawn and landscape contractors, visited the annual Louisville show, which was a sellout for the first time.

"We're certainly pleased with the increase in the commercial end-user segment," said Stan Byers, EXPO show chairman. "The commercial end-users like to come in and run the equipment. It doesn't matter how hot it is." And the EXPO is known for its blistering heat.

Commercial attendance has increased steadily over the last few years, aided by the addition of the commercial demonstration area. Byers added that overall attendance was up this year because distributors, dealers and commercial endusers in major markets reported fairly good seasons, and more could afford to attend.

Dennis Dix, president and CEO of the

Outdoor Power Equipment Institute, reported visitor registrations increased 3 percent over last year, with dealer/retailer categories up 10 percent. About 1,200 international registrants visited Louisville from 60 countries.

Twenty-three percent of all visitors were first-timers at EXPO. "We are proud that the show continues to draw such a large new audience for exhibitors every year," Dix said.

A few more than 500 manufacturing companies and suppliers showcased products throughout 237,514 net square feet. About 110 of the exhibitors also took advantage of 500,000 net square feet in the adjacent outdoor demonstration areas. About 40 companies were on the waiting list for space in the 93 show. An additional 130,000 square feet of exhibit space will accommodate that list next year.

States Still Going Green

The trend toward tougher state environmental laws continues, and a few states that had been unresponsive to potential toxic dangers have jumped on the green bandwagon, according to *City & State* magazine's second annual Environmental Survey of the States. Some 39 states now have their own Superfund programs to remediate hazardous waste sites other than those on the federal National Priority List.

Twenty-one states that responded to the survey reported their air-quality standards exceed those of the federal Clean Air Act. About 17 states still report established statewide goals for the recycling of specific percentages of municipal solid wastes. Alabama, Georgia, Kansas, Mississippi and North Carolina have no recycling laws of any substance, accord

ing to City & State.

Nevada, California and Oregon topped the states in per capita spending for air-pollution controls. Likewise, Louisiana, Rhode Island and Iowa are per capita spending leaders in the area of wetlands protection and research; Minnesota, Wisconsin and Pennsylvania in aid to communities for recycling; and Pennsylvania, Vermont and Maine in support for solid-waste programs.

The survey also found that seven state underground storage tank trust funds have more claims against them than funds. Because of the funding problems, many abandoned tanks and surrounding soil and ground water may not be cleaned up for years. (continued on page 18)



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For more information, call RISE at (202) 872-3860, or write to 1155 15th St. N.W., Suite 900, Washington, D.C. 20005.



News (continued from page 15)

Superstore Challenges Equipment Dealers

Weingartz Supply Co. recently opened a 42,000-square-foot "mega" power equipment store in Farmington Hills, Mich., making it possibly the largest such outlet in the United States.

The company's first store, located 34 miles away in Utica, Mich., continues to grow, but owner Ray Weingartz decided to expand to high-rent Farmington Hills.

"With our new store, no one comes close in size or dollar value," Weingartz said. "The new store has everything, including warehouse, service area and showroom, all under one roof."

The new outlet includes an 11,000-squarefoot showroom and separate parts and service areas. The two stores combined carry more than 100 brands of commercial and consumer lawn mowers, including Bunton, Exmark, Scag and John Deere, and almost full lines of every major brand of tractors, trimmers, blowers, generators, mowers and more.

The stores stock more than \$100 million

Realizing the Benefits of Turf

For the third year, the Grounds Management Association of Wisconsin announced a winner in its "Benefits of Turf Contest." The event, designed to promote the positive image of the green industry, was held in conjunction with National Lawn Care Month and included the participation of sixth, seventh and eighth graders throughout the state. The grand prize was awarded to Angela Penrose, a sixth grader from Oak Creek, Wis., for her



"Turf is Picture Perfect" drawing. She received a Milwaukee Brewer weekend for her family.

worth of stock parts, and guarantee service for commercial and residential customers within 48 hours. The two stores are hooked via computer, so parts not available at one can easily be checked at the other.

Almost 50 percent of customers at both stores are in commercial lawn care. Patrons come mostly from throughout Michigan and lower Canada.

Weingartz regards the two stores as a large dealership with extended services and parts availability. He noted that a growing number of power equipment dealers are opening second locations nationwide.

"That has to happen. Customers are demanding more than they did a few years ago. They want faster service," he said

Carlo Miceli, vice president of Best Truck Equipment in Willoughby, Ohio, which also sells lawn equipment, said opening second locations is a consideration for dealerships offering diverse equipment and services, but not a trend. He also contended superstore outlets could hurt small dealer-

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ships."It would be a threat, unless you have a niche and offer good service, fair price and personal attention," he said.

Dealers believe smaller companies offer better, more personalized service; Weingartz contends large stores offer faster quality service. "Even if we don't have the part and neither does the manufacturer, we will take off from the price of service if we take longer than 48 hours," Weingartz said.

State Preemption Stalls Federal Action

Federal preemption legislation continues to stagnate due to the large number of state level preemption bills already enacted and sluggish federal legislation processes, according to Allen James, executive director of the Responsible Industry for a Sound Environment.

Thirty-one states have passed preemption bills thus far. Seven states - Alabama, Arizona, Arkansas, Montana, Nebraska, Nevada and Texas - passed legislation this year. Bills are pending in Illinois and New Hampshire.

Preemption legislation will likely be attached to the Federal Insecticide, Fungicide and Rodenticide Act, which is proceeding slowly in the House and has stalled in the Senate, Reps. Robert Smith, R-Ore., and Harold Volkmer, D-Mont., are expected to introduce preemption language. Preemption died as a stand-alone issue when it did not pass in the 102nd Congress.

PETA Fights Pesticide Use

The People for the Ethical Treatment of Animals, in a national campaign against pesticides, has begun distributing postcards and fact sheets maintaining that lawn care herbicides lead to lymphatic cancer and toxicity for dogs and cats, and cause serious health effects to humans.

According to the Responsible Industry for a Sound Environment, PETA has provided its 370,000 members with postcards that proclaim "lawn chemicals are poisonous to the Earth and its residents. They travel far and wide via storm drains and streams to poison other areas."

PETA urges members to distribute the cards to neighbors, park custodians, golf courses and schools that apply lawn chemicals.

PETA also released a fact sheet on pesticides that contends the Environmental Protection Agency knowingly registers pesticides without guaranteeing they will not cause health risks. "The EPA ... says 33 of the 34 most popular lawn and garden

pesticides have not been fully evaluated for their safety," according to the fact sheet.

RISE officials hope to offset misleading PETA information with press releases and state alliance responses.

ISUZU Offers Teletrac Service

American Isuzu Motors Inc. is adding PacTel Teletrac transceivers to new Isuzu Rodeos to help fleet customers track their vehicles.

The transceivers access PacTel's vehicle security service. If a fleet Rodeo is stolen, the owner can call PacTel Teletrac to discern the vehicle's location.

"We've introduced this program to give our Isuzu Rodeo fleet customers two real advantages," said Bob Reilly, vice presidentsales for Isuzu. "First, it gives them greater driver security and the ability for law enforcement agencies, working with Teletrac, to quickly locate and help recover a vehicle that is stolen. And secondly, with the

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LAWN & LANDSCAPE MAINTENANCE . SEPTEMBER 1993

ability to monitor the location of the vehicles, productivity is increased."

The Teletrac service is available in Los Angeles, Chicago, Detroit, Dallas, Fort Worth and Miami. Isuzu provides Rodeo fleet customers with introductory service for one year at no charge. After a year, fleet customers can subscribe to an individual service plan or upgrade to the PacTel Teletrac Fleet Director service at an additional cost. If a customer chooses to discontinue service, Teletrac will arrange to remove the equipment at no charge.

News Digest

(continued from page 12)

69 cents on 8,341,000 shares outstanding compared to 51 cents on 7,806,000 shares outstanding in the year earlier period. The higher number of outstanding shares in fiscal 1994 reflects the issuance of 500,000 common shares.

Total revenues rose 50 percent to \$25,815,000 from \$17,161,000 in the prior year's quarter. Higher first quarter results reflect growth in systemwide customers to

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USE READER SERVICE #49

432,000 in fiscal 1993 from 315,000 a year earlier, and the acquisition of Ever-Green.

Barefoot Grass President Patrick Norton said the company is operating essentially debt free after cash generated from the late March share offering paid for the Ever-Green acquisition.

News

(continued from page 12)

irrigation and computer software companies. "Irrigation exhibitors are looking at lawn and landscape as a potential market as more lawn care operators incorporate irrigation into their plans," McClure said. The bulk of educational sessions take place Monday through Wednesday, although PLCAA and ALCA plan to offer special seminars on Sunday preceding the show.

The associations plan to hold sessions at similar times, allowing members to attend other associations' offerings. "The result is greater value, easy planning and no schedule impossibilities," said John Gillan, acting executive director of PGMS.

Last year's attendees called for more explicit instructions on where and when sessions take place, resulting in the 1993 show program providing a complete matrix for all three conferences "so it will be easier for people to know what's going on," McClure said.

PGMS will set up its headquarters at the Marriott Inner Harbor. PGMS activities begin on Sunday with tours of Fort McHenry and the Inner Harbor. PGMS' seminar topics include landscaping with perennials, tree care, composting and athletic field maintenance.

PLCAA's accommodations are at the Hyatt Regency Hotel. Its conference program begins with a customer service seminar Sunday afternoon, followed by the president's reception, which for the first time is open to all PLCAA members. The educational track for PLCAA includes topics on the environment, business, regulations and recertification. Early morning roundtable discussions will cover employee incentives, employee training, computerization and diversification.

ALCA has chosen the Sheraton Inner Harbor Hotel as its home base. Changes in the association's program include more roundtables and a broader, more balanced coverage of topics pertaining to landscape design, installation and maintenance. The educational track also will feature a larger number of professional speakers, said Debra Atkins, executive director of ALCA.

Other changes include extending the length of the Breakfast with Champions and opening the conference with a full-day seminar on Sunday called "Hiring and Firing — Building a Strong Team."

Association News

THE COMPOSTING Council will hold its Fourth Annual Conference Nov. 17-19 at the Vista Hotel in Washington, D.C. The conference features a marketing summit to bring composters face to face with customers, enabling them to examine marketplace demands. A technical symposium will review current compost research.

Cost for the conference is \$395 for nonmembers and \$325 for members, academics and public officials. The fee includes meals and sessions.

In other news, the council created a new vice presidency in a move to better represent the small business sector, said Archie Albright, council president. Rod Tyler, manager of product and market development for Kurtz Brothers, Cuyahoga Heights, Ohio, filled the position.

The Professional Lawn Care Association of America and the Responsible Industry for a Sound Environment are offering a three-part Lawn Care Technician video training series, designed to educate new lawn care employees and update experienced applicators. The series covers lawn

For more information...

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PLCAA 1000 Johnson Ferry Rd., NE Suite C-135 Marietta, GA 30068 404/977-5222 ALCA 12200 Sunrise Valley Drive Suite 150 Reston, VA 22091 703/620-6363

PGMS 120 Cockeysville Road Suite 104 Hunt Valley, MD 21031 410/584-9754 7.

CLCA 2021 N Street Suite 300 Sacramento, CA 95814 916/448-CLCA

care basics, pest control and lawn care equipment.

"PLCAA and RISE hope the Environmental Protection Agency training standards being met by this program will encourage increasing uniformity across the country, and that having the videos available in every state will help this," said Ann McClure, PLCAA executive vice president.

The American Society of Landscape Architects and the Associated Landscape **Contractors of America** are sponsoring a design/build symposium titled "Clients' Requirements, Exceeding Their Expectations." The event takes place Oct. 3 during ASLA's annual meeting in Chicago.

Tom Lied, owner of Lied's Nursery Co., will keynote the event, focusing on clientsensitive approaches to process management, meeting clients' requirements and exceeding their expectations. A panel discussion will follow. Panel members include Lied; Sam Eppstein of Eppstein, Keller, Uhen Archi-

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tects; Bruce Hunt of The Brickman Group; Peter Kudlata of Flagstone Landscape Design; and Joe Skelton of Lifescapes.

Roundtable discussions will be led by panel members and Russel Adsit of Adsit Landscape and Design Firm; Judson Griggs of Lied's Nursery Co.; and Robert Rennebohm Jr. of Heard Gardens Inc. Cost to attend the symposium is \$95.

The Professional Grounds Management

Society's board members are considering changing the association's regional boundaries "to create more balance between and commonality within the regions to better serve the members, branches and national," according to John Gillan, PGMS' acting executive director.

The idea was introduced at the board's first strategic planning meeting in mid-March, and will be reviewed at the PGMS Conference in November.

"Right now we have six regions. The new map calls for eight," Gillan said. "The problem we have had is that there are so many miles between members in Western states."

PGMS was founded in New Jersey and New York. Three-quarters of its membership remains east of the Mississippi River. Redefining boundaries could effect several other changes, but none which would burden relationships between branches. The move would create two more regional board member positions.

"The decison will be made at the GIE show, and plans, if approved, will be implemented by the end of the year," Gillan said. "I don't anticipate any big controversy. There has been no voice against the changes."

The **California Landscape Contractors Association** recently published its "Wage and Benefit Study: 1991," a report developed to help landscape contractors effectively run their businesses.

The study is divided into eight parts covering sales, wages, benefits and vacation time. Part one profiles three groups of landscape contractors based on whether they offer services in construction, maintenance or both. Parts two through five provide statewide wage information by the hour. Part six lists 16 benefits and percentages of landscapers who provide them. Section seven examines health insurance, and eight covers paid holidays and vaca-tions.

The study is available to CLCA members for \$10 and non-members for \$50.

IN BRIEF...The Irrigation Association has relocated. No longer in Arlington, IA's new offices are located at 8260 Willow Oaks Corporate Dr., Suite 120, Fairfax, VA 22031. The new phone number is 703/573-3551 and fax, 703/573-1913...The American Association of Nurserymen, the National Plant Board and the Department of Agriculture offer the "Federal & State Quarantine Summaries," an outline of general shipping requirements and quarantines enforced by the Animal and Plant Health Inspection Service. The binder includes quarantine information for 50 states and Puerto Rico. Information is available by contacting AAN, 202/789-2900...The Georgia Turfgrass Association's 24th Annual Georgia Turfgrass Conference and Show, scheduled Dec. 7-9, will explore

Show, scheduled Dec. 7-9, will explore issues facing turfgrass managers into the next century. Themed "Future Turf," the conference will cover water availability and conservation measures, new science and the public's understanding of turfgrass technology, new equipment and supplies for the future labor force and safety concerns. The show draws more than 2,000 attendees, and provides nearly 50,000 square feet of exhibit space. Details are available by contacting GTA at 404/975-4123.



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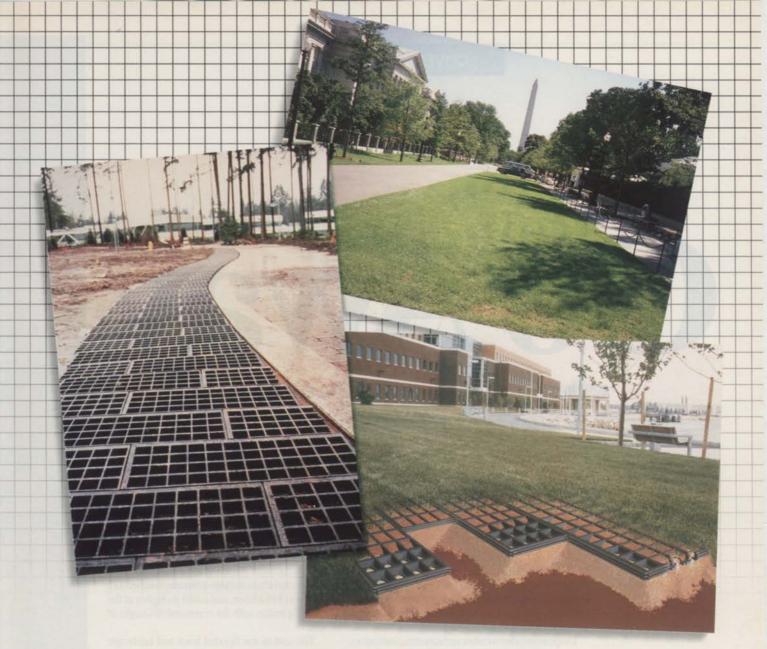


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COVER STORY

The rains and subsequent flooding are just the tip of the iceberg. The true mortality rate won't be evident until next spring when turf, trees and ornamentals may fail to produce healthy growth.

Away

By Cindy Code

Rain, Rain.

THE NORTHEAST and Southeast are sweltering, the Midwest is flooded and the West is fighting the construction doldrums. Between the weather and the economy, it's been an odd year for the lawn and landscape maintenance industry.

Despite such dire weather and economic indicators,



The St. Peter Earth Center, located northwest of St. Louis, has been closed since mid-July. They didn't expect it to re-open until after Labor Day. suppliers and end-users alike are mostly satisfied with this year's gains and look forward to increased prosperity when routine weather patterns resume.

Try as hard as they might, returning to normal in the Midwest won't come easy. As the massive swelling of the Mississippi and Missouri rivers began to recede in mid- to late August, the cleanup in

eight Midwest states began in earnest. And the floodravaged landscape is not a pretty sight. Muddy, dirty and dead were the words uttered by many as they surveyed the wake of the Flood of 93. Buildings, farms and landscapes were damaged beyond repair.

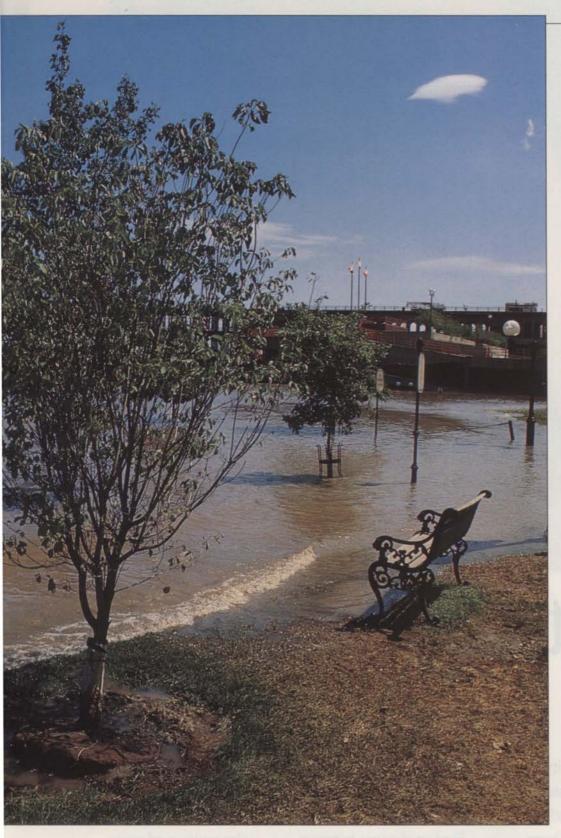
By temporarily relaxing landfill bans and burning laws the predemolition phase of the cleanup is expected to last four to six weeks. The complete cleanup may take up to a year or more. And the cost? Hundreds of billions of dollars. In Missouri alone damage estimates reached \$12 billion to \$18 billion, and could go higher as the flooding recurs with the continued onslaught of rain.

The cost of the flooded lawn and landscape industry is hard to pinpoint. Even harder to understand is the priority landscapes will receive in the clean-up saga. Insurance, in most cases, probably will not cover landscape losses.

Some firms suffered the loss of plants, buildings, equipment and accounts. Others were fortunate enough to suffer only the inconvenience of the flooded highways and the inability to service some of their customers' properties.

The flood is replete with irony. Areas lucky enough to avoid the devastation of too much rain and flood waters instead were faced with the unpleasantness of no potable water. As in no drinking water, no watering-in of pesticides, no watering seed or sod, no watering of nursery stock and so on. On the other hand, some established plants received so much water they were pulled from their root systems. Now, the same plants are struggling for survival because their roots are damaged and can't pull in needed sustenance.

Lawn and landscape professionals in areas not directly affected by flood waters were often forced to delay pesticide applications, offer cash and carry sales of landscape materials unable to be watered and haul water from the river for emer-



gency needs.

BEHIND THE 8-BALL. Lawn and landscape professionals in the Midwest have been fighting Mother Nature since the start of spring when the rain first began falling. The rains fell in Iowa, Illinois, Nebraska, Minnesota, Wisconsin and Kansas flooding the Illinois, Mississippi and Missouri rivers. Grounds became saturated under the burden of 25 percent to 50 percent more rain than normal. And some of the "victims" of the flooding are now appearing in the lifeless forms of plants which are suffering from suffocation, root rot, premature leaf drop and disease problems.

"It's too overwhelming for

words. Just too much rain and water at one time," said Lee Mueller, owner of Reliable Landscape, St. Louis, Mo. "I was ready to build an arc."

A South County business, Mueller's firm was spared the brunt of the water, but his customers can't claim the same. As a result, lawn maintenance was virtually non-exDowntown St. Louis was spared the brunt of the flooding, but the riverfront area wasn't as lucky. Parks, roads and garages were under water.

istent this season.

"All areas of the business were affected, but it was the tree division that kept us afloat," he said. "When the rain quit, our people were out pruning, removing trees, spraying."

Although landscaping is currently the last thing on the minds of his customers, Mueller expects his phone will soon start ringing off the hook. In the meantime, with a number of suppliers and their nursery stock under water, Mueller is biding his time, ready to step in where needed.

Sara Bibens, executive director of the Missouri, Nebraska and Western associations of nurserymen, said the much publicized flooding drew attention to a problem occurring all winter, spring and summer. "The long-term rain affects the landscape business more in the long-run than the actual flooding," she said. "Some nurseries couldn't even get out to dig holes because it was too muddy. There's still lots of nursery stock sitting on lots."

Terry Pesapane of Growing Greens in St. Louis, Mo., said a handful of her clients lost their businesses to the flood, most of whom were located in a commercial area that had been developed in a flood plain over the last 20 years.

"The flooding happened so quickly, they were not forewarned and they had no chance to get their things out," Pesapane said. Growing Greens lost about \$1,000 in monthly maintenance billings.

For Dave Freidel of Freidel's Lawn& Landscape, St. Joseph, Mo., the spring and summer rains made it nearly impossible to maintain any kind of schedule.

"I lost one-third of my income in July as it rained 28 days that month," Freidel said. "My employees tried to go out every day. We were only completely rained out a few days."

Daryle Johnson, president of All American Turf Beauty, Van Meter, Iowa, had difficulty applying his third-round, fertilizer/insecticide pro-(continued on page 28)

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NOTHING RUNS LIKE A DEERE*

Cover Story

(continued from page 25)

gram because he couldn't water the product in.

"We had to switch to just fertilizer because we couldn't get the water," he said. "Eventually, we just picked a rainy day and went out and applied product."

WASTE DISPOSAL. Chris Byrne, program manager for the air, land and water engineering branch of the St. Louis County Department of Health, said sandbags in St. Louis County are being used as clean fill for holes in the floor of an old quarry. Additionally, trees and brush are being ground for volume reduction and dumped in the land-fills or burned.

Although a burning ban was lifted statewide, individual jurisdictions have the ability to enforce more stringent burn laws. In St. Louis County, for example, curtain destructors are being used to attain the clean burn required by law instead of a smokey, black fire.

Individual cities across the Mid-

west can and are working out agreements with landscapers for the grinding and disposal of waste materials. Most cooperative contracts are still being worked out.

There had been talk about sending the multitude of sandbags to compost facilities across the Midwest, but the sheer quantity made it nearly impossible. In theory, the composter could separate the sand from the nylon bag and reincorporate the sand with compost into the environment. Instead, various state health departments gave the sand bags — once thought to be hazardous — a clean bill of health and decided to go with the quick fix.

Because of the ferocity of the fast-paced waters, it was reported in the consumer media that untold amounts of foreign substances, including pesticides, had been swept into the water. However, state Environmental Protection Agencies and technical assistance teams have yet to report any detectable amounts of hazardous materials in the flood waters.

SURVIVAL OF THE FITTEST. As

the water recedes, the damage to the landscape is becoming more apparent. But, in many cases, the industry has yet to see the worst.

Because of bleak predictions for improved weather conditions, many are predicting trees, shrubs and other plants won'thave a chance to recover, let alone show their true colors, until sometime next year.

"We're all kind of holding our breath. We don't know what the long-term effects will be," said Jeff lles, extension horticulturist at Iowa State. "Trees sensitive to flooding are already showing signs of stress."

Tree survival varies by species. Linden trees near major flooded areas are showing signs of stress including yellowing and deterioration of leaves. Additionally, in central Iowa, conifers with branches under water look dead. But appearances can be deceiving.

"We're cautioning people to be careful. If trees lose their leaves early it doesn't mean they're dead. Resist the temptation to pull plants out until we know. We may not know until next spring," Iles said. "Winter is one more variable. How cold will it be? It can create a problem if the trees don't harden off before winter. We have all kinds of questions, but not many answers."

The general consensus is that if flood waters don't hang around too long — somewhere in the neighborhood of three to five weeks the trees will be OK. In areas like Ames and Des Moines, the water came and receded quickly.

"For the most part, it hasn't been a big deal here. But along the Mississippi, where the flood waters have been high for a long time, we're seeing some problems on lindens," Iles said. "Throw in other variables such as when will the soil dry out? Will low soil oxygen be persistent? (You don't need standing water for this to occur.) Undoubtedly, root death has occurred. But how much? There's no good way of answering the question."

Trees intolerant to flooding include sugar maple, white oak, yellow buckeye, tulip tree, black walnut, redbud, linden, red oak and most pines and spruces. Flood-tolerant species include silver maple, sweetgum, red maple, green ash,

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USE READER SERVICE #46

CORPORATION 9281 LeSaint Drive, Fairfield, OH 45014 honeylocust, Eastern cottonwood, bald cypress and willows.

Turf damage is more readily discernible and more easily corrected.

The length of time grass can survive submersion depends on a number of factors including species, temperature and the condition of the grass before the flooding. If the grass was initially healthy, most species are tolerant of short-term flooding, according to Nick Christians, department of horticulture at Iowa State.

Creeping bentgrass, Kentucky bluegrass and bermudagrass reportedly have survived for weeks under several feet of water. On the other hand, annual bluegrass and ryegrass show less tolerance and may suffer more immediate damage, Christians said. Home lawns that are flooded for four to six days will come back pretty quickly. But if submerged longer than that, the grass will probably have to be re-seeded.

In addition to the length of submersion, water temperature is a concern. The higher the water temperature, the more quickly grass is damaged. For instance, shallow pools of water remaining on the turf after other water has drained may become the site of turf damage on hot days. These areas should be drained as quickly as possible after flood waters recede.

Water is not the only hazard to turf. Silt can lead to a multitude of problems if not promptly removed. The extended flooding along the Mississippi can result in silt deposits of 6 inches or more. Christians said these sites more than likely will require major work to remove the silt; reseeding is almost certainly required.

"If you can remove it, then do so, but it's not always possible," he said. "Running a fairway-type aerator through can break some of it up. Also, high-pressure water removal is another good method."

A light layer of silt is OK. If the grass is dead, and there's 1/2 to 1 inch of silt on the turf, it's OK to till it under. But even 2 inches of silt is too much, and should be removed. The fine texture of the silt is not good for the rootzone of the plant, Christians said, because it has no structure and cracks easily when it dries. If there's time and money, a peat or compost mix are beneficial additions to the soil.

There are no quick and easy cures for tree stress, but contractors should make sure that trees left standing are structurally sound and monitored on a regular basis.

"Beware of the unscrupulous entrepreneur recommending magic bullets for trees," Iles said. "Lots of fertilizer is not going to make it better. There's no quick fix, no cure for flood injury. The best thing is to wait for dry weather."

EQUIPMENT CHECK. Experts recommend that flooded equipment not be started. First, drain the oil from the engine and hydraulic system; drain the fuel; change the air filters; replace the fluids and then try to start it. After letting it run for a few minutes, check the oil to see if the oil and water have mixed. If so, drain and replace the oil.

Temporary flooding is not a real problem to equipment, but equipment that has spent the better part of two weeks or more under water could require major engine repairs. **DROUGHT.** Receiving not nearly as much attention, but just as devastating is the drought enveloping the East Coast.

Record heat has combined with spotty rain to produce a killing drought. In many cases, mowing contracts were most affected. Landscape contracts, however, saved the day for a number of them.

Although the drought has devastated the agriculture industry, there are no reports of massive losses in the green industry.

Most of the warm-season turfgrasses are capable of handling the extreme heat before resorting to dormancy. Many turf varieties are experiencing loss of healthy color, however.

With high relative humidity, disease is said to be a major concern. And if the stress to turf isn't alleviated before winter, the turf will be more susceptible to winter injury. Not all that different from their Midwest counterparts.

The author is Editor/Co-Publisher of Lawn & Landscape Maintenance magazine.



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Making you look good in print

Composting

Making the most of the Missouri yard waste predicament, a St. Louis landscaper took the situation in stride and launched his own compost facility. Today, it not only handles the landscape firm's waste, but that of private waste haulers and other area landscapers.

By Robin Pendergrast

WHEN MISSOURI'S ban on yard waste disposal in landfills took effect Jan. 1, 1992, landscapers like Patrick Geraty, president of Geraty Landscaping, Kirkwood, had to find another place to take yard trimmings. Like many fellow landscapers, Geraty's initial solution to the yard-waste disposal dilemma was to take his trimmings to a yardwaste composting site. But unlike the others, Geraty's interest in composting went far beyond simply dropping his yard waste off at the site.

"I started looking into what was involved in yard-waste composting when the ban was still in the planning stages," explained Geraty. "I had been thinking about expanding into other areas, and yard-waste composting seemed like a good complement to my landscaping business."

Geraty Landscaping, a full-service design/build/maintain firm, serves a mix of customers — 60 percent residential and 40 percent commercial.

The firm has been successful in its 11 years in business; however, the last few years had become increasingly competitive for Geraty and fellow St. Louis landscapers. Each year more landscaping companies seemed to go after the same customers. Although his business hadn't started to suffer, Geraty began to doubt his long-term growth potential. So he started looking at other expansion areas. The more exploring he did, the more yardwaste composting seemed the perfect fit.

"At first I did a lot of research on yard-waste composting because I wanted to get a feel for exactly what was involved before I committed myself to anything," Geraty said. "I read every magazine and newspaper article I could find on the subject, and I talked to a lot of different people involved in the field. I paid special attention to the details that

> make a yard-waste composting site successful how to go about setting up a site, what kind of equipment is needed, what's the best method of handling the material —I tried to cover everything."

Most of the problems encountered at yardwaste composting facilities fall under two broad categories — excessive processing costs and objectionable odors. The key to developing and operating a successful yard-waste composting



facility is avoiding these problems. Three fundamental principles are needed to accomplish this:

1. Minimize the number of times material is moved or handled.

 Use adequate woody and carbonaceous bulking agents such as wood chips and leaves in the material mix.

 Always employ the best equipment available to properly shred, mix and windrow organic debris.

GETTING STARTED. As soon as the ban took effect, yard-waste composting sites started appearing around St. Louis County, Geraty said. "From all the research I'd been doing, I quickly realized that some of these new operators weren't as well-prepared as they needed to be — and their sites began to have problems almost right away. I was sure that I could do a better job."

So Geraty began actively look-

Patrick Geraty, keeps a close eye on the progress of his compost in St. Louis County. Photo: Robin Pendergrast





St. Louis Composting uses this Jenz machinery to provide the finishing touches to his compost product. Photo: Robin Pendergrast

ing for the right opportunity. It wasn't long before his newly formed yard-waste composting company, St. Louis Composting Inc. — a joint venture between Geraty and GreenCycle Inc., a yardwaste management company headquartered in Northfield, III. — had its first location. St. Louis Composting has since added several smaller sites, all of which are serviced on a weekly basis. But it is this first site that occupies most of Geraty's attention.

Although yard-waste composting doesn't require a large on-site staff — St. Louis Composting's main, five-acre site needs no more than four employees, even in peak times — it does require a substantial capital investment in equipment. Geraty estimated he has more than \$400,000 invested in equipment at the site, including three skid steers, a three and one-half ton front-end loader, a screening machine and two shredding machines.

The main site is on the grounds of a large, private landfill in St. Louis County. The landfill operator had originally contracted with another operator. The arrangement didn't work out, and Geraty was called in to sort out the mess the other operator left behind.

"We had our hands full right from the start," Geraty said. "When we took over the site, it was a disaster. There were already 6,000 cubic yards of material stockpiled on the site — and the site itself had never even been prepared properly.

"We had no choice but to take a two-pronged approach. First, we divided the site into sections. Then we began windrowing the stockpiled material on one section while we worked on the grading of another section. As soon as we finished the grading on a section, we'd start using it for windrows. Then we'd clear off another section so we could grade it. We wasted a lot of time moving windrows around those first few months, but we finally got the whole site graded just the way we wanted it."

That was one of the lessons

Geraty learned while researching yard-waste composting — proper drainage is critical to the success of a yard-waste composting site. And 1993 has proven Geraty's system is more than adequate. Despite the heavy rains St. Louis experienced during the spring and summer, drainage on the site has not been a problem.

TAKING HOLD. The site's convenient location right at the landfill has helped St. Louis Composting attract a wide range of customers. Private haulers who bring construction debris to the landfill return with their yard-waste collections. And landscaping companies who used to bring their yard waste to the landfill now drop it off at the yardwaste composting site instead of at the landfill itself.

Geraty's landscaping company only makes up about 5 percent of the main site's volume. There are approximately 150 other landscaping companies that bring yard waste to the site. However, the majority of the incoming material comes from three large, private wastehaulers who do contract work for local cities, including the city of Kirkwood. (Kirkwood is unusual for the St. Louis area in that it handles its own waste disposal. Most cities in the region contract with private waste haulers.)

Although the rain and flooding of the last few months have not impacted the site itself, they have had a significant effect on other operations in the area. Many sites have encountered drainage problems and a few have experienced flooding difficulties. The result has been a dramatic increase in volume for St. Louis Composting.

Last year, the main, five-acre site handled 30,000 cubic yards. This year that same site had taken in 30,000 cubic yards by Aug. 1, and Geraty anticipates the site will process 60,000 cubic yards by the end of 1993. Due to this dramatic increase in volume, Geraty plans to double the size of the site, increasing it to 10 acres by fall.

MARKETING PRODUCT. The pur-

pose of a yard-waste composting site is not simply to provide a place for landscapers and private waste haulers to dispose of their yardwaste trimmings. The intent is to also produce a high-quality natural soil amendment or compost. St. Louis Composting has been successful at this aspect of the business as well.

The 30,000 cubic yards of raw material it took in last year produced approximately 6,000 cubic yards of high-quality compost. Subsequently, Geraty's biggest challenge is finding a market for the end product.

"We were very pleased that we sold all the compost we produced at our main site last year," he said. "We're hoping to do as well this year—even with the larger volume we'll be handling. And I think that's a realistic goal because once people try using compost, they begin to realize its benefits and decide to stick with it."

According to Geraty, compost provides three primary benefits over oak bark mulch: it retains moisture better; it has a higher R factor (radiant energy) in the winter to help protect perennial plants; and it has nutritional value, which oak mulch does not have.

"Permitting a yard-waste composting site is very difficult right now."

"Last year, we spent a lot of time educating people — home-owners, landscapers and nurseries about the benefits of using yard waste that has been composted," Geraty explained. "We prepared articles detailing these benefits for the local newspapers. And we also did a fair amount of advertising last year. We even gave away free truckloads of compost to landscapers just to get them to try it."

St. Louis Composting sells the end product for \$8 per cubic yard to

landscapers and \$10 per cubic yard to homeowners. "That's very competitive pricing — considering the advantages that high-quality compost has to offer.

"We also try and make it as easy as possible to purchase our compost. We let people come in and pick up their own compost, we deliverit to their location and we even have a limited quantity of bagged compost available. This year we plan on expanding our bagging operations, and we'lleven be doing some large-volume blending of compost with top soil."

FUTURE OPPORTUNITIES. Despite working an 80-hour week, Geraty continues to be on the lookout for more yard-waste composting opportunities. Right now he finds public perception to be the largest hurdle in the establishment of new compost sites.

"Location is a key factor in a yard-waste composting site's economic feasibility. With its close proximity to St. Louis and tipping fees ranging from \$7 to \$8 per cubic yard, our main site is costeffective for our customers. But if we have to spend a lot of extra money obtaining permits for subsequent sites, if we have to set up these sites farther and farther away and if our customers have a longer drive, then yard-waste composting starts to lose some of its economic viability.

"Most people equate yard-waste composting sites with landfills and they don't want them nearby. This means that permitting a yardwaste composting site is very difficult right now.

"St. Louis Composting has had several permitting attempts fall through in the last few months. So right now we're working very hard to educate people about the benefits of yard-waste composting, and to change their perceptions of what a yard-waste composting site is. We need to convince people that both yard-waste compost and yardwaste composting sites are good for the environment."

The author is a partner with the International Marketing Exchange, McHenry, Ill.



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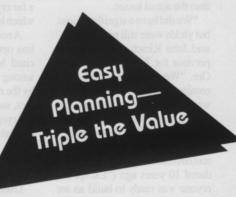
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SEED HARVEST

the 1993 Green

Prices Stabilized By High Demand; Some Seed Supplies Fall Short

Heavy rains delayed seed harvests and reduced some yields. But the physical damage looked worse than actual seed losses, according to growers.

By Cathy Hoehn

MODERATION IS key in this year's seed harvest yields. Prices are up somewhat and supplies are down slightly, but neither will create real havoc. High demand is expected from the South, East and Midwest.

A short spring and wet, cool July, particularly two weeks of solid rain in the latter part of the month, delayed seed harvests two to four weeks in parts of Washington, Idaho and Oregon. Windrows sat out in heavy rain too long, causing re-growth to occur underneath. High moisture during pollination, sprouting, seed shattering and a small prob-

lem with mold inhibited seed yields in some areas.

But the damage looked worse than the actual losses.

"We did have a significant loss, but yields were still near normal," said John Kirsch, production supervisor for Turf-Seed, Tangent, Ore. "We had a hellacious crop coming in. The cool, wet weather was ideal for the growing season. The only problem is that it didn't shut off in July like we expected." The wet weather, resembling torrential conditions seed growers endured 10 years ago ("Except everyone was ready to build an arc



then," said Bob Richardson, vice president and general manager of Great Western, Albany, Ore.), was a far cry from last year's drought, which lowered yields significantly.

A number of growers displayed less optimism than Kirsch. They cited lower yields, particularly among early maturing crops hurt by the rain. Late germinating species, such as fine-textured perennial ryegrass, matured after the rain and exhibited only slight damage.

The weather finally cleared in late July providing the hot, dry conditions ideal for harvesting.

Overall, yield estimates were

lower than average and below original predictions, particularly for annual ryegrass, bluegrass and fine fescue. Perennial ryegrass yieldestimates ranged low to average and tall fescue assessments showed an average harvest.

Prices are expected to be above average. Lower yields tend to spark lively price jumps. The hot, dry summer weather in the South and East and intense rain in the Midwest are expected to create high demand this fall, helping increase prices a bit. Kentucky bluegrass crops, which yielded only about 50 percent of the normal seed level, Straw is spread on this field after combining takes place. Photo: Seed Research of Oregon.

are the general exception.

"Kentucky bluegrass prices are very high. Weather conditions were very poor in the production area, so yields came in low," said Mike Robinson, president of Seed Research of Oregon, Corvallis.

Tall fescue may see lowerprices. "It's the only species that could have sufficient surplus or excess surplus seed," said Brad Dozler, vice president of sales for Interna-

tional Seeds, Tangent, Ore. "Some say we could have gone without a crop and still had enough seed."

Strong demand is expected for re-seeding lawns, football fields, parks and golf courses in the Southeast and Midwest.

"We did not see the demand typical forearly August," said Steve Tubbs, general manager of Turf Merchants, Tangent Loop, Ore. "But we're hoping the drought on the East Coast helps sales." He expects "dynamite demand" for tall fescue in the South.

Seed exports are down, accord-(continued on page 36)

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Seed Supplies

(continued from page 34)

ing to Richardson. "Europeans appear to have large carryovers. Europe is trying to export to the U.S. They have more seed than they need right now," he said.

So what does all this mean?

"It's interesting. Early on we were looking at almost a burdensome oversupply. Soft prices. Real lousy spring,"Tubbs said. "Rain removed the 20 percent to 30 percent excess supply, served to strengthen the market. It's the proverbial mixed blessing. We're better off today."

Presented below are seed yield reports for various products. This is not an all-inclusive list of producers or varieties but a representation of the 1993 harvest.

BARENBRUG, Tangent, Ore. Ryegrasses suffered 20 percent annual yield reductions. Perennial ryegrasses were down 15 percent, and turf-type tall fescues were down 10 percent.

Annual and perennial ryegrass prices may rise. Turf-type tall fes-

cue prices stayed put. Availability should be adequate for most grasses, but perennial ryegrass may fall short, said Don Herb, sales manager.

Herb anticipates a call for overseeding in Texas, Georgia and the Southeast. "I'm optimistic we'll have good usage, good demand, for fall and spring. I don't anticipate surplus, maybe for K31 tall fescue. There may be a small carryover in 1994," he said.

Barenbrug is offering a limited supply of Lexus, a turf-type tall fescue selected in the United States and France. The fescue is fine-textured, dark green, slow- and lowgrowing and disease resistant.

DAVENPORT SEED, Davenport, Wash. Bluegrass yields fell 30 percent to 40 percent below average, according to Orlin Reinbold, general manager. Prices climbed steadily at about 25 cents to 30 cents per pound.

Davenport offers Adelphi, A-34 and Able I bluegrass varieties. "We expect sales to be good in the East. Not much bluegrass. Historically we harvest about 20 million pounds. We're not going to have that. We're short on Kentucky bluegrass, proprietary and common," he said.

Present conditions will affect next year's supply. "The pipeline supply will be gone. There won't be carryover in bluegrass this year," Reinbold said.

E.F. BURLINGHAM & SONS, Forest Grove, Ore. Perennial ryegrass and tall fescue had average yields. Acreage for perennial ryegrass was expected to be 10 percent to 15

percent more than last year. Acreage is "way down" for tall fescue due to a long-time oversupply. Total supply is less than normal.

Annual ryegrass is down about 20 percent. Orchard grass yielded 25 percent to 30 percent. Total availability for annual rye was down 15 percent or more from last year.

E.F. Burlingham plans to market two tall fescue varieties: Falcon II, a dark green fescue resistant to brown patch, and Marksmen, a slow-growing, dark green tall fescue also shown to be resistant to brown patch.

FARMERS MARKETING CORP.,

Phoenix, Ariz. Common and proprietary bermudagrass yields were down overall from 15 percent to 20 percent compared to last year. Prices for both remained steady.

The common market is expected to stay level through year's end and exhibit continued strength through spring 1994. The proprietary market is expected to hold steady from last year.

Farmers Marketing's Primavera turf-type bermudagrass exhibits medium to fine leaf texture and excellent summer green color. Next year the company plans to introduce Certified NuMex SAHARA Bermudagrass 60/40, a blend of seed lots expected to provide quick germination.

FINE LAWN RESEARCH, Lake Oswego, Ore. Early estimations during harvest showed yields down 10 percent to 60 percent. "We usually put bluegrass into windrows June 21 and leave them for 10 days. We had them out there about a month. We were very nervous people," said vice president Dennis





Excessive standing water will contribute to poor yields. Photo: Seed Research of Oregon.

Combs. "You can't pick windrows up when they're wet."

His quick synopsis: "For bluegrass, there is a shortage. Tall fescue, there is a surplus. That's not likely to change."

GREEN SEED, Gallatin, Tenn. Early estimates pointed to low yields for

annual ryegrass, according to Rod Sonnen, Northwest representative. Perennial ryegrass crops were hurting even before the rain. Fine fescue did not have a good heading. Chewings and creeping red fescues were down 15 percent to 20 percent from average.

Prices were up on all public commodities, except tall fescue. Ryegrass remained particularly firm in price. As far as availability, "with annual ryegrass, there's probably not enough for even cattle feeding," Sonnen said.

One variety of orchardgrass, which yielded 20 percent to 25 percent below early estimations, sold out before even being harvested. Green Seed committed only a fairly decent yield for tall fescue. "We're taking on additional varieties, such as Eldorado. We'll market it because we know we won't have enough product to cover our needs," he said.

INTERNATIONAL SEED, Tangent, Ore. Steve Johnson, senior research scientist, also expects post-harvest management to affect 1994 seed yields. Of this year's crops, fine fescue showed a depressed yield. Strong creeping red fescue was hit the worst.

Yield was down for bluegrass and fine fescue, and average for ryegrass and tall fescue. If the rain had stopped earlier, all crops might have seen bin-buster yields, Johnson said.

International Seed is marketing Essence+, a dense, fine-bladed ryegrass bred for resistance to crown rust. The company also plans to release another ryegrass, unnamed at press time, that exhibits dark green color and heat tolerance.

JACKLIN SEED, Post Falls, Idaho. Glenn Jacklin anticipated aboveaverage yields before the rain outstayed its welcome. Proprietary bluegrass fell off the mark 10 per-(continued on page 40)

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STREET TOUGH, DRIVER FRIENDLY.

Seed Supplies

(continued from page 37)

cent to 15 percent, however. It was off 60 percent to 70 percent last year, due to the drought. The Kentucky bluegrass yield was lighter than predicted.

Jacklin anticipates no oversupply. He expressed optimism about maintaining a fair supply of bluegrass, tall fescue and ryegrass.

Bluegrass prices dropped about 40 cents from last year. It will probably drop another 50 cents per pound for the remainder of this year, Jacklin said.

LESCO INC., Rocky River, Ohio, plans to have limited supplies of three new varieties. Wildwood Kentucky bluegrass, selected for its dark green aggressive appearance after a six-week drought, is a low-growing variety with dark-green color and medium-fine leaf texture. Brittany chewings fescue (fine fescue) is a medium dark-green and finetextured variety with intermediate endophyte levels.

Advantage, a turf-type perennial

ryegrass, exhibits a dark blue-green color, fine texture and good mowing qualities. The grass exhibits a reduced vertical growth rate and reduced stemminess in late spring and early summer.

In 1994, LESCO will introduce two warm-season grasses: an improved seeded zoysiagrass with early spring green-up and an improved seeded bermudagrass noted for cold tolerance and early spring green-up.

LOFTS SEED/GREAT WESTERN,

Bound Brook, N.J./Albany, Ore. Perennial ryegrass was down 5 percent. Consumer areas had carryover due to the short spring. Annual ryegrass had smaller than normal yield. Turf-type tall fescue showed average yields. Fine fescue and chewings fescue had smaller than average yields, down 10 percent to 15 percent.

New this year is Crenshaw, a creeping bentgrass developed by Texas A&M. The bentgrass promises to withstand high heat and humidity conditions common in the South.

O.M. SCOTT & SONS, Marysville, Ohio. Evaluate your seed needs and buy early, advised Kevin Turner, manager of the seed, production and research program. "When the barrel is empty, I expect people to start asking me for more seed."

Turner claims to be more optimistic than most in evaluating seed yield.

He noted a good, strong crop for tall fescue, but conceded fine fescue crops showed poor yield.

Prices are pretty straightforward, he said. "If supply is reduced, and there's constant demand, you'll see good price increases. I anticipate prices will go up, particularly for elite varieties of bluegrass, such as Bristle and Coventry. It's difficult to meet demand with reduced varieties. Top-notch varieties will be pretty dear."

O.M. Scott is offering Brigate hard fescue in limited supplies. The tall fescues Adobe and Aztec will have good availability, and Achiever, a perennial ryegrass, will be in supply for the first time, Turner said. **PICKSEED WEST.** Despite panic early on, perfect harvesting weather in early August allowed perennial ryegrass to have an average yield, up from last year. The crop incurred about 5 percent damage.

Acres are down for turf-type tall fescue, but the grass shows good yield and availability. Prices remain about the same.

Pickseed offers Cutter, adroughttolerant and pythium-resistant ryegrass. "We'll produce all we can," said Gerry Pepin, executive vice president and general manager.

SEED RESEARCH OF OREGON,

Corvallis. Robinson believes this year's lower seed yield may actually benefit the industry. "We had a tremendous crop — a real barnburner as we call it. If it had all been harvested, we could have had a two-year supply, and prices would have plummeted," he said. "Ideally, from a business standpoint, it was healthy for the whole industry, although some farmers may not think so."

Robinson estimated perennial ryegrass yields were down 20 per-

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cent or more. Hard fescues dipped 30 percent below average; chewings fescues were slightly below average. Kentucky bluegrass yields "were not good at all. They were below average in central Oregon, but even worse in eastern Washington where rain was heaviest," he said.

The bentgrass crop was "average to a little below. I'm saying that before it's even cut," he said. "Tall fescue yields were average, considering the acreage was the lowest it's been in years. There was a large carryover from last year. Older varieties tend to carry over more than new ones."

Prices steadily increased through summer for perennial ryegrass. Tall fescue prices remained about the same. Fine fescue sales are expected to increase since they are commonly mixed with bluegrass, which jumped in price.

Varieties of bluegrass in central Oregon fared OK, including Merit, which Seed Research sells. The company has two new bluegrasses available for fall. The low-growing, dark green SR2000 has a wide

leaf blade making it ideal for blending with tall fescue. The SR2100 is an elite variety, dense with excellent sod strength. "It's not quite as dark green but it's harvested and looks good," Robinson said.

TURF MERCHANTS. Tall fescue had a good yield and ryegrass was above average, according to Tubbs. The company expected to reap 60 percent of original estimates in common bluegrass. Perennial ryegrass was expected to be 20 percent to 25 percent down. Fine fescue was thought to be off 25 percent to 30 percent. Oregon fine fescue was damaged. Proprietary blues in the Rathbun Prairie were down, but the Madras area had excellent yields, he said. The Columbia basin's yields were better than average. The Rathbun Prairie and common dry areas were hit hardest.

Tubbs, like Herb, foresees a continued regional trend in over-seeding, particularly on golf courses. "Golf course superintendents want high-quality seed, but they are not buying permanent turf," he said.

Prices for perennial and annual

ryegrass are down. Bluegrass prices dropped 50 percent from last year, but are inching upward and could end up back at last year's level.

Tubbs quoted an excellent supply of Canadian creeping bentgrass, saying prices would hold stable.

TURF-SEED INC. Reports in early August showed near-normal yields for most crops, according to Kirsch. At the onset of harvesting, he anticipated ryegrass to be down 15 percent to 20 percent and tall fescue to be off 25 percent.

Early varieties took the worst beating. Late varieties, like Navaho and Bright Star, swathed after most of the rain, avoided serious damage.

Turf-Seed for fall offers a limited supply of a new bluegrass combining high turf quality, like Midnight, with the potential for high seed yield.

ZAJAC PERFORMANCE, North Haledon, N.J. Given the short supplies, end-users would do well to order seed early, particularly for elite varieties. "There won't be a

supply that is so large that plenty will be available next year. But some varieties, if you wait until the last minute to buy, you could get hurt," said company president John Zajac.

Perennial ryegrass was down 25 percent from original estimations. Bluegrass remained on the short side, particularly for some proprietary varieties. Tall fescue was about average. Fine fescue yields were down, but not as low as seen last year.

Zajac is concentrating on summer stress tolerance with its two grasses being marketed this fall. Prizm perennial ryegrass, a dark green, compact variety, shows a high degree of summer stress tolerance. Nordic hard fescue grass bodes well on areas receiving low maintenance and shows high summer stress tolerance. Both grasses were offered in limited supplies last year, and will have adequate supplies this year.

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



COMPUTER NETWORKING

Computer Age

Contractors rely more and more on computers to do their busy work. Finding suitable software is half the battle.

By Cathy Hoehn

Among the benefits of computerization is the ability to provide printed invoices to customers immediately after service is provided. Photo: Norand Corp.



VERSATILITY, EASE of use, quality service and reasonable pricing. Those are the basic ingredients contractors look for in new software packages. It doesn't seem like a lot to ask, but finding the right package can be painstaking.

More contractors rely on computers to not only do their billing, accounting, routing, scheduling and the like, but also irrigation, chemical application, plant selection and landscape design.

Manufacturers, depending on whom they tailor their software packages, say 20 percent to 60 percent of new lawn and landscape customers are first-time buyers. Contractors already working on computers look to add new features as they begin offering additional services.

"There's a lot more computer awareness out there," said David Tucker, president of Sensible Software, Gaithersburg, Md. "Computers are becoming a commodity. Where 20 percent to 30 percent of the contractors used to use computers, that number is now 60 percent to 70 percent."

Hardware costs have dropped so much in the last decade, even in the past five years, that smaller companies can now afford decent computers, while those already using them can consider more sophisticated systems. Manufacturers say hardware prices have bottomed out and may actually begin to rise.

"We're finding prices of computers have come down so much, people can get computers and software combined for under \$2,000. They get fewer questions on billing because they have stock billing forms. It helps improve their images quite a bit," said Lee Bornstein, vice president of Labb Systems, Scottsdale, Ariz.

Other manufacturers claim a high-quality software package, computer and printer won't cost less than \$4,000.

Software prices remain competitive, but may be rising slightly. Companies offering software specifically for the lawn and landscape industry tend to charge higher prices.

"It would be nice to have a package geared for our industry. We looked at a few, but they really fell short of what we felt they were worth. The market's so small, the price was prohibitive," said David Prater, vice president of finance for Minor's Inc., Fort Worth, Texas. The company instead chose to use a general accounting software package.

Competition can be fierce among software firms. Manufacturers agree that catering to the lawn and landscape industry isn't always lucrative. A survey taken by CompuScapes, a Duluth, Ga., software firm, found that most customers take six months to a year to make a computer purchase decision.

"It seems to be that low end (software companies) in the landscaping and lawn care software market are dropping out. Those selling the good stuff will stay in," said Tim Shields, owner of CompuScapes. "The sell cycle is a lot longer than for other software markets."

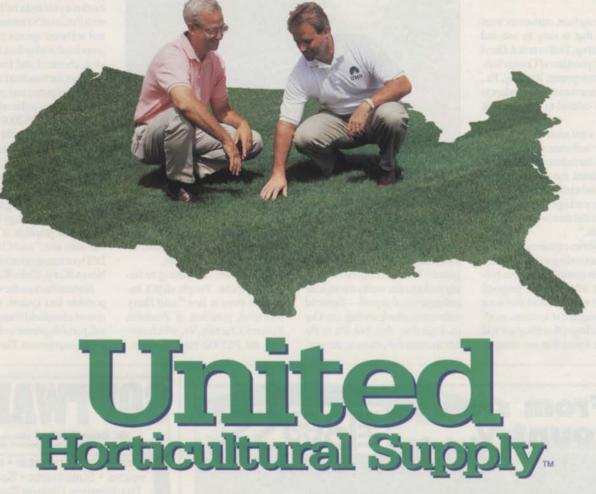
MARKET DEMANDS. What a contractor looks for in a computer package depends largely on the company's size, services offered, number of clients and a multitude of other factors.

Whatever the determinants, contractors are becoming more specific about what they want, Tucker said.

"They're demanding more out of hardware, much more than even two years ago. More companies are going into full-service lawn maintenance. They demand software to address every aspect of lawn care, landscaping and landscape construction."

Tucker hasn't noted much call for design software from lawn main-(continued on page 44)

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Working To Enhance Our World

Computer Networking

(continued from page 42)

tenance operators, but other software firms say computer automated design functions are in high demand.

On the surface, customers want software that is easy to use and faster to set up, Tucker noted. Daryl Kershner, president of Genius Software Development, Reading, Pa., said customers more easily adapt to packages catered to their specific needs.

"They want something they can use. Our software is written by people in the industry. Some companies started out with a general package and tried to apply it to lawn care. Our package started out for landscape and then branched out to other fields."

Capabilities capturing customer interest, according to manufacturers, are job costing, repetitive billing, plant selection and proposal and report writing. Most also want good management systems, modules or packages that integrate and statement forms that are compat-



ible with other systems, said Steven Skuropacki, owner of SPS Consulting in Cranford, N.J.

Carl Nagel, president and owner Michael/Todd Inc., Naples, Fla., looks for software that can be integrated. "We need one good accounting package that works through the entire gamut of payroll—financial statements, check writing, etc. Our package does that, but not to the advancement of others on the market. It's geared toward a very small market."

MARKET TRENDS. One noted trend in the marketplace is the move toward handheld computers.

"Handhelds are starting to become popular. People didn't believe in them at first," said Harry McDavid, president of Precision Systems, Chantilly, Va., which markets the PS2000 handheld com-

Automated route accounting can improve technician productivity, data reliability and customer satisfaction. Photo: Norand Corp.

puter. The PS2000, which hit the market a year and a half ago, works with Precision's Pestware pest control software system to eliminate preprinted workorders; transfer service, chemical and financial data between the handheld unit and the office computer; and print out detailed invoices and receipts on-site.

"Sales of the PS2000 are starting to go up. We've sold two times more in the last four months than we did in the last year," McDavid said. "We put a lot of risk and lot of money into the decision to sell the handheld. It's starting to pan out."

"The real advantage to the handheld is the graphics. It's a higherend sales unit," said Cheryl Wery, DSD communications manager for Norand Corp., Cedar Rapids, Iowa.

Norand markets the 4000 Series portable data system, which consists of a handheld computer terminal, portable printer and communications equipment. The system au-



tomates many daily functions pertaining to service route information. The system can print a technician's schedule up to six working days, including clients previously scheduled, but not serviced. It retains time in/time out, accounts serviced, payments received, materials used, dosage rate, taxes and discounts and vehicle usage. A technician can print daily reports and transmit them to the office.

"With the handheld, you can better manage information that you collect throughout the day. In the lawn and landscape industry, I've only seen interest in the last 18 months to two years," Wery said.

Pen-based handheld computers are another option, although lawn maintenance companies tend to stick with traditional handheld units.

"In the future, we see pen-based computers being used for quoting and estimating, as the large screen is perfect for displaying layouts," Wery said. "The current pen-based computers lack the durability for day-to-day use by technicians. But as technology evolves, more rugged pen-based units may definitely become an important tool for lawn care technicians."

Another trend is using graphics applications like Microsoft's Windows. Manufacturers differ in opinion as to whether such applications are beneficial to lawn and landscape contractors. "Some in the industry don't think Windows is a good thing. They think DOS (disk operating system) is easier. Windows is good if you want to do anything other than word processing or spreadsheets," McDavid said.

"Ninety-nine percent of the clients out there don't care for Windows. It looks nice. That's all there is to it," said John Massaro, president of Customized Business Software, Glen Rock, N.J. "It takes up a lot of room. And it doesn't work on older machines."

"There's no question Windows graphics capabilities are taking over. DOS will be phased out," countered Kershner.

Several manufacturers traditionally offering basic accounting and billing software have added job costing, general ledger, check writing, contract proposals, chemical tracking, invoices, sales analyses, work orders and inventory capabilities to their package repertoires.

Ruppert Landscape Co., Ashton, Md., uses SLICE, a comprehensive software package for the lawn and landscape maintenance industry from Thornton Computer Management Systems, Maineville, Ohio. "We use it for our seven branches in four cities," said Don Jarratt, director of landscape management. "The system can integrate payroll information with job costing, and distribute payroll off of that. The information is coded as part of our financial statements. We run seven financial statements monthly."

Ruppert also uses SLICE for job costing and plant inventory. It runs a separate fleet maintenance truck and equipment inventory system.

The Bill Master (Customized Business Software's package) offers standard billing, double entry, routing and billing invoices, but it also enables users to do market, tax and sales reports, Massaro said. When you're ready for a chipper/ shredder that can stand up to commercial use, turn to Bear Cat for power that lasts.

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The Superintendent Compliance Management System from SCMS Software, Lake Forest, Ill., helps grounds maintenance companies complete a range of tasks, from handling accounting functions to compiling reports to meet Community Right to Know Act requirements.

"The computer takes information and puts it into report form," said Bruce Johnson, president of SCMS. "Every time you use a chemical, you

"Computers are becoming a commodity. Where 20 perent to 30 percent of the contractors used to use computers, that number is now 60 percent to 70 percent."

pull the information without having to input it."

The package also includes a communication program enabling users to access a message bulletin board, and maintains and speed searches information for material safety data sheets, including licensing data on 350 chemicals commonly used on turf and ornamentals.

Other packages, such as Lbase from Synoptic Systems, Carlsbad, Calif., offer modules for specific services such as irrigation and chemical application. Irrigation Management Corp., Union City, Calif., released software for calculating water budgets for planting, irrigation and landscape management. The program is in response to California's water conservation regulations. The package contains numerous reports for compliance verification of local water requirements.

Another trend is computer networking. Since hardware prices have decreased, more midsized companies have jumped on the bandwagon. Networking allows two users to simultaneously work in different software modules.

PRICE OPTIONS. Software packages can range in price from \$39 for a "canned, off the shelf package" aimed at first-time buyers to up to \$30,000 for the most comprehensive systems. Basic management packages range from \$100 to \$600. Billing software, such as The Billing Clerk from New Braunfels, Texas-based Dilloware Inc., which features recurring billing, flexible one-time invoicing and recurring invoices or statements, runs \$179. Prices often drop during special promotions.

The next grade of packages, which seems in most demand, costs up to \$5,000, and can include any number of features such as full accounts receivable, accounts payable, general ledger, routing/scheduling, estimating, financial statements, inventory control, report modules, purchase orders and time keeping.

Companies offer various programs for upgrading software. Some charge a basic fee; others charge per upgrade. Still others, such as Customized Business Software, offer free upgrades. "We know all our ideas are from our customer base and will increase sales," Massaro said.

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

WHAT TO LOOK FOR?

WHEN CONSIDERING buying software, Daryl Kershner of Genius Systems, recommends the following guidelines:

Find out upfront what you need from the software you intend to buy — minimum hardware
requirements, what kinds of forms it uses and how long it takes to get the system up and running.

• Ask for a trial version of the software. This is different from a demo, which is essentially a slide presentation that often fails to accurately portray the software's capabilities. A trial version allows you to use all the features of the software for a limited time, or for a limited number of customer records. Be ready to pay \$50 to \$100 for a trial version.

• Software should be easy to use. If you've just purchased software and have struggled for several days to get it to do your bidding, you've purchased the wrong software for your business. Take advantage of the vendor's return policy and ship that package back before it's too late. Then try another package. You'll know good software when you see it.

• Subscribe to Software Update Service. Software developers for vertical markets like the green industry are virtual clearing houses for the latest information in your industry. If the software company you purchase from cares about your industry, they will make it their business to gather the latest technical and regulatory information from the lawn and landscape professionals using their software. This translates to new features added to the software you already own.

Other points to consider:

- Does the company upgrade software regularly?
- What type of service and support does the company offer?
- Is the software geared for your particular needs? If not, is the company
- willing to customize?
- Is the price warranted?
- · Can the company representative answer your questions sufficiently?

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VEHICLE TRENDS

Managing Your Truck Fleet

Price, personal preference and fleet purchasing power are among the main factors influencing truck and service vehicle buying decisions.

By Julie A. Evans

WHEN IT COMES to buying a new truck or service vehicle, quality remains the most influential factor for lawn and landscape maintenance decision-makers. Price rates a close second, followed by warranty, dealer location and manufacturer support.

That's just one finding in a 1993 Service Vehicle Study of Lawn & Landscape Maintenance magazine readers conducted earlier this year. Among its other findings:

Among its other midings.

• Survey respondents report that almost 96 percent of vehicles were purchased vs. leased.

• More than one-half (54.1 percent) were new at the point of sale.

• March is the most popular time of the year for service vehicle purchases (35.7 percent of firms buy in March); followed by February (25.9 percent of firms); January and May (20.5 percent); and the month of April (18.8 percent).

• Forty-seven percent of those who purchase their service vehicles replace them after an average of four to five years. Another 29.3 percent of respondents replace them every six to eight years; and 15.8 percent replace them every 9 to 10 years. Only a small number of companies (8.3 percent) hold onto their service vehicles for less than four years.

 Lawn and landscape firms estimate average annual expenditures of \$18,800 for service vehicle purchases.

• Full-size pickups are the most commonly owned maintenance vehicle, with one-ton cab and chassis rating a distant second.

• Cars are the vehicle of choice for sales and management personnel, followed by sport utilities and pickups. While responses to the Service Vehicle Study reflect small-, medium- and large-size companies, it's a safe bet that all firms rank truck purchasing decisions high on their list of priorities — especially when you consider the size of the investment required for a single purchase.

Conversations with the following lawn care, landscape maintenance and construction and nursery firms confirm the obvious: There's no exact science to fleet management decisions. Personal preferences and brand loyalties seem to come into play almost as much as price and maintenance considerations.

THE BRICKMAN GROUP. It's probably safe to assume that The Brickman Group of Long Grove, Ill., has a large truck fleet. With 24 offices nationwide, the landscape maintenance and construction firm has built up a fleet of 250 service vehicles, 90 percent of which are medium-duty pickup trucks. The company purchases Ford vehicles exclusively.

"It's easier to have one kind of truck than many because of parts inventory, the training of mechanics and purchasing power," said Brickman's Gary West, production manager. "Our fleet also all looks the same."

An added incentive for remaining with a single manufacturer is paint customization. Ford customizes the vehicles' color scheme at the factory — "anyway we want them," West added.

According to West, the company transitioned into its Fordonly policy in the late 1970s. The company does not lease any of its vehicles.

In 1992, the company purchased 33 trucks, a number that West said is slightly above average due to expansion at existing branches. Although he couldn't quote an average annual expendi-(continued on page 52)



Trucks play an important role in achieving successful route management. Lawn and landscape maintenance professionals take great strides to customize trucks to fit individual company needs.

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Vehicle Trends

(continued from page 50)

ture for vehicle purchases because needs vary by year, West said the company holds onto its trucks for as long as they'll operate.

"We take a truck and use it until it's beyond use. By the time we're done with them, they're done in," West said.

Trucks that are too old for rugged daily use but still "roadworthy" are put into semi-retirement on large job sites where they get minimal use. The company even ships older trucks to distant branch offices if an office requests one.

Trucks are purchased in October with plenty of lead time for a March 1 seasonal startup. "If you don't have the order in place well in advance, it might delay purchases by as much as four weeks," said West, who added that Ford closes down production for three weeks in December.

It takes about six to eight weeks to build Brickman's trucks to company specifications, which include a chassis cab, custom-stick dump body and a five-man crew box. The only options the company purchases are AM/FM radio and automatic transmissions.

In-house mechanics service the trucks and other equipment at three regional offices, each supporting five to nine branches. The biggest headaches formechanics, Westsaid, are not caused by the trucks but by the people who drive them. "Like any piece of mechanical equipment, you can only run it so long so hard."

To monitor driver care for the vehicle, each supervisor is assigned to a particular truck and only that supervisor and his crew of three to five laborers can drive it.

"It helps our maintenance staff to have one person responsible for one truck. They tend to treat it better if they know that that's the same truck they'll have tomorrow and the next day," West said.

TEUFEL NURSERY INC. Fleet maintenance is like doing a crossword puzzle, said John Eskew, fleet maintenance supervisor for Teufel Nursery Inc.-Landscape, Portland, Ore.

"You put together the pieces and

NEW VS. USED

If your service vehicles are purchased, do you buy them new or used?

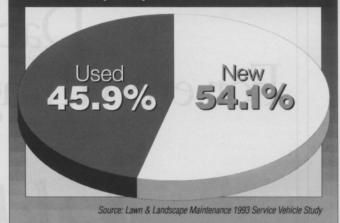
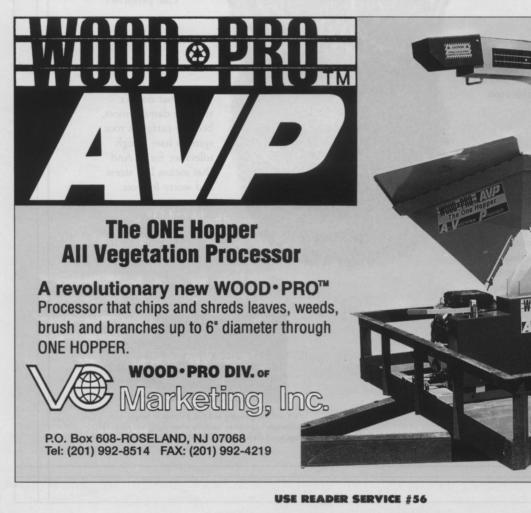


Table 1.

see the finished puzzle when you're done. I get job satisfaction from that," he said.

In his supervisory role, Eskew is responsible for the maintenance of nearly 200 new and used trucks for the company's 270-plus employees at two Oregon locations. As he is also responsible for purchasing, Eskew takes advantage of fleet discounts and puts bids out to local dealers to get the best price for his company.

Salespersons drive Chevrolet S-10s or Ford Rangers, he said. For landscape applications, medium-



and heavy-duty Chevrolet and Ford pickup trucks are accessorized with bed liners and special ramps to haul blowers and grass cuttings. And for irrigation applications, the company prefers the Ford Econo van. "What we're looking for is how they spec on brakes and springs and drive components," Eskew explained.

If Eskew could design his own truck, he would make it more practical with easier access to clutches and transmissions, he said.

Eskew credits the computer for making his job easier. All maintenance work is input into the computer daily, and the computer indicates when vehicles are due for servicing. The computer also helps Eskew track the length of time required for each maintenance job, which averages five minutes per week per piece of equipment; and the cost of maintenance, currently around 23 cents per mile for each vehicle.

Inventory is also easier to track through the computer. The company stocks \$30,000 to \$50,000 in inventory, not a large amount, he said, because "it doesn't pay to carry a large inventory and have so much money tied up in it."

Service vehicles are typically replaced every eight years — although 10 years would be ideal, Eskew said — and sold through auctions or to private parties and employees.

Eskew, who's been with the family-owned company for 25 years, said his biggest job challenge is working with employees and helping them understand the costs of maintenance. "There are some people who would not consider the company's investment in a vehicle and you have to come across to them in a nice way, but be straight with them as to what it costs to maintain these vehicles," he said.

The company routinely schedules classes with open discussions to emphasize the importance of

Full-size pickups are the most commonly owned maintenance vehicle, with a oneton cab and chassis rating a distant second. Cars are number one for sales personnel followed by sport utilities.

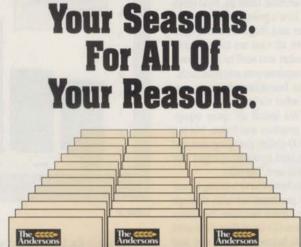
implementing proper vehicle maintenance, he said,

SPRING-GREEN CORP. Image is key to franchise success, said Gary Yunker, shop manager for Spring-Green Corp., Plainfield, Ill. That's why the company tries to specify uniform white service vehicles with the Spring-Green logo for its 120 franchisees.

And since Yunker is a "Chevy guy," and he calls the truck pur-

BUYING DECISIONS If your service vehicles are purchased, approximately how often are they replaced? 50 45 46.6% 40 35 30 29.3% 25 20 15 15.8% 10 5 7.59 0 Every 3 Every 4-5 Every 8-8 Every 9-18

Source: Lawn & Landscape Maintenance 1993 Service Vehicle Study



32-3-10

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Table 2.

chasing shots, our franchisees typically drive Chevrolet one-ton G-30 vans, built to the company's specifications.

"I won't tell someone that they can't have something else, but if they purchase from us, nine times out of 10 it's going to be a Chevy," Yunker said. Regardless of manufacturer, all vans are accessorized by Yunker and staff to meet company requirements and standards.

"The franchisees have to purchase what we're building at the time. We install all spray equipment, graphics and logos. We put on a 200-gallon pumping unit and customized spreader-sprayer that we build here," he said.

Franchisees have a strong incentive to purchase vehicles through Spring-Green because the company benefits from fleet discounts of \$700 below cost per van and passes the savings along to its franchisees.

"We make our money on our equipment, not on our vehicles," Yunker said.

Most vans are purchased, although a few individuals just get-

BUYING INFLUENCES The following factors have the most impact on

vehicle buying decisions.

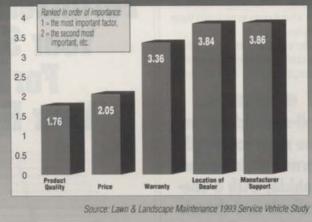


Table 3.

ting started in the franchise occasionally lease them.

Franchisees are responsible for their own truck maintenance, and field representatives from Spring-Greenenforce a maintenance schedule of 3,000-mile oil change, 10,000-mile tire rotation and other standard checkpoints. Appearances also must be maintained to company standards, a contract agreement that is strictly enforced.

"We're very fussy with our franchisee program. If one of the vans starts to look shabby, we tell them to re-paint or else they're in breach of contract which states that it has to be approved by us," Yunker explained.

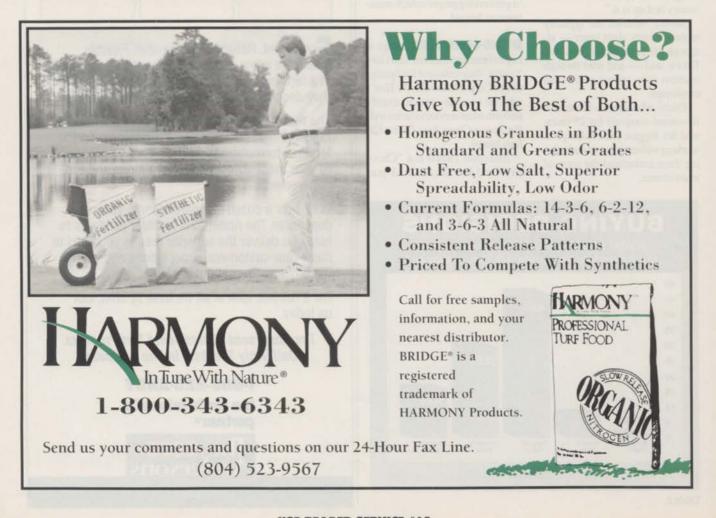
Yunker believes that trucks and vans today, regardless of manufacturer, don't stand up to wear and tear like older models. Alignments, for example, have to be checked more frequently than in the past, and ball joints are replaced more often. He concedes, however, that vehicles today ride better.

Dealership cooperation is important to lawn and landscape maintenance professionals as they look for the best price and favorable service agreement.

"We are a fleet buyer so it makes no difference what dealership we go with. They have to give it to me at fleet price," Yunker said.

Consequently, "a lot of dealers will not stock vans for me. But they'll call me up if someone else wants to buy a truck and see if I need one. They work with me very well."

The author is a Contributing Editor to Lawn & Landscape Maintenance magazine.





Mother Nature severely tested NuStar before its discovery.

Jacklin Seed Company found the mother plant of its NuStar Kentucky bluegrass in the unlikeliest place — a roadside in eastern Washington 40 miles from civilization. An environment so arid that less than ten inches of precipitation fell each year. NuStar was green — all other plants around it were brown from drought.

After years of official testing at Rutgers University, NuStar passed with flying colors. In fact, this moderately dense, dark green bluegrass ranked in the top ten out of 228 varieties in overall turf quality during the Rutgers trials. NuStar received top marks against powdery mildew and summer patch, plus excellent resistance to leafspot, melting out and leaf rust. NuStar also scored high against wilting due to drought.

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GREATER DESIGN FLEXIBILITY The PS Spray with Adjustable Arcs

The Hunter S-Type PS spray head with built-in nozzle is perfect for small turf and landscape areas. Adjustable arcs allow greater design flexibility in all residential and commercial sites. The PS spray is also easier to install because the built-in nozzle is an integral part of the sprinkler and no assembly is required.

The PS is available as a shrub model, 2" or 4" pop-up, and a side strip with matched precipitation achievable between all models.

- · Fixed, full-circle also available
- Adjustable: .2 to 5.3 GPM, Radius: 4' 19'
- · Two-year, over-the-counter exchange warranty



2" or 4" Pop-Up

Shrub Head

S-Type

Arc and radius are easily adjusted.



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IRRIGATION TRAINING SERIES

THE RIGHT STUFF

A little preventive maintenance goes a long way toward maintaining irrigation systems in the landscape.

By Larry Keesen

MOST PROPERTY owners don't realize the importance of preventive maintenance for the irrigation system. They only react when a dry spot appears in the landscape or a leak causes damage. The irrigation system is like any other mechanical device. It requires periodic maintenance to sustain proper performance and longevity.

Irrigation systems should be checked periodically for various adjustments, cleaning and functioning. The frequency is determined by the quality of the equipment and the installation. If the equipment is not installed properly, mowing equipment may cause repeated damage to the heads and valve boxes.

Photo: Bob Barnes, Creative Annuals, North Ridgeville, Oh.

This pop-up irrigation head is spraying water onto the fence because it was installed facing the wrong direction. Photo: Larry Keesen.

Older (more than 10 years) and poorly installed systems may require weekly maintenance, after every mowing. Other systems can be inspected biweekly and newer, quality systems can be checked every three or four weeks.

See the box below for the recommended irrigation inspections and how often it's needed.

If you have additional ideas, let me know. Irrigation systems with good preventive maintenance programs last longer, perform better and provide a healthier landscape.

WINTERIZATION. If the system is installed in a region subject to winter freezes, it's necessary to protect the equipment from possible damage. Irrigation in freezing climates has always challenged designers, contractors and maintenance personnel.

When water freezes in an irrigation system it expands enough to break the pipes, valves and heads. Most freeze breaks occur in backflow prevention devices and polyvinyl chloride pipes resulting in expensive repair bills, flooded buildings and damaged structures, with tremendous liability for all involved.

To complicate matters, a freeze/thaw cycle can occur in some winter climates. This allows water to re-enter the system via the irrigation heads and cause freeze damage even if the system is drained. **EQUIPMENT.** Protect an irrigation system from damage by using freeze resistant equipment that allows for removal of water from the system.

First consider the pipe. There are two types of pipe commonly used in landscape irrigation systems. The first, PVC, is a semi-rigid, high-pressure (160 psi and higher) pipe. The second type is polyethylene (Poly) which is a flexible, low-pressure (between 80 and 100 psi) pipe.

In most cases, use PVC for the system mainline. PVC will withstand the higher water pressure and the potential water hammer found in many mainlines. If you are installing a residential irrigation system, however, Poly pipe with a pressure rating of 100 psi or more is acceptable for short mainlines.

Poly pipe — used instead of commercial grades of pipe — is the best choice for lateral lines because it is flexible and more resilient. This is true only if it is NSF (National Sanitation Foundation approved). NSF pipe has better quality control during manufacturing as well as heavier wall thickness. This prevents major freeze damage even if the pipe is full of water all winter.

Install mainline pipe at a depth of 18 to 24 inches if the pipe size is 4 inches or less. Lateral lines are located at a more shallow depth. Pipe installed any deeper makes maintenance more difficult. It is senseless to bury the pipe below frost

IRRIGATION INSPECTION CHECKLIST

WEEKLY TO MONTHLY INTERVALS:

- Arc and radius coverage adjustments
- · Proper head alignment
- Damaged equipment
- Potential liability
- Leakage
- Cleaning system filters
- Seeping control valves
- Slow closing valves

ANNUAL MAINTENANCE:

- Lubricate pump
- Test backflow preventers
- Review system operating pressure
- · Check nozzle wear if sediment enters system
- Test controller backup battery
- Flush drip filters
- Winterize where applicable
- · Activate system where applicable

level because all the risers leading to the surface will freeze. Additionally, frost levels vary year to year.

For smaller systems all-plastic, automatic drain valves with resilient seal closings at about 10 psi of pressure, are appropriate. Brass and stainless steel automatic drain valves are not as effective because they corrode rapidly from the constant exposure to moist air during the winter. Plasticautomatic drain valves can be used, but every time the system is oper-

ated, water in the lateral lines will drain out of the pipe. This results in wasted water and potential wet spots in the landscape setting.

The King plastic drain valve is one of several available in the industry. A selfdraining system using the King drain on mainlines is feasible unless the mainline or backflow preventer is more than 20 feet above the automatic drain valve. With more than 20 feet of head, the water pressure is in excess of 8 psi at the drain valve, preventing the drain valve from opening. This valve is ideal for residential and small commercial irrigation systems.

For best results, manual drain valves



should have a rising stem, rubber seat, brass body and angle configuration. A rising stem valve keeps the valve open when there is no water in the line. Drain valves vary in size from 3/4-inch to 2 inches depending on the size and length of the line being drained, as well as the time allowed for draining.

Use 3/4-inch to 1 1/2 inches of clean gravel for the drain sump. Wrap the gravel and valve box with a filter fabric (see illustration on p. 60) to prevent soil from entering the system. Drain sump sizes will range from 1 to 9 cubic feet depending on the size of the drain valve and the soil type. Use a small drain sump in sandy soil and a larger one in heavy clay soil. Drain valves can be drained to daylight by piping from the drain valve to a point above grade.

Designers and contractors should provide written winterization instructions to the owner or maintenance contractor. In reality, however, when the as-built plans are furnished 95 percent always seem to get lost because of the turnover in owners and maintenance personnel. Solve this problem by installing as-built irrigation plans that are reduced in size and laminated for installation in the controller door. This will at least help the maintenance personnel locate equipment and maintain the system. Good as-builts are important.

WATER REMOVAL.

You can remove the water from the irrigation system by using one of the following techniques:

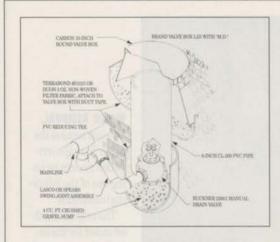
The original method called for the installation of manual drain valves at all low points in the system. This was modified in the 1950s to include the use of brass ball check automatic drains on lateral lines only.

Systems with drain valves are more expensive for initial construction, and require pipe installation with at least a 1 percent slope toward all low-drainage

points. Manual drain valve boxes should be at least 10 inches in diameter for easy spotting. Systems with drain valves allow water re-entering the system to pass through.

A second technique is to blow the water out of the system with compressed air. This method was originally developed because as-built drawings had a tendency to get lost. As a result, maintenance personnel couldn't locate manual drain valves or feel confident that they found all the drains. This method is now most common, and is needed when sprinkler heads are installed with check valves in the base of the head.

Blowing out the system with com-



pressed air is not foolproof and can leave water in the lines. But it has proven effective when done properly. In some situations — such as a drainage swale where piping dips through a low point — the air can blow the water out of the top part of the pipe and leave water in the bottom to freeze. This can weaken the pipe and A sample manual valve detail drawing from Keesen Water Management. Not drawn to scale.

cause it to break in the future.

To reduce the potential for damage, never exceed 100 psi of pressure at the air compressor. Blowing out the system with compres-sed air can be a more expensive procedure than using drain valves.

At Keesen Water Management, irrigation systems are designed to

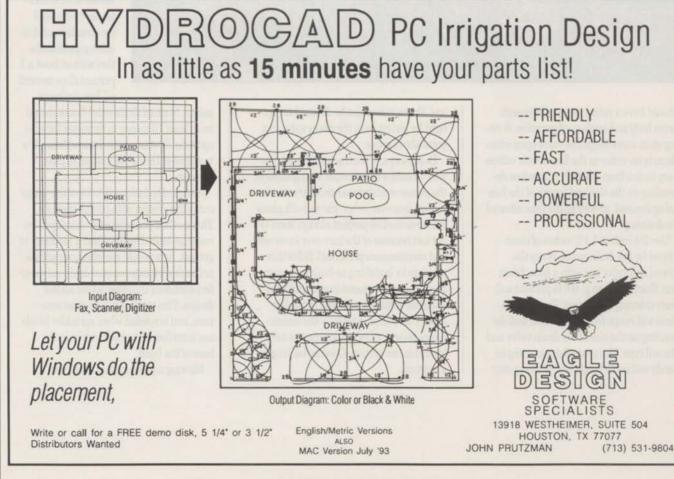
use a combination of the two methods. The system is designed for blowing out the water with compressed air, and a quick coupler valve is installed immediately downstream of the backflow preventer to be used as the point of connection for the compressor.

A word of caution: Compressed air can

be hot when it emerges from the compressor. At least 100 feet of hose is recommended between the compressor and the system to allow the heat to dissipate. We also require manual drains at major low points in the system, and poly lateral lines without automatic drain valves. Insulated enclosures are also used to protect the backflow preventers from freezing in early spring and late fall.

When installing 12-inch pop-ups, always use the bottom inlet to connect the head to the lateral pipe. This will help prevent water freeze damage to the popup head body and avoid debris accumulation in the bottom of the head.

Leave the electricity to the automatic



LESSON FIFTEEN

TYPICAL SHUTOFF INSTRUCTIONS

1. Close water supply valve(s).

2. Connect the compressor to the system.

3. Start pumping compressed air into the system only after the first station on the controller is activated or opened. If no valves are open, severe damage can result from the high air pressure in the mainline. At the automatic controller, cycle through each station, allowing each valve to open for approximately five minutes or until all the water is evacuated from each zone.

4. Open manual drain valves.

- 5. Open petcocks and drain valves on backflow preventers.
- 6. Rest easy the entire winter.

controller on all winter to provide heat and protect sensitive controller parts.

The damage to irrigation systems in freezing climates can be removed by following these directions and designing for freeze conditions.

Next month I will look at system repair, rebuilding or replacement and improving performance.

Thank you for your comments and ex-

pressions of appreciation. Please let us know what other topics interest you.

The author is vice president of Keesen Water Management, 10700 E. Bethany Dr., Suite 103, Aurora, CO 80014.



IRRIGATION QUESTIONS

1. Where do most freeze breaks occur?

2. At what frequency should the irrigation system be checked?

3. Can water re-enter the irrigation system during the winter?

4. What type of pipe is the most resistant to freeze damage?

5. How often should a quality, properly installed system be checked?

6. Can blowing out the system damage the equipment?

Answers appear on page 74 of September LLM.





People

THE TORO CO. appointed **Parker Smith Jr.** to the new position of director, turf care products and services. Smith formerly served as executive director of marketing and sales for Gaylord Entertainment Corp.

Jerry Schweiner was appointed president and chief executive officer of Snapper Power Equipment. Schweiner succeeds Kraig Kramers who had been Snapper's president since 1991. Kramers resigned to pursue other business interests.

Previously, Schweiner served in senior manufacturing positions with John Deere and Simplicity Manufacturing. Most recently, he served as an equity investor and management consultant to Benco Industries.

Melnor Inc. named **Phillip Griffin** president and chief executive officer, replacing **Clarence Yahn** who served as president during Melnor's acquisition by O'Sullivan Corp. Griffin most recently served as corporate vice president of human resources. Yahn will assume an advisory role.

ISK Biotech promoted **Dr. Lewis Kamiri** manager, product development in corporate technology. Kamiri previously served as development and technical manager, Europe, Middle East and Africa. He is now responsible for all insecticide/nematicide products and development.

Dennis Sitar was promoted to president of Nature's Way, Gro-Power's newly established distributor of organic plant food/soil conditioner products. Sitar succeeds **Mike Varner**.

Ingersoll announced the following appointments: Michael Roberts as vice president of operations, responsible for manufacturing, purchasing and engineering. Roberts was formerly vice president of finance. John Brefeld as controller, reporting directly to the president. Brefeld previously served as accounting manager. Jim Balza as customer service manager, responsible for wholegood and service parts order entry and distribution. Balza formerly served as manager of service parts. Chuck Phelps as product engineer, in charge of product design. Phelps was previously product distribution manager. Jack Talin as distributor sales manager, responsible for Ingersoll and Grazer's sales in North America. Talin formerly worked for Gravely International and Yazoo.

Color Spot named **Steve Chamberlin** director of sales and marketing. Chamberlin





Schweiner

Smith

oversees all sales efforts and supervises development of marketing plans and advertising strategies. Color Spot also appointed **Richard Dominge** general manager of its Fallbrook, Calif., facility. Dominge previously worked in retail nursery sales, landscape research and horticulture management.

Automatic Rain Co. appointed **John Holmquist** sales manager. Holmquist was previously district manager for Rain Bird Sprinkler Manufacturing Corp. In addition, Automatic Rain named **Jim Ross** operations manager and **Jim Weller** inventory services manager. Ross oversees personnel for 11 branches throughout northern California; Weller supervises the company's computerized central purchasing and inventory distribution.

How leaves get carried away.

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DIRECT SAFETY Co. offers Crew ZX Series safety glasses with customized fittings. Nose bridge and temple fittings can be adjusted; alternative sizes are included.

The glass lens are available clear, gray or mirrored gray. Frames can be black, blue, orange, red, white or neon yellow.



Crew ZX Series glasses meet ANSI Z87.1 standards. Circle 126 on reader service card

The quick Compost Activator from Flowtron Outdoor Products is an allnatural, organic compost additive for accelerating chemical and bacterial action.

The compost activator helps turn leaves, grass clippings, pine needles, wood chips, kitchen scraps and other organic materials

PRODUCT SPOTLIGHT

Products

JACOBSEN'S AERO King 1321 seeder has a 21-inch seeding width and operating speed of 2.5 mph, enabling it to seed 23,000 square-feet per hour. Seed outlets are set 1 1/2 inches apart.

The Aero King's weight is evenly distributed over the rear-drive wheels for easier handling on hills and uneven terrain.

The seeder, geared for prepared ground or over-

seeding, features a double-bin seeder for planting two varieties simultaneously. The vertical mowing blades can be used independently for vertical mowing or dethatching applications.

The unit is powered by an overhead-valve, 13-h.p. Honda engine and has a 6:1 gear reduction.

Circle 125 on reader service card

into rich compost in 20 to 30 days. It contains 100 percent natural nitrogen and organic proteins which speed up decomposition. The bacterial action creates temperatures up to 160 degrees F, killing roots and weed seeds.

The activator helps make up to 1,000 pounds of moist humus when added to a

bin, bag or pile of composted materials. Circle 127 on reader service card

The AEM bulk material pneumatic spreader from **Finn Corp.** conveys wood mulches, compost and a variety of bulk materials through a flexible hose 150 feet long and 4 inches wide.

Small ad.

Big software value.

The HANDY RAMP ENDGATE

Slips on and off like a regular endgate, no drilling required! Takes less than 30 seconds to install! Weighs less than 110 lbs. yet loads any object up to 2,000 lbs. without needing extra personnel. It mounts on the same latching system currently used on all full size 1/2 - 1 ton pickup trucks and folds out into a ramp that allows any item to be loaded without backing into a ditch or using planks that can slip. Easily load: Riding lawn mowers, snowmobiles, ATV's, motorcycles, core aerators, etc...

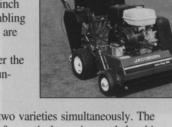
100% all steel construction. 100% USA materials and labor.

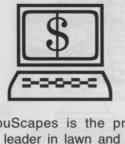
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USE READER SERVICE #29

65

The AEM can be loaded manually with a bucket loader or with a conveyor belt-style inlet elevator.



The spreader is powered by a watercooled diesel engine. **Circle 128 on reader service card**

The Areo-Power Unitized Fueler is an

above ground steel storage tank that provides environmentally safe storage and secondary containment for chemicals and gasoline used in landscaping equipment.

The tanks range in capacity from 300- to 20,000-gallons and provide 110 percent secondary containment with complete overfill protection. They also feature an emergency vent and overflow diverter. **Circle 129 on reader service card**

The Yard Ball compost bin from **DJK Enterprises** holds up to 15 bushels of yard waste or garden toppings for fast conversion to usable organic compost.

The 45-pound, rotary container is made of dark green recycled plastic with U.V.



stabilizers. Its insulated panels snap together to make a 42-inch diameter portable ball. **Circle 130 on reader service card**

The Dose-It portable injector from **Aquatrols** is used to apply AquaGro and other liquid chemical concentrates and

Control At Your Fingertips

Powerful Doane System computer software

helps you manage your landscaping business.

Detailed job costing

Produces fast, accurate bids

fertilizers. The water-driven, in-line injector proportions concentrates from the pail into the water flow, resulting in application anywhere a quick connect valve is located — without a spray rig or the need for additional watering-in.

The Dose-It is transportable and easily adjusted for different types of application. (continued on page 72)



STILL CREATING LANDSCAPING PLANS THE OLD-FASHIONED WAY?

LandDesignerPro is a powerful CAD software



package that automates the time-consuming tasks of designing drawing, and modifying high-quality landscaping plans. Created specifically for the landscaping industry professional, the Pro's built-in flexibility and extended features help you design beautiful landscapes complete with comprehensive cost and materials estimates and irrigation systems.

When you're ready to spend less time at the drawing board and more time winning new business, call:





Product Profile

GAINING EFFICIENCIES IN LANDSCAPE MULCHING

IN THE PRESENT business environment, contractors are looking for better, more efficient ways to operate and complete projects. Not only are plants and materials costly, but labor expenditures — unchecked — can send budgets soaring.

The mulching process is one of the most expensive, individual activities taking place on landscape installation and maintenance sites. On average, a single application of mulch accounts for 8 percent to 15 percent of the total contract price. Therefore, any significant reduction in application costs can have a dramatic affect on the bottom line both yours and/or your client's.

With this in mind, Thornton Gardens of Cincinnati, Ohio, and several other contractors approached Finn Corp. several years ago in search of a more efficient means to apply mulch. The main criteria for the proposed equipment was to reduce labor and material costs while enhancing overall job quality.

What resulted was the Finn AEM spreader, a trailer model pneumatic unit designed to convey mulch, wood chips, compost and other bulky materials. It can be loaded from



The Finn AEM is a time-saver.

a truck bed using the elevator or a bulk pile with a loader. The material is delivered to the bedding site through a four-inch hose at distances up to 200 feet. "We have seen the potential for a 50 percent savings in labor costs using the Finn unit," said Dave Zahniser, team coordinator for Thornton Gardens maintenance division.

As a delivery system, the AEM eliminates repetitive steps to place mulch in a bed. Not only does this save time, it allows crews to work in conditions normally considered too wet. Subsequently, damage to turf from wheelbarrows and heavy equipment in wet conditions is no longer a concern. All material movement occurs through one hose with little personnel traffic. The unit can be used for direct application or as a delivery system from point to point.

In the hands of an experienced team member, the mulch blower leaves a high quality finish. The rate of flow is nearly 70 percent faster than application by hand or with hand tools. In addition, the distribution of mulch is much more uniform than achieved by hand, leading to better use of mulch.

In the past, bagged hardwood mulch was used almost exclusively. With existing methods, job cost analysis show the extra

(continued on page 71)



MULCH MONSTER

The crisis in the waste management industry and the restrictions that apply specifically to "green waste" make the AmeriQuip 250 Chip N Mulch the right product at the right time.

The 250 is built tough for commercial use. A suspended trailer, big capacity mulcher, large shaft and bearings, dual purpose design and a 16 HP OHV engine are all standard equipment. For more information, call:

(800)824-9776

AmeriQuip

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Buyers' Market



Olathe Manufacturing offers the 837TG tub with the following features:

• The compact and portable unit has an 8 1/2-foot tub opening — large enough to accept a wide range of materials, but still small enough to be easily towed with a one-ton truck.

• A Material Management System puts the tub and discharge system on a single control, ensuring that the discharge augers and conveyors are synchronized with tub rotation for the specific material being processed without requiring complicated hydraulic adjust-ments to manually balance the system.

• The 837TG's Hydraulic Tilt Control system lifts the tub forward to a 38degree angle, providing open access to both sides of the hammer mill, screens and augers.

Circle 140 on reader service card



United Elchem Cement Remover eliminates solvent cement from hands after a day's work. The product has been field tested for several years. It is applied to dried cement on the hands and massaged into the skin. After a short interval of time, with a gentle scrubbing action (such as with a wash cloth) the cement can be removed from the hands.

Please visit our booth at the International Irrigation Exposition in San Diego Oct. 30 to Nov. 3. We will be demonstrating this product along with our "Turf-Tite PVC Cement," and handing out free samples of both items. **Circle 141 on reader service card**



Joining the family of reliable, USA-made BlueBird Lawn Combers and Lawn Seeders is the BlueBird Lawn Aerator. Loaded with operatorfriendly features such as adjustable tine depth, removable weights, folding handle and a narrow width for tight spaces, this stable and highly maneuverable aerator is designed to make even the biggest aeration jobs fast, easy and profitable.

Circle 142 on reader service card



Grind yard waste into valuable compost with the HD8 Industrial Grinder manufactured by Haybuster.

The HD8 Industrial Grinder is especially suited to grinding tree limbs up to 6 inches in diameter, pallets, yard waste, wood chips, bark and other demolition lumber into valuable compost, landscape mulch, wood fuel or a variety of organic products.

Circle 143 on reader service card



The Bravo 1002 Advantage from Wheatec helps prevent odors from municipal solid waste, landscaping and composting, as well as invessel, bio-filter and open air odors. It is nontoxic, economical and natural. It controls odors before and during processing, and eliminates costly partial durings.

Bravo is derived from natural plant extract. No chemical dyes or perfumes are used, which makes it biodegradable and environmentally safe. It will not corrode equipment.

Additionally, Bravo aids the decomposition process, helping produce a rich, dark compost. Circle 144 on reader service card



Bandit Industries offers the Model 90 Chipper with a wider frame, heavier axle and a couple of new power options.

Power options include the 33-h.p. Perkins Model 103-15 and 44-h.p. Perkins Model 104-19 diesel engines. Additionally, a 37-h.p. Wisconsin gasoline engine and a 41-h.p. air-cooled Deutz diesel engine are available.

The Model 90 Brush Bandit is a handfed tree and brush chipper which chips everything a tree trimmer can chip, but is less costly to own and operate. The Model 90 has the same feed and hydraulic systems as Bandit's Model 200+. The 9-inch diameter capacity machine weighs about 3,000 pounds, depending on the engine option.

The unit is easy to tow and in most cases can be towed without brakes. The Model 90 is a heavy-duty, industrial chipper that quickly and economically reduces brush to chips.

Circle 145 on reader service card

Buyers' Market



Wood waste, leaves, branches, pallets, grass clippings and other yard waste can be quickly turned into recyclable material with a Farmhand 7000 Tub Grinder from Farmhand Equipment Group. Wood waste up to 6 inches thick, including most pallets, leaves, grass clippings and other materials can be ground into compost, boiler fuel or landscape cover with the CG7000. Grinding typically reduces the volume of these materials by 2 to 10 times, greatly reducing storage area needed for recyclables.

Circle 146 on reader service card



The WOOD.PRO AVP, from the Wood.Pro Products Division of VC Marketing, is a one-hopper, all-vegetation processor. It uniformly reduces organic debris without sizing rods or screens. The AVP handles everything from leaves and weeds to brush and tree limbs through one hopper.

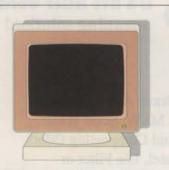
The WOOD.PRO AVP processes all types of vegetation, is nonclogging, high capacity and fastfeeding. It is available in tractorpowered take-off models, and engine-powered towable and landscaper platform models. **Circle 147 on reader service card**



Anthony Groundskeeper Co. offers three low-cost yard waste removal and recycling systems.

A self-contained, trailer-mounted version of the pickup model is available with 18-h.p., 23-h.p. or 30-h.p. engines and a range of intake hose lengths. An axlemounted, pull-behind truck loader is available with a 23-h.p. Kohler twin-engine with a 12-inch by 10-inch intake hose and 25-inch impeller or a 30-h.p. Wisconsin V4 engine with a 16-inch by 8-inch intake hose and 25-inch impeller.

A high-capacity model designed to mount on a hydraulic flatbed or dump truck is constructed of fiberglass-reinforced plywood with aluminum roof, side molding and top corner castings. Available in either 23-h.p. or 30-h.p. models in 8-foot to 14-foot lengths, this unit's capacity ranges from 18.5 cubic yards to 33 cubic yards and can also be custombuilt for special applications. **Circle 148 on reader service card**



Billmaster software from Customized Business Software is a complete billing system designed to fully meet your business needs. Billmaster provides quick and professional invoicing, flexibility to track multiple businesses and thousands of accounts.

The user has instant access to account information, transactions and balances. The program contains powerful features such as routing, scheduling, tax reports, inventory contracts and proposals. Billmaster also provides unlimited TOLL-FREE training and support. Free demo disks are available.

Circle 149 on reader service card



The new Sundance KID II Grinder with a hopper opening of 8 by 3 1/2 feet, loading height of only 4 feet and totally enclosed grinding action assures safe and efficient performance. Hydraulic cylinders push the feeder with material to the spring-loaded feed roll and rotating 1,500-pound, 84hammer rotor. The 8,200-pound grinder easily handles 9-inch diameter brush and construction waste as well as wet yard waste for ideal particle reduction. Circle 150 on reader service card



Amsoil Inc.'s AGGRAND natural and organic sprayable liquids are effective, convenient and economical.

AGGRAND Natural Lime Plus is extremely fine lime with chelated iron. Rapid pH adjustment. Quick green-up.

AGGRAND Natural Organic Dethatcher decomposes thatch and releases thatch-bound nutrients.

AGGRAND Natural Organic Compost Accelerator activates compost microorganisms.

AGGRAND Natural Organic Fertilizer is a complete nutrient package and bioactivator. It may be applied as a foliar spray for quick green-up. **Circle 151 on reader service card**

Calendar

OCT. 2-5 American Society of Landscape Architects Annual Meeting, Chicago Hilton & Towers. Contact: Jan Rothschild, ASLA, 4401 Connecticut Ave. NW, Washington, DC 20008; 202/686-8319.

OCT. 3 ASLA/ALCA Design/Build Symposium, Chicago. Co-sponsored by the Associated Landscape Contractors of America and the American Society of Landscape Architects. Contact: ASLA Member Services, 202/686-2752 or fax, 202/ 686-1001

OCT. 5-7 Horticulture From Around the World Annual Convention and Trade Show. Tulsa, Okla. Contact: Oklahoma State Nurserymen's Association, 400 N. Portland, Oklahoma City, OK 73107; 405/942-5276.

OCT. 5-8 Interstate Professional Applicators Association Convention, Salishan Lodge, Oregon. Contact: IPAA, P.O. Box 1377, Milton, WA 98354-1377.

OCT. 6-7 33rd Annual Southern California Turfgrass Expo, Orange County Fairgrounds, Costa Mesa. Contact: Linda Knoche, Southern California Turfgrass Council, 1092

Tanya Lane, Unit B, Fallbrook, CA 92028; 619/723-0947.

OCT. 9-10 Certified Landscape Technicians test, American River College, Sacramento. Contact: Kim Heckes, California Landscape Contractors Association, 2021 N St., Sacramento, CA 95814; 916/448-2522.

OCT. 11-13 Northwest Turfgrass Conference, Holiday Inn at Yakima, Wash. Contact: Northwest Turfgrass Association, 206/754-0825.

OCT. 31-NOV. 3 International Irrigation Exposition and Technical Conference, San Diego Convention Center. Contact: IA, 8260 Willow Oaks Corporate Drive, Suite 120, Fairfax, VA 22031; 703/573-3551.

NOV. 1-2 Southwest Outdoor Power Equipment Show, Arlington Convention Center, Arlington, Texas. Contact: The Service Dealers Association, 1946 S. IH-35, Suite 100-A, Austin, TX 78704-3693; 512/443-7999.

NOV. 1-3 National Institute on Park and Grounds Management Show, Sheraton Denver Tech Center, Colorado, Deadline for

reservations is Oct. 10. Contact: NIPGM, P.O. Box 1936, Appleton, WI 54913; 414/733-2301.

NOV. 9-12 Turf and Grounds Exposition, Rochester Riverside Convention Center, Rochester, N.Y. Contact: New York State Turfgrass Association, 800/873-TURF or 518/ 783-1229.

NOV. 14-18 Green Industry Expo, Baltimore, Md. Co-sponsored by the Associated Landscape Contractors of America, the Professional Grounds Management Society and the Professional Lawn Care Association of America. Contact: GIE, 1000 Johnson Ferry Road, NE, Suite C-135, Marietta, GA 30068-2112; 404/973-2019.

NOV. 17-19 TheComposting Council's Fourth Annual Conference, Vista Hotel, Washington, D.C. Contact: CC, 114 S. Pitt St., Alexandria, VA 22314; 703/739-2401.

DEC. 7-9 Georgia Turfgrass Conference and Show, Georgia International Convention and Trade Center, College Park. Contact: Georgia Turfgrass Association, 5198 Ross Road, Acworth, GA 30102; 404/975-4123.

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Product Profile

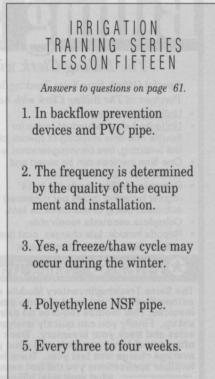
(continued from page 67)

cost of bagged mulch vs. bulk mulch was outweighed by the savings in labor and equipment costs. The AEM Spreader allows the user to apply bulk materials and take advantage of cheaper material costs without sacrificing labor costs.

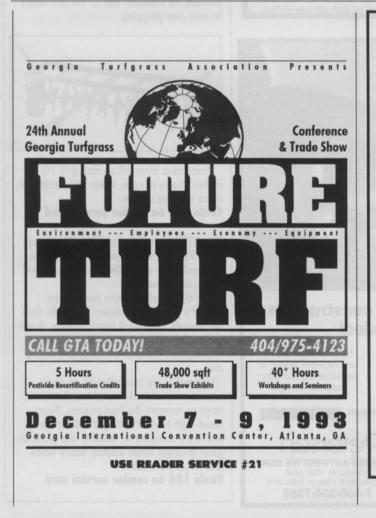
"We've shown a material savings of nearly 40 percent over the past four months," Zahniser said. In addition to the maintenance and landscape divisions, Thornton Gardens includes two retail centers, a 280-acre nursery and a wholesale division. This depth allows plenty of opportunities to broaden the scope of the AEM spreader. Experiments slated for the near future include: Delivery of organic amendments to beds prior to landscape installation, healing in nursery stock for the winter months and applying seed/mulch mixtures for turf installation.



The flow rate with the Finn spreader is said to be 70 percent faster than if done by hand.



6. Yes, from hot air.







Products

(continued from page 66)

(clts concentrate ratios range from 1:04 to 1:500.

Circle 131 on reader service card

Toro's Irrigation Division offers the 570 MPR Plus nozzles and 570Z Series sprinklers.

The 570 MPR Plus nozzles match precipitation rates, ensuring even distribution of water. The radii of the nozzles measure 5 to 15 feet, but with the twist of a screw they can be reduced 25 percent. The radii are color-coded, making the nozzles easy to identify and install.

The 570Z Series sprinklers feature an improved low-pressure seal which flushes only upon retraction, ensuring reliable popup since debris washes away from the head. The sprinklers pop up and seal at 15 psi, minimizing flush and maximizing gallonage. **Circle 132 on reader service card**

The model 48-inch swath, 2340-48 TurfVent core plug aerator from Feldmann is designed similarly to the 32-inch model pull-behind. It can be hitched to a tractor or rider mower with a hitch pin and draw bar. The lift-up handles pop the 10-inch pneumatic tires into position for transport and let the unit down to start core plugging.



Penetration from 1/2 an inch to 2 1/2 inches allows oxygen, water and fertilizer to reach the root system. **Circle 133 on reader service card**

The PTO-driven, disc-style brush chipper from Vermeer is designed to cut the time, cost and labor of handling brush and wood materials reduction.

The 606 Brush Chipper runs off the tractor's power and features hydraulic feed for smooth, controlled brush feeding. A self-feeding roller drags brush material into a housing that contains the chipper's cutting disc.

Hydraulics are controlled by an easyaccess, manual-feed control bar that starts, stops or reverses the feed process. Near waist-high feed table height reduces unnecessary stooping or bending and provides good leverage when loading heavy limbs and larger materials.

Circle 134 on reader service card

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All classified advertising is 75 cents per word. For box numbers, add \$1 plus six words. All classified ads must be received by the publisher before the first of the month preceding publication and be accompanied by cash or money order covering full payment. Submit ads to:*Lawn & Landscape Maintenance* magazine, 4012 Bridge Ave., Cleveland, OH44113. Fax: 216/961-0364.

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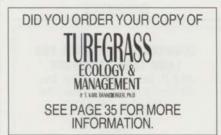
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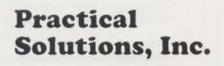




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