Lawn & Landscape

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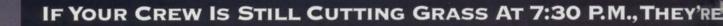
Matching Mowers To The Task

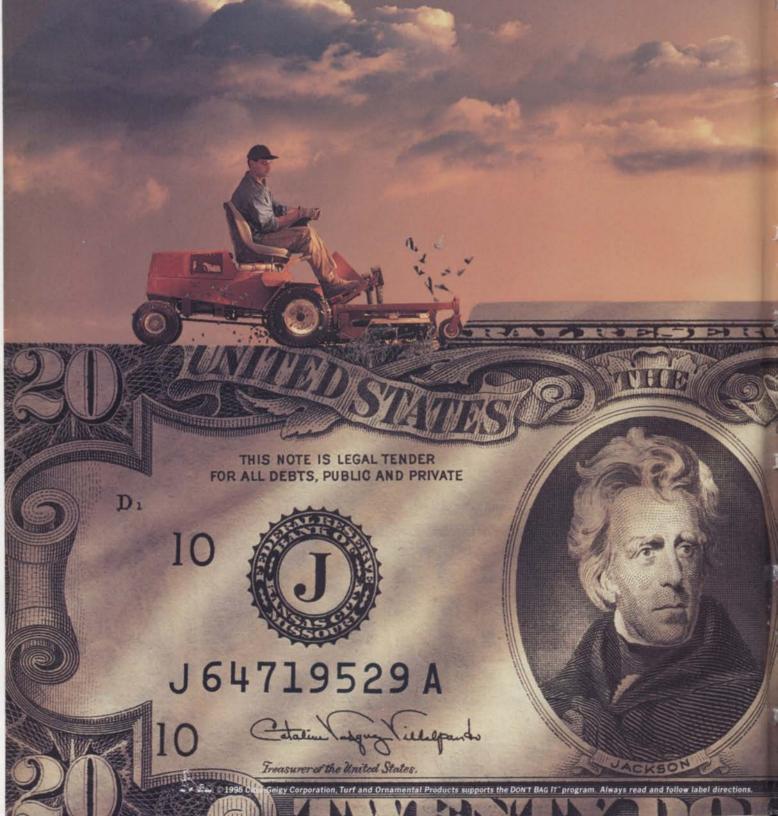
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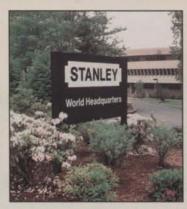
Instead of paying someone else time and a half.

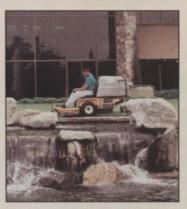


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Lawn & Landscape MAINTENANCE

VOLUME 16, NUMBER 1

JANUARY 1995

Cover photo: Richard Benkof St. Louis, Mo.

FEATURES

24 Cover Story: Balancing Act

In 11 short years, Gerber Landscape Solutions has become a major force in its market. The secret? A careful balance of services and remembering its "roots."

38 Fitting the Right Mower to the Job

Rotary mowers are king for most landscape contractors, but special circumstances require specialty mowers. The choice is almost as varied as the terrain.

42 Water Conservation — A Tough Sell

Many consumers are still reluctant to accept water conservation strategies for their landscapes. Some contractors have persuaded their clients that the investment pays off.



p. 24



p. 38

48 Entering the Interior Market

Successful interior plantscaping requires a high level of plant maintenance skills plus the ability to relate well to a different breed of customer than the exterior customer.

56 Check Soil Fertility for Plant Health Problems

Drought, insects and disease often are blamed for turf and ornamental damage, but the real problem might be low soil fertility.

62 GIE Show Review

The fifth annual Green Industry Expo attracted large numbers of exhibitors and attendees. Most of them are enthusiastic about business prospects in the coming year.

66 Weed Biology:
Taking a Measure of the Competition

Weeds are some of the most competitive plants around. Knowing how weeds get their competitive edge can give healthy grass a winning chance.

73 Business Management Series: Long-Term Success

Experts can't stress enough the importance of following a careful business plan, managing well and having a professional attitude.



p. 48

DEPARTMENTS	of he veet the		
100 Advertisers' Index	8 Business Watch	6 Editor's Focus	13 News in Brief
18 Association News Green Industry Expo board elects new officers; Anheuser-	95 Calendar	10 Environmental Forum Responsible use, not the pesticides, worries the public more.	82 People
Busch receives landscape contribution award; National composting program gets \$60,000 EPA grant.	101 Classifieds	22 Landscape News	84 Products

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Editor's Focus

AFTER A COUPLE of months of posturing, office musical chairs and political boasting, the 104th Congress gets down to business this month. Let's hope they get down to business.

The mandate for change overwhelmingly passed by the American public in the midterm elections should give our elected officials plenty of food for thought. It was more than just party politics. It was poor leadership and selfishness by the majority of Congress — not any party in particular. After all, it was just two years ago that the Republicans were swept out of office in favor of the Democrats. How long can these party sweeps go on?

Two years after the Democratic mandate, Americans can't really say they are better off (although the economy did come around in 1994). But will the Republican insurgence make any difference in the long run, or will gridlock continue?

Because of the anti-pesticide stance the Clinton administration has taken, many industry officials are looking forward to the chance to work with a Republican administration; primarily in a proactive fashion. Republicans won about 54 seats in the House and nine in the Senate to take majorities in both chambers for the first time in 40 years. (That's a generation to most of us.)

Private discussions have already taken place with the new heads of committees in an effort to educate our elected officials on the business of specialty pesticides and the professional lawn and landscape industry. Let's hope we're not wasting our breath.

The American public is counting on the Republicans and their "Contract for America," but the Republicans, if they are to succeed, can't spend too much time gloating over their landslide win.

Here's a synopsis of what the Republican Congress has in store for us this year and next:

- Balanced budget amendment and lineitem veto
- Modifying the crime bill
- · Middle class tax cut
- Legal reform/product liability issues
- · Congressional term limits
- · National security

In short, they probably won't spend too much time debating environmental issues and whether or not pesticides should be used on our lawns and golf courses.

The Republicans have set an ambitious political agenda to say the least, but can they deliver? The stakes are high. The public is already extremely cynical of government and if change doesn't occur in a relatively short time, there will be another groundswell in 1996.

The next 12 months will be interesting to



say the least. I hope for all business people the change is for the better.

The lawn and landscape industry itself shouldn't see too many unexpected changes this year. Posting and prenotification issues should continue, although the pace has slowed considerably.

As a matter of fact, most lawn service professionals I've been in touch with don't even consider posting an issue. It's performed as a service whether or required by law. Often, posting is a great form of advertising for the service professional since the company name and phone number are listed for all to see.

New products are popping up on both the pesticide and equipment sides of the industry enabling contractors to perform their jobs more efficiently. This is particularly important in terms of the continued evolution of service diversification.

While suppliers can provide contractors with new delivery tools and contractors can provide their customers with additional services and package programs, none of this can be accomplished without improved professionalism.

In this issue and throughout the year, the readers of LLM will find a series of business articles designed to educate, inform and reinforce the importance of running your firms like businesses. Not only is it important to your bottom line, it's significant to the overall impression the public has of the lawn and landscape industry.

While our customers have as yet to issue a mandate for a change in professional performance, it's the responsibility of each and every contractor to remember the industry's reputation as a whole, as well as your individual image, when dealing with the public. Let's hope the growth and goodwill of 1994 carries over to 1995. — Cindy Code •

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Business Watch

THE KEOGH ALTERNATIVE

AS AN ALTERNATIVE to SEP-IRAs, some self-employed individuals may wish to adopt profit sharing or money purchase pension plans — also known as Keoghs — as one of their business' retirement funding vehicles. There are several reasons why you may wish to fund a Keogh rather than a SEP.

 Contributions. Annual contributions of up to the lesser of 25 percent of compensation or \$30,000 are permitted per participant if you, as an employer, adopt a money purchase pension plan or a combination of the profit sharing and money purchase plans. Contributions are made with pre-tax dollars and grow tax deferred.

 Eligibility. Employees generally must be 21 years old and have completed two years of 1,000 hours of service per year before they become eligible to participate in these plans. This restriction may enable you to exclude some of your part-time employees from participating in profit sharing or money purchase plans — which adds to the plan's cost-effectiveness.

• Distributions. If participants in these plans meet the requirements of the IRS for special income tax averaging treatment, they may be able to take advantage of this valuable tax-planning strategy when they receive lump-sum distributions from their plan. Participants should confer with a tax adviser to determine whether to take advantage of this special tax treatment option.

When choosing among a SEP-IRA, a Keogh or any other type of retirement plan, be sure to consider the advantages and

disadvantages of each option, in light of your particular business needs. — John Houlihan, Dean Witter Reynolds Inc., Melville, N.Y.

	SEP-IRA	KEOGH
WHO MAY ESTABLISH	Self-employed individual Partnership, S Corporation or Corporation	Same as SEP
ESTABLISHMENT DEADLINE ELIGIBILITY	Tax filing date plus extensions Must include all employees 21 and over who have worked 3 of past 5 years and earned at least \$300 during year	End of fiscal year All full-time employees 21 and over with 1 year of service credit (2 years if fully vested)
CONTRIBUTION LIMIT	Lesser of 15% of compensation (up to \$150,000) or \$30,000 - 1994 limit is \$22,500.	Lesser of 25% of compensation (up to \$150,000), or \$30,000 (if you use Money Purchase or combined plans)
TAX TREATMENT	Taxed as ordinary income, plus a 10% penalty tax if under age 59 1/2.	Generally, same as SEP. However, individuals may be eligible for favorable tax treatment (5- or 10-year forward averaging)
GOVERNMENT FILING REQUIREMENTS	None	Yes. Generally IRS Form 5500

SAVING FOR RETIREMENT

In these economically challenging times, one convenient way to increase personal responsibility is through retirement-funding and wealth-building vehicles known as Simplified Employee Pension plans or a Keogh.

Under the terms of a properly established SEP plan, self-employed individuals can manage their tax bills and save for a comfortable tomorrow by making tax-advantaged contributions to their Individual Retirement Accounts. This unique arrangement is the reason why these plans are also referred to as SEP-IRAs.

Tax advantages to opening a SEP-IRA plan include:





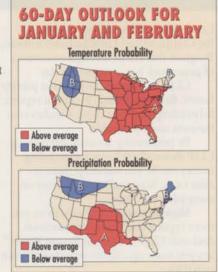
*Assumes \$2,000 annual contribution made on January for each of 30 years. 8% return, 40% combined federal, state and local income tax bracket. This table is for illustration purposes only.

Source: Dean Witter Reynolds

- In 1994, SEP-IRA contributions are tax-deductible for any amount up to 15 percent of the first \$150,000 of your net earned income or \$22,500. The amount you contribute can vary each year or be omitted entirely.
- Since your SEP-IRA plan assets are placed within an IRA, your
 earnings accumulate on a tax-deferred basis. Tax deferral can greatly
 accelerate the growth of your assets, compared with currently taxable
 investments, and can thus provide you with a larger pool of capital for
 your retirement.
- Persons under the age of 70 1/2 who contribute to a SEP plan may also make annual contributions to an IRA in an amount up to 100 percent of their earned income or \$2,000 (whichever is less). Supplementing your SEP contributions with tax-deferred IRA contributions could increase your retirement savings.— John Houlihan, Dean Witter Reynolds Inc.

The National Weather Service's 60-day outlook through February calls for a mostly mild winter nationwide with at least a 55 percent chance of above normal temperatures over roughly the eastern half of the country, except for the northern and eastern portions of the Great Lakes, New York and New England areas.

Below normal temperatures are expected with at least a 55 percent probability only over the northern and central Great



Basin, and northern Maine. A 55 percent probability for above median precipitation exists along the southern border of the nation.



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Environmental Forum

RESPONSIBLE USE. The public knows the benefits of specialty pesticides but worries about responsible use, according to an opinion survey commissioned by Responsible Industry for a Sound Environment. The survey, conducted by Charlton Research Co., combined 8 focus groups in sessions lasting 1 1/2 to 2 hours with telephone surveys of 1,000 adults. Its goal was to assess attitudes about pesticide values and risks.

RISE reported that many consumers "clearly see the benefits of pesticides and are willing to balance their personal and environmental health and safety concerns with these perceived benefits." The participants also believed pesticides were safe when used as directed, but were uncertain whether their neighbors used pesticides safely. The survey also noted that consumers believe professional applicators use stronger pesticides, but were trained in their proper use.

The focus groups, held in Pittsburgh, Seattle, Milwaukee and Birmingham, asked small groups of people their opinions. Other key results of the survey include:

- Most people use some form of pesticides. Controlling household insects/rodents ranked first at 64 percent; garden care/outdoor insects came in second at 48 percent; and lawn care ranked third with a 38 percent response.
- Control of termites, insects and bacteria for personal health and safety got higher consideration than having beautiful lawns or minimizing highway maintenance costs. When personal protection becomes important, most people will override their initial concerns about pesticides.
- About 1/2 of the respondents believe pesticides are tested before they are available to the public; the remaining respondents were unsure.
- Extension services, poison control centers and departments of health were the most trusted sources of information on pesticides.
- "Maintaining public health" was the reason 8 out of 10 people gave for using pesticides in public areas.

Allen James, executive director of RISE, commented that the survey revealed several opportunities to educate the public.

POSITIVE PR. Investments by two of this industry's major associations in public relations programs have paid off in frequent and positive exposure in the media.

The Professional Lawn Care Association of America reported that its spring press kit



campaign sent to 3,000 newspapers and magazines reached about 12 million readers and generated nearly \$35,000 in free space. PLCAA's two-part video news release was sent to 200 television stations, generating an estimated 18.4 million impressions and gaining \$566,400 of free air time in 236 telecasts at 195 stations.

Add those figures to PLCAA's recent Grasscycling TV public service message, which received 3,452 telecasts, to generate another \$1,380,800 of free air time.

In similar efforts, the Associated Landscape Contractors of America reported on its developing relationship with NewsUSA, an agency that writes and places nationally syndicated columns. The group has developed six newspaper columns on the value of professional landscaping, interior plantscaping advantages, real estate values, business benefits from plantscaping and other topics.

ALCA estimated that more than 22 million people were exposed to those messages, amounting to more than \$500,000 in free space. ALCA's two radio spots have gotten more than 1,000 airplays to approximately 12 million listeners, at a value of about \$50,000 free air time.

TOXIC USE REDUCTION. Mandated Toxic Use Reduction (TUR) is the wrong approach, warned Dr. Donald Theissen of 3M Company, at the Chemical Specialty Manufacturers Association Environmental Affairs Conference. He noted that a movement to redefine pollution prevention via TUR will further restrict the use of chemicals regarded as toxic.

Theissen explained that while industry has used TUR techniques to reduce risks,

mandates for TUR will not achieve pollution prevention goals. "The TUR approach is a simplistic solution to a complex problem which ignores the intrinsic benefits of chemicals and the importance of science and risk in making decisions regarding their use," he commented.

The approach, which uses lists of regulated chemicals, would "divert resources away from a generally sound product stewardship approach." He recommended that Toxics Use Management, an approach that reduces overall risks associated with manufacturing, transporting, use and disposal would be a better method.

STRATEGIC PLANTINGS. The

American Association of Nurserymen reported that a recent study from American Forests' Cool Communities

programs proves that shade trees save millions of dollars in energy costs. A study of Frederick, Md., used aerial photography to analyze the relationship between trees, buildings and energy use.

One neighborhood with mature trees was compared to a new development with young trees to show how strategic plantings can save additional money as the trees mature. In this study, Cool Communities found that a potential savings of more than \$3 million existed if more trees were planted.

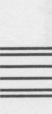
Cool Communities is a program seeking to improve the environment by strategically planting trees and cooling heat-absorbing surfaces. It is directed by American Forests in cooperation with several federal and industry sponsors. A similar study in Chicago determined that planting 95,000 trees would bring \$38 million in environmental and economic benefits over 30 years.

Cool Communities currently monitors model projects in Georgia, Texas, Florida, Illinois and Arizona.

HIGH MARKS. DowElanco and its parent company, Dow Chemical Co., were recognized by *Fortune* magazine as one of the nation's top 10 environmental champions. *Fortune* cited the company's leadership in the following areas:

- Reduced toxic emissions by 32 percent in three years.
- Placed its top environmental officer on the board of directors.
- Organized an advisory council of outside environmentalists to help direct environmental policy
- Established a waste reduction program that cut millions of pounds of solid waste and emissions in 7 years.

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News in Brief

NEWS DIGEST

OPEI Forecasts Increase in 1995

The Outdoor Power Equipment Institute revised its 1995 forecast for shipments of lawn and garden products to reflect an expected increase of 2.3 percent. Twelvemonth shipments for 1994 increased 4 percent over 1993 figures.

The 1995 gain is forecast for all categories of outdoor power equipment except rear engine riders and tillers.

Buckner, Hunter Join Forces in Golf Irrigation

The new Legacy product line is the result of a strategic marketing agreement between Buckner of Fresno, and Hunter Industries of San Marcos, to combine Buckner's golf course irrigation control systems with Hunter's sprinklers.

The Legacy product line includes sprinklers, valves, controllers and accessory items for golf course irrigation systems. Both electric and hydraulic closed-case, gear-driven valve-in-head and check valve sprinklers will be available. Additionally, both brass electric control valves and brass quick-coupling valves will be offered.

Lofts Seed Expands Shipping Operations

The Allentown, Pa., warehousing/shipping operation of Lofts Seed Inc., Bound Brook, N.J., has expanded to serve the mid-Atlantic region. Corporate staff and research divisions will consolidate at the New Jersey location.

Echo Plans Major Illinois Plant Expansion

A 90,000-square foot expansion to the existing 160,000-square-foot facility will more than double the manufacturing facilities for Echo Inc., Lake Zurich, Ill.

Echo plans to complete the expansion by June 1995 for the manufacture of two-stroke engines and outdoor power equipment. The company said it has grown at a rate of 15 percent in the last five years and needs more production capacity.

Mycogen Teams With Florikan for IPM

Mycogen Corp. and Florikan E.S.A. Corp. agreed to work together to create a complete IPM program of biological products. It will include insecticidal soaps, oils, herbicides, pH buffers, moss and algicide products and biological controls.

LESCO Establishes FitzGibbon Scholarship; PLCAA To Award Stipend Annually

WHEN JIM FitzGibbon, 68, co-founder and chairman of LESCO, Rocky River, Ohio, died in October the industry lost a friend, innovator and supporter.

To honor his memory, LESCO established a \$2,500 scholarship in his name to be awarded

annually to an industry student by the Professional Lawn Care Association of America. Mike Dietrich, director of lawn care sales, made the announcement at the PLCAA annual meeting in St. Louis.

Founded in 1962 by James FitzGibbon and Robert Burkhardt as Lakeshore Equipment & Supply Co., the firm began as a local supplier of turf maintenance equipment, including irrigation products, to the markets surroundings its headquarters.

From its inception, LESCO's goal was to become a complete, one-stop supplier to the green industry, and it grew quickly from a regional company serving the Greater Cleveland area to a national company capitalizing on the emerging lawn service market developed by lawn care companies such as ChemLawn.



Mike Dietrich

Today, most sales are generated by LESCO's 138 service centers scattered throughout the South, Northeast and Midwest. Since 1976, sales have been supplemented by the company's fleet of 59 tractor-trailers delivering LESCO fertilizers, pesticides, equipment, aftermarket parts and accessories to golf course superintendents across the United States.

Going direct to golf courses with a unique fleet of fully stocked sales trucks and building a network of drive-through service centers are two examples of the marketing and service that have contributed to the company's growth.

LESCO's 1994 net income is estimated at \$6.6 million a 38 percent increase over the previous year. Revenues are expected to jump 20 percent to \$199 million.

In 1993, LESCO entered the consumer market, test marketing its products at six Home Depot stores in Atlanta. This was initiated shortly before the appointment of William Foley as CEO and president in July 1993. Foley succeeded FitzGibbon who had retired as CEO, but continued as chairman of the board until his death.

Foley brought more than 20 years of successful leadership in the field of consumer products including a stint as vice president and general manager of the consumer business group for The Scotts Co., Marysville, Ohio.

Notable acheivements during FitzGibbon's tenure at LESCO include:

- LESCO is the only national marketer of its own complete product line to the green industry, manufacturing more than 80 percent of what it sells.
- In 1962, LESCO opened its first sales office, hired first full-time sales representative and began selling irrigation products.
 - In 1974, the first LESCO fertilizer was formulated in Wellington, Ohio.
- In 1975, Ron Giffen was appointed its first full-time sales representative to lawn care.
- In 1976, the first LESCO truck began calling on customers in Florida. FitzGibbon credits the inspiration for the idea to the salespeople who carried supplies in the backs of their station wagons or pickup trucks.
 - In 1978, the United States' first commercial sulfur-coated urea plant opened in Alabama.
 - In 1982, a rotary spreader LESCO's first piece of equipment was manufactured.
- In 1983, moved to current headquarters in Rocky River, Ohio.
- An initial public stock offering was made in 1984 and the company's name was shortened from Lakeshore Equipment & Supply to LESCO Inc.
- The first LESCO Service Center was opened in Ft. Lauderdale, Fla., in 1985. Additionally, the company opened its 150,000-square-foot lawn care equipment manufacturing plant in Sebring, Fla.
- In 1986, LESCO's first exclusive-right turfgrass seed Julia Kentucky bluegrass and Cimarron turf-type tall fescue were marketed; the first 300 greensmower was manufactured; and ELLITE greens-grade sulfur-coated urea fertilizer was formulated.
- In 1992, LESCO completed construction of a fertilizer formulating, manufacturing and warehousing facility in Martins Ferry, Ohio. The year also marked the operation of more than 80 service centers in 26 states.
 - · A consumer retail market test was initiated at six Home Depot stores in Atlanta.

Garden Council Revises Promotion Order Steps

In an effort to get more industry segments and geographical regions involved in the "Plants for America" promotion order process, the Garden Council has postponed the industry survey wrap-up until March. It was originally scheduled for completion in December, 1994.

Garden Council executives assigned an action plan at their November meeting in Dallas. The extended time period will allow the council to accurately size the container market, make more industry participants aware of the promotion order, survey them and compile a comprehensive list of growers by the March deadline.

By sizing the container market correctly, the council will enable growers to determine exactly their projected costs at the time of the survey. The promotion order will require participation by industry members to raise \$25 million for marketing.

Early proposals suggested that growers pay an assessment based on a percentage of gross sales. A new proposal, endorsed by the United States Department of Agriculture Marketing Service, requires an assessment to the cost of containers instead.

Composting to Help California Meet Mandate

The Composting Council reported that California is expected to meet its 1995 mandate to divert 25 percent of solid waste from its landfills, primarily because of composting. The California Integrated Waste Management Board noted that an 80 percent increase in the state's composting facilities in three years has had a major inpact on the program's results.

California diverted nearly 23 percent of its solid waste in 1994. CIWMB called for even more increases in composting, finding new recycling markets and cutting waste in an effort to reach the state's diversion goal of 50 percent by the year 2000.

John Deere Redesigns Lawn & Grounds Group

To provide more streamlined product development, focused dealer service and enhanced customer satisfaction, John Deere restructured its Lawn & Grounds Care division into product groups to service their key markets.

Those groups include power products, primarily hand-held and walk-behind

models; lawn and garden products, rearengine riding mowers to lawn and garden tractors; and commercial golf and turf products, commercial, sports field and golf course equipment.

Each product group is charged with developing new products, supporting the retailer organization and filling orders, advertising their products and supporting end users. Overall business development and support services are shared.

"We believe the companies that emphasize product quality, great customer service and unparalleled customer satisfaction are the companies that will succeed in the 21st century," said Mark Rostvold, vice president of the Lawn & Grounds Care division. We're making sure that our product groups can make the important decisions to support all our customers for long-term success."

Memphis Banker Buys Adsit Landscape

Adsit Landscape and Design Firm of Memphis, Tenn., was sold to area banker Robert Pyeatt for an undisclosed amount.

Pyeatt, who left banking to become fulltime owner and president of Adsit, will

(continued on page 16)



DESIGN IMAGING GROUP

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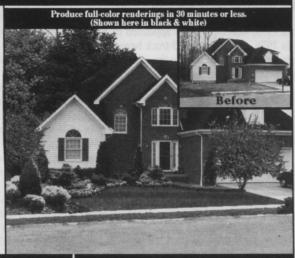
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News

(continued from page 14)

retain the company's name. Adsit Landscape, founded in 1976 by Russell Adsit, is a \$1.2 million design/build and maintain firm employing about 40 peak-season employees.

"After 18 years in business, I was burned out and tired and I decided it was better for someone else to take the reins," Adsit said. "I was dealing with so many administrative problems, I didn't enjoy the landscape business as much as I used to. Robert (Pyeatt) wants to grow this business."

Adsit and Pyeatt were brought together by a business broker and have established a healthy working relationship. Adsit is committed to helping the firm renew its landscape and maintenance accounts and will stay on to consult with Pyeatt. Adsit, who is a fellow of the American Society of Landscape Architects, will also work in a design capacity with the firm as well as establish a landscape and business consulting firm.

Landscape TV Show Breaks New Ground

Landscape design and construction will be the focus of a national television series scheduled to debut on Scripps Howard's new Home and Garden Television Network. The series, "Breaking Ground," will demonstrate the basics of landscape design, planting and construction in a how-to



John Knox and Frances Doyle

format that will also explore why design and horticulture decisions are appropriate for certain sites.

John Knox, a landscape architect and environmental planner, and Frances Doyle, a landscape and interior designer, will host the weekly half-hour show. Both have worked on a wide variety of landscape projects in the past.

Breaking Ground will have five main segments exploring residential landscape projects (construction and renovation), small projects, tool selection and use, urban landscapes and unique landscapes designed for decorative or functional use.

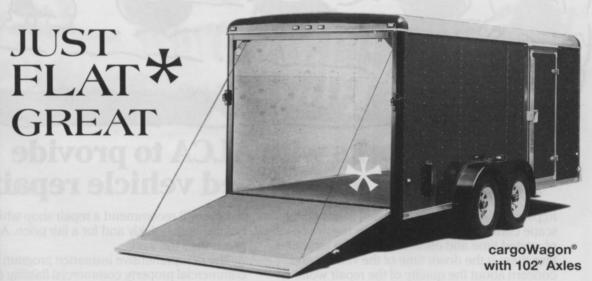
The series, which has been in development for three years, has been endorsed by the American Association of Nurserymen, the Associated Landscape Contractors of America and the American Society of Landscape Architects.

Redwood Landscaping Wins Two-Year WRAP

Redwood Landscaping, Santa Rosa, Calif., was recognized by the California Integrated Waste Management Board as a two-year winner of the 1994 Waste Reduction Awards Program. The program honors companies for their environmental improvement efforts.

Redwood's programs include paper waste recycling, educating clients about grasscycling, composting its landscape materials and donating tree stakes and other reusable materials to charities.

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Look inside our trailer. The big asterisk shows you our 6'9" wide interior floor is **Flat!** No wheel boxes inside. Perfect for motorized Lawn & Garden equipment, and plenty of "walk-around" room, too.

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Association News

THE GREEN INDUSTRY EXPO board elected officers for 1995 at the close of its fifth annual Expo in St. Louis in November. The nine-member board has three representatives from each sponsoring association serving three-year terms. The sponsors are the Professional Grounds Management Society, the Professional Lawn Care Association of America and the Associated Landscape Contractors of America. Some representatives chose to serve an additional three-year term.

New GIE officers are: David Luse, Arteka Natural Green, president; Lou Wierichs Jr., Pro-X Systems, vice president; and E. Earl Wilson, Thornton-Wilson Inc., secretary/ treasurer. The 1995 directors are: Jeff Bourne, Howard County Parks & Recreation; Mike Dietrich, LESCO Inc.; Rick Doesburg, Thornton Gardens; Steven Glover, L&L Landscape Services; Gary Trinetti, Garick Corp.; and Joe Williams, Lawn Master Inc.

Anheuser-Busch was honored by the **Associated Landscape Contractors of** America as the 1994 Landscape Contribution Award recipient. Anheuser-Busch owns

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114 South Pitt St. Alexandria, VA 22314 703/739-2401



AAN

1250 I Street, NW Suite 500 Washington, DC 20006 202/789-2900

the world's largest brewing company, as well as family entertainment parks.

The ALCA award honors corporations and developers who achieve high standards of landscaping through the use of professional contractors. Hewlett-Packard, Walt Disney World and McDonald's Corp. are among the previous award recipients.

Horticultural distribution centers are the focus of a new publication available from the American Association of Nurserymen. Business Insights into Horticultural Distribution Centers explains how the centers increase the availability of plants, specialty products and other materials for smaller horticultural customers. Opportunities for growth and market prospects are included.

The Composting Council's National Backyard Composting Program got a shot in the arm with a \$60,000 grant from the U.S. Environmental Protection Agency. The

(continued on page 20)



versatile. Nothing as thorough.

It vacuums up leaves, twigs and garden debris through a large diameter intake tube. The exclusive, patented, built-in shredder mechanism simultaneously turns the yard waste into fine mulch in a single pass.

The rugged, and powerful 23.3cc Echo engine features superior dualring, piston-ported design.

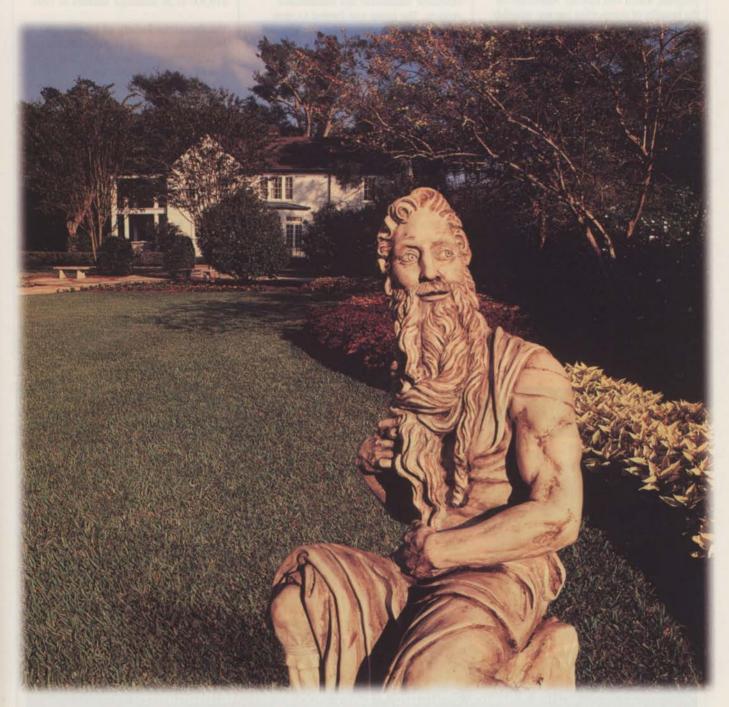
Its Pro-Fire® Electronic Ignition and purge pumpequipped carburetor give sure, fast starts and steady powerflow. There's a comfortable foam-cushioned rear handle. And the large 1-3/4 bushel bag has a convenient shoulder strap and is easy to empty.

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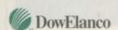


Dependability is what lawn care and landscape professionals look for in a preemergence herbicide. And dependability is what you get with the time proven Team* herbicide. Since 1985, Team has proven itself effective at stopping a broad spectrum of troublesome grassy weeds, especially crabgrass.

With the rock solid performance of Team, you can expect consistent, season long control.

Because nothing, pound for pound, prevents crabgrass better than Team, you know you've got a preemergent you can depend on to bring a smile to the face of any customer.

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Association News

(continued from page 18)

money is a "significant first step" for the program, which will educate Americans on the benefits of composting organic materials into a high quality soil amendment.

New officers for the new year at the **Illinois Landscape Contractors Association** are:
Cheryl Muskus, C&J Landscaping Inc.,
president; Herb Buhr, Buhr's Landscaping &
Lawn Care Inc., executive vice president;
Cathy Ricciardi, Interior Garden Services
Inc., vice president; Chuck McGinty,
McGinty Brothers Inc., treasurer; and Bob
Busch, Busch & Sons Landscape Contractors, secretary.

The North Carolina Composting and Organics Recycling Council will produce a directory of North Carolina businesses that distribute or produce compost or recycled organic products. The guides, to be published early this year, will be distributed to nurserymen, landscape architects, turfgrass producers, landscape contractors, consumer groups and extension service branches. To have a listing included, contact NCCORC at 919/851-8444.

The Metro Atlanta Landscape and Turf Association held its fifth annual MALTA Environmental Awards Banquet in December to recognize outstanding landscape installation and maintenance projects. The group was formed to open communications between the green industry, vendors and the general public, and currently includes more than 200 members in the southeast United States. Awards honored residential and commercial projects in landscape installation, maintenance, seasonal color, community service and special contributions.

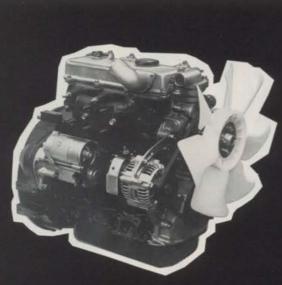
The 1995 executive board for the California Landscape Contractors Association has taken office. They include: James Everett, Everett Landscape, chair; Richard Jark, South Coast Landscaping, president; and John Redmond, Cypress Landscape, president-elect. New vice presidents include: Dave Penry, Redwood Landscaping; Charles Nunley, Lakshmi Landscape Co.; Ken Chase, Lifescapes; Ken Crowl, Riverside Landscape & Irrigation Inc.; Randy Tavenner, H&R Building Services, vice president of finance; and Kent England, England & Co., vice president-secretary.

CLCA's Landscape Educational
Advancement Foundation elected Janice
Weems of Hydro-Plant Inc. as 1995 chair.
LEAF awarded 31 scholarships totalling
\$19,300 to 26 landscape students in 1994.

The American Society of Landscape Architects reported high attendance at its annual meeting and exposition, held in San Antonio, Texas last October,

In related news, ASLA announced that it has entered into a cooperative project with the **Trust for Public Land's** Green Cities Initiative to provide technical assistance in land use planning and design for the initiative, which is dedicated to protecting open space and creating new recreation and cultural resources in urban areas.

IN BRIEF...Ohio Professional Applicators for Responsible Regulation is the new name for OPARR, which reflects the group's new agenda of involvement in other areas of application, including fertilization...The Oregon Association of Nurserymen added three people to the 11 honorees in its Hall of Fame, established in 1991. They are: David Brown, Bill Egan and Alfred Teufel. All have had extensive experience in Oregon's green industry.



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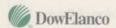
With Confront* herbicide, lawn care and landscape professionals know they're covered. Because no postemergent herbicide controls broadleaf weeds better.

Confront brings you a new standard of broadleaf control on both warm and cool season turfgrasses.

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Landscape News

ALCA NAMES EXTERIOR IMPROVEMENT AWARD WINNERS

IT'S BEEN 25 years since the Associated Landscape Contractors of America began its Environmental Improvement Awards program. This year's record 154 entries in the exterior award program is proof that contractors value industrywide recognition for quality landscape workmanship and consistent use of materials.

ALCA started the program to reflect the association's commitment to creating and preserving the beauty of landscaping. It also recognizes citizens who under-

write high quality landscape work. Judges were Janelle Cox, Boldt Development Corp.; Dennis Otsuji, ONA; and J.W. Stamps Jr., ISS Landscape Management Services.

This year, ALCA named 30 Grand award winners in several categories (listed below), 45 Merit award winners and another 54 Distinction award winners.

RESIDENTIAL LANDSCAPE CONTRACTING

(Between \$25,000 - \$100,000)

Bland Landscaping Co. Inc., Cary, N.C. Project: Klein Residence Supplier Recognition: Bold Spring Nursery

Hillenmeyer Nurseries Inc., Lexington, Ky. Project: The Donohue Residence Supplier Recognition: Tri-White Construction, Windows by Henkel

RESIDENTIAL LANDSCAPE CONTRACTING (ABOVE \$100,000)

Ecosystems Imagery Inc., Encinitas, Calif. Project: Alydar Rainforest

COMMERCIAL LANDSCAPE CONTRACTING

(BETWEEN \$75,000 - \$250,000)

Smallwood Landscape Inc., Naples, Fla. Project: Bay Colony Tennis Facility

COMMERICAL LANDSCAPE CONTRACTING

(ABOVE \$250,000)

Ecosystems Imagery Inc., Encinitas, Calif. Project: Cityfront Terrace

Kurisu International Inc., Portland, Ore. Project: St. Vincent Hospital Critical Care Facility

Supplier Recognition: United Pipe & Supply, Interstate Rock

Otto Damgaard Sons Inc., Des Plaines, Ill. Project: Amoco Building – Plaza Redevelopment



Reinhold & St. John, Memphis, Tenn. Project: GTE Telephone Operations Headquarters

COMMERCIAL LANDSCAPE MAINTENANCE

(Office and Industrial Sites)

The Brickman Group Ltd., Long Grove, Ill. Project: Lake Cook Office Centre

Maintain Services Inc., Dallas, Texas Project: Forest Plaza

The Morrell Group Inc., Atlanta, Ga. Project: Ravinia Office Park

Ruppert Landscape Company Inc., Ashton, Md. Project: Dulles Corner Business Park

Torre & Bruglio Inc., Pontiac, Mich. Project: Somerset Collection

COMMERCIAL LANDSCAPE MAINTENANCE (HOUSING)

Cagwin & Dorward, Novato, Calif. Project: Blackhawk Homeowners Association

Environmental Care Inc., Calabasas, Calif. Project: Hammock Dunes

Scapes Inc., Sterling, Va. Project: North Hills, Reston Streetscape

COMMERCIAL LANDSCAPE MAINTENANCE (RETAIL)

Nor-Van Landscape Design Ltd., North Vancouver, B.C., Canada Project: Waterfront Centre Hotel

COMMERCIAL LANDSCAPE MAINTENANCE (INSTITUTIONAL)

Torre & Bruglio, Inc., Pontiac, Mich. Project: Chene Park and St. Aubin Park

RESIDENTIAL MAINTENANCE

Reinhold & St. John's landscape contracting project at the GTE Telephone Operations headquarters was one of ALCA's grand award winners.

Torre & Bruglio Inc., Pontiac, Mich. Project: A Residential Project in Franklin, Mich.

RESIDENTIAL DESIGN/BUILD

(UNDER \$25,000)

Kinman Associates Inc., Dublin, Ohio

Project: The Lorms Residence

RESIDENTIAL DESIGN/BUILD

(BETWEEN \$25,000 - \$100,000)

Garden Gate Landscaping Inc., Silver Spring, Md. Project: The Sheperd Residence

Muray Arquitectos, Mexico City, Mexico Project: "Making A Dream Reality"

Van Zelst Inc., Wadsworth, Ill. Project: Glenview Residence

RESIDENTIAL DESIGN/BUILD

(ABOVE \$100,000)

ILT Company Inc., Prairie View, Ill. Project: Highland Park Residence

McDugald-Steele Landscape Architects and Contractors, Houston, Texas Project: The Andrews Residence

Yardmaster Inc., Painesville, Ohio Project: The Krantz Residence

COMMERCIAL DESIGN/BUILD

(ABOVE \$250,000)

Smallwood Design Group, Naples, Fla. Project: Isle Verde

Thornton Gardens Inc., Maineville, Ohio Project: Wetherington Golf & Country Club

ECOLOGICAL RESTORATION, RECLAMA-TION AND CREATION

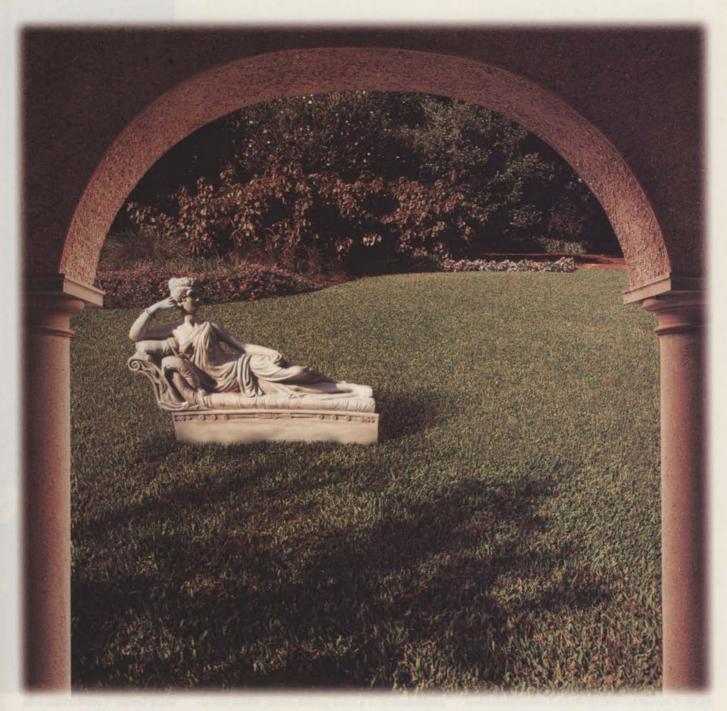
Teufel Nursery Inc., Portland, Ore. Project: Kelsey Creek Supplier Recognition: Parsons Brothers Rockeries

SPECIAL EVENTS

Oakland Interiorscapes/Oakland Nursery, Columbus, Ohio

Project: Huntington's Colors of Belgium

IF YOU WANT TO KNOW HOW LONG GALLERY WORKS TO PREVENT BROADLEAF WEEDS, ASK SOMEONE WITH TIME ON THEIR HANDS.



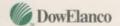
After applying Gallery* preemergence herbicide, you've got about 6 to 8 months of good solid waiting before you'll spot the emergence of any of over 95 different broadleaf weeds. Even the tough ones like spurge, dandelion and plantain.

In fact, Gallery is the only preemergent on the market today that's designed to prevent so many broadleaf weeds, yet is safe over the top of all turfgrasses, and over 400 different species of ornamentals.

So now that you have a little extra time on your hands, maybe you can get around to digging up even more business.

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Balancing Act

In 11 short years, Gerber Landscape Solutions has become a major force in its market. The secret? A careful balance of services and remembering its "roots."

By Susan Gibson

THE MASTER ACROBAT balances each plate on a stick, gives it a spin and moves on to the next in line. As he goes down the line, the first plate gradually slows its spinning and starts to lose its balance. The acrobat, knowing just how many plates he can keep spinning at one time, also knows just when to run back and set the first plate spinning again. It's a delicate balance and it's impressive to watch.

Donald (Skipp) Gerber II knows a lot about balancing the right number of plates in his business. As president and founder of Gerber Landscape Solutions, he's grown the company from a one-man service (mowing/maintenance) into a dominant force in the St. Louis market.

The company now is composed of six divisions that have evolved into strong entities of their own. Its portfolio is a remarkably even split between residential and commercial, with both large and small customers. In an age when many firms are searching for one special niche or market to concentrate on, Gerber has bucked the trend with great success.

Gerber had no formal education or experience in the landscape industry when he started. His background is in a family funeral director business; he concentrated on a variety of studies in college — psychology, sciences and mortuary science. His experience in the landscape industry has been self-taught. This could be a drawback for someone less resourceful than Gerber, but it has been an asset he has used well.

He got his first taste of the business while he was a graduate student at SMU. "I had a very full schedule of classes, studying and working as a waiter, but the job wasn't working out," Gerber said. "So I started a mowing business by knocking on doors in the Dallas area. I bought some equipment and paid it off in one month. I eventually hired some friends to help. When I graduated from school, I sold the business."

He moved to Cincinnati and worked at a funeral home for a short time, then returned to his native St. Louis and re-entered the industry. "I started here in the same way I did in Dallas. I knocked on doors and got 15 people to subscribe to my mowing service, bought a mower and paid it off in one day," Gerber recalled. "The first year, I was by myself. The second year, I hired out the work. Then I gradually organized work crews."

GROWING SERVICES. By the third year in business, Gerber's company handled about 450 properties each week, and it was getting out of hand. It was time to reevaluate the services and the market. "We gradually got that number down to a target group of people wanting full maintenance services," he noted.

The company expanded into landscape design/build projects, learning much of the work through hands-on experience. Eventually, it added chemical lawn care, tree and shrub maintenance and landscape architecture.

It also ventured into other services, some with success and some without it. "At one time, we offered automobile waxing, lighting, room additions, patios and other services," he explained.

As customers began to ask for irrigation work, Gerber worked with subcontractors. This created problems, because it was hard to balance a subcontractor's quality with customers' expectations. "We had a hard time getting subcontractors to take responsibility for their work. I know how hard it is to get people to do that, so to get more control over the work, we took irrigation services in-house," he said. That was in 1990. "Now, we're responsible for the work."

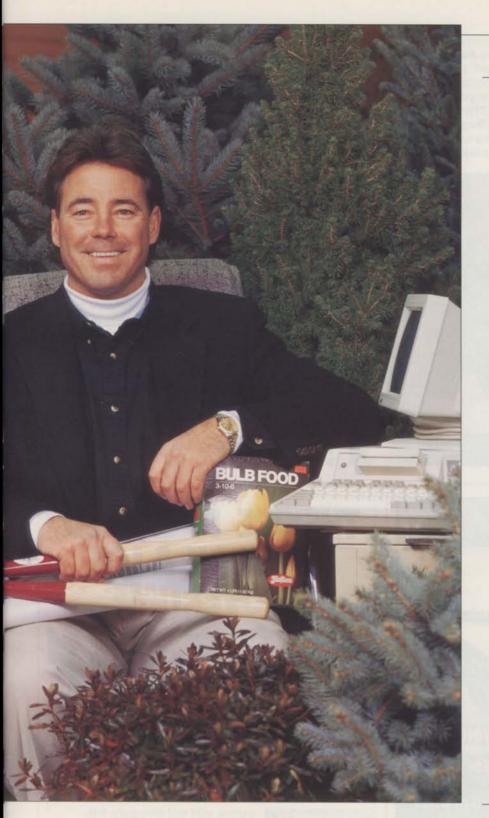
The company expanded once again in 1994 with the establishment of a retail garden center, which has already proved profitable.

The decision to diversify into each new service was made on more than a trial-and-error basis. It was also made with a careful eye on management and quality. "I would tell people not to diversify too much," advised Gerber. "People do what they do best and we try to remember to keep them doing that. You can't necessarily turn a good grass cutter into a good landscape worker, or turn a landscape worker into a good irrigation technician.

"Each new area that we get into has to stand on its own as much as possible, as a separate business. We try



Skipp Gerber is comfortable with the challenge of balancing six service divisions with a 50-50 split between residential and commercial clients.



GERBER LANDSCAPE SOLUTIONS

LOCATIONS: Ladue and Afton, Mo. FOUNDED: 1983

OWNER: Donald (Skipp) Gerber II
PRIMARY SERVICES: Landscape
maintenance; landscape design/build;
chemical lawn care; tree and shrub care
services; garden center; irrigation.

EMPLOYEES: 165-175 seasonal, 50+ full time

1994 SALES: Approximately \$6 million; roughly 30 percent is maintenance, 25 percent is design/build, 20 percent is chemical lawn care/tree and shrub work, 15 percent is the garden center and 10 percent is irrigation.

EXECUTIVE SUMMARY

THE CONCEPT: Be a single source service supplier for large and small commercial and residential customers.

Treat every customer the same.

PROJECTIONS: Reaching \$7 million in 1995.

FUTURE CHALLENGES: Expand growth of wholesale/retail garden center sales, develop more "microcrews," increase business within St. Louis area and beyond.

THE PRESIDENT

DONALD (SKIPP) GERBER II AGE: 35

FAMILY: Single; two sons
EDUCATION: Undergraduate work at
Miami University; graduate work at
Southern Methodist University

JOB HISTORY: Started first lawn maintenance service while in school at SMU. Briefly went into mortuary practice in Cincinnati (still practices as part of his family's business), established Gerber Landscape Solutions on his return to St. Louis in 1983.

AVERAGE WORK WEEK: 60 hours EQUITY HELD: 100%

not to jeopardize what we call the 'hub' business."

Gerber believes his company has been successful because "we haven't lost our roots. I think we've done well and grown so fast because we didn't let ourselves do fewer, bigger jobs. As some companies move up, they concentrate on larger jobs, then on commercial work, then just on landscape work. We still respond to the call to replace a single shrub. We believe that any customer who calls deserves the same hours as the highend customer."

All Gerber business divisions are split about evenly between residential and commercial work, "We like it that way," noted Gerber. "We have no one customer worth more than 4 percent of our annual volume, and also no one major commercial segment. We do work for some offices, shopping centers, multifamily units and residential, with a slight focus on freestanding owner/occupied office buildings. We keep it mixed up between new construction business and rehab work."

About one-half of the company's annual volume comes from the renewal business and it boasts a 93 percent renewal rate. Gerber estimates that 30 percent of new volume is additional sales to existing customers and 20 percent is new business.

"We are focused on meeting customer needs," Gerber said. "We still do lots of little jobs and we treat everyone the same. On a typical day, we may have 250 jobs — maybe 100 in mowing, 100 chemical lawn care or tree and shrub care, 30 or 40 in horticultural maintenance and 10 landscaping jobs of

all sizes. The paper chase is a nightmare and also a challenge."

He pointed out that the company's diversification has always been in response to customers' demand. "They keep calling for more work. We get 20 to 30 leads a day. You never know from under which rock the next juicy job comes."

SYSTEMS ORIENTED. No one manager, or acrobat, can handle this kind of detail without a system that is both profitable and flexible. Another element of Gerber Landscape's success is the evolution of a practical, workable management system.

"We're a very systems oriented

company," Gerber explained. "My goal from day one has been to develop self-replicating systems so the company can run without me." He urges this vision on his management team, which frees him up to "push them in new directions and to generate new business."

Gerber describes his management style as "onehalf hands off and onehalf hands on. I like stirring things up a lot and I'm very pro-change. I'm a risk taker and I'm will-

Gerber's new retail garden center showed a profit in its first year. ing to try new things, but I'm also not afraid to abort a mission either. I love it when someone comes to me and says 'we want to try this.' My answer is to say, 'sure, try it.'

Previously, Gerber Landscape used a system of divisional management based on the type of service (mowing, lawn care, etc.). Recently, it converted the maintenance managers to a regional system.

He explained, "As our managers get better and better, they have the opportunity and responsibility for the management of a site, and the customer only has to deal with one field person."

In order to accommodate the smaller jobs profitably, Gerber Landscape established minimum charges for mowing and site visits. "We also try to reduce our sales time but still keep a structure that gives us the flexibility to handle the smaller jobs," Gerber said.

Irrigation and landscape areas have division managers. Gerber Landscape also has managers of mechanics, sales, accounting and other areas who report to John

(continued on page 30)





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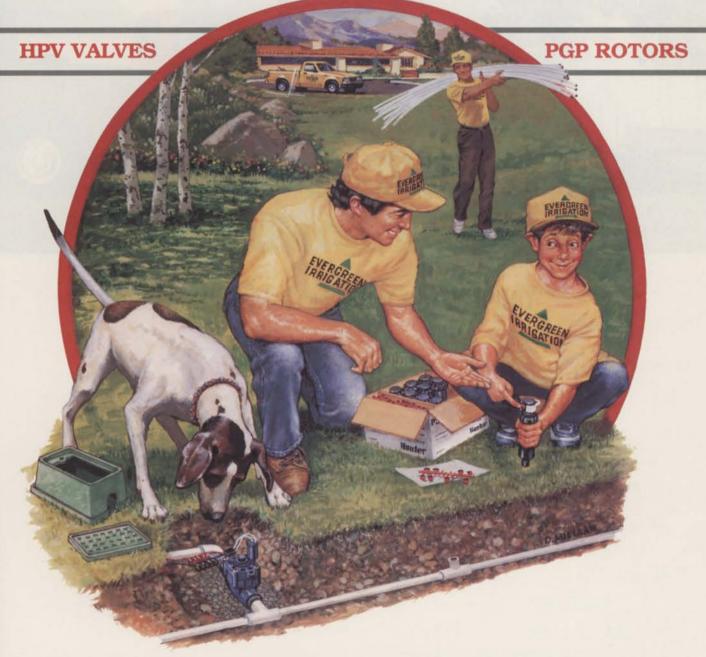
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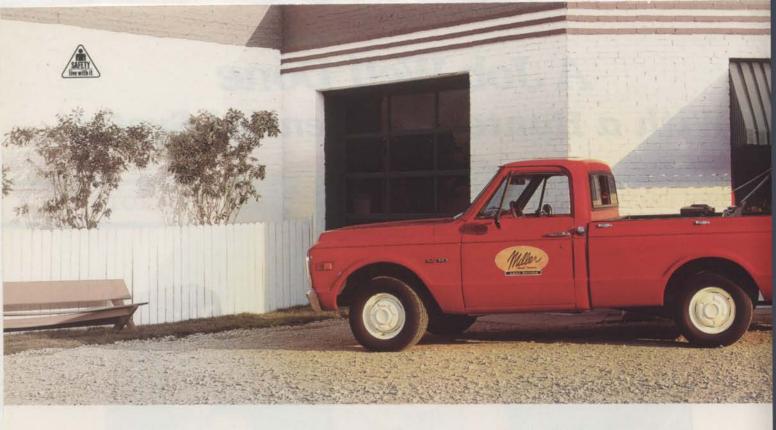


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Cover Story

(continued from page 26)

Schultz, who serves as the chief operating officer/chief executive officer.

Gerber Landscape has bucked the trend toward fewer, bigger work crews managed by one supervisor. "We've always had one- or twoman crews, and in some cases, three- or fourman crews," Gerber noted. "If we have a real big job, we'll send in two or three of our 'swat' teams. We call them 'microcrews.'"

INDUSTRY FOCUS. One role that any leader

must take is that of setting a vision. To do that, the leader must be able to perceive the organization's strengths and weaknesses. Gerber attributes much of his company's success to a professional attitude and quality work. And he sees much more of that throughout the industry.

He has been a member of the Associated Landscape Contractors of America for eight years and also holds membership in the Professional Grounds Management Society and other Missouri industry organizations. He has served as a discussion leader at ALCA's Executive Forums.

This experience has given him a larger per-

spective on the industry and successful business.

"It's encouraging to go to seminars and find out that we're doing a lot of things right, but we haven't learned it all from seminars or books," he said. "Our focus has always been on building a real company. Profit was a second consideration to building a real company, placing people where they want to work and getting customers who want to use you for the work. It's different from the guy who is in it because he likes to mow grass or just wants a few bucks."

In Gerber's brief time in the industry, business has changed. "I've noticed a radical change in the construction of the active group of people involved in ALCA. Eight years ago, everyone at industry events used to be dressed in blue jeans and flannel shirts. Now, they're in suits and they're increasingly professional.

"It's also tougher to make money in the industry. It's not as easy to enter. The industry is more savvy now and the needs of the customers have changed. Years ago, everyone wanted a specialist, but now there's more demand for the com-

'Our focus has always been on building a real company. Profit was a second consideration to building a real company, placing people where they want to work and getting customers who want to use you.'

pany that does it all. The survivors of the future are the ones who are bigger and who do it better."

Part of Gerber Landscape's professional image is its lifetime plant warranty, which Gerber sees as an additional marketing tool. "We don't want to make anyone mad — it isn't worth it to lose a customer or a friend over a couple of dollars. If we have a negative service call, we treat it as a high priority item. The customers who call with a problem are the ones who care."

Gerber Landscape instituted the warranty several years ago to satisfy their customers. "But we don't tell people to buy from us because of the warranty," he said. "We tell them to buy from us for the maintenance work itself."

THE CHALLENGES. Obviously, balancing such a diverse business with an equally diverse client portfolio is a challenging job. In the following interview, Gerber detailed how he manages to make it work with the most challenging aspect of all: the people factor.

Q. What is the most difficult factor of running your business?

(continued on page 32)



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USE READER SERVICE #21

Cover Story

(continued from page 30)

A. Our challenge is always people related. Our industry has so many variables in it: we have to work off-site, we always deal with different people, we have all types of equipment to work with, there are many people's expectations to consider, it's a very subjective kind of work anyway, we have to work with live plant material and there's the seasonality factor.

Q. How do you handle seasonality?

A. I've noticed that our peak seasons keep getting bigger and our slow seasons get slower (because we have higher overhead). So we try to lengthen the seasons by being more mobile, being flexible and offering more services. In the winter, we can do landscape work like hardscaping, grading and snow removal.

In the summer when the grass stops growing around here, we install sprinkler systems. Lately, the growth in irrigation work has begun to balance out the slack in lawn maintenance.

Q. How do you get good employees?

A. First, we pay between 20 and 30 percent more in salary than the market rate. We get what we call the "cream of the cream," and we hire people with experience. We don't really have a set wage structure but we want to make it a winwin situation for both parties.

I think that in any situation, you still have about a I out of 4 chance that people will work out. We're quick to hire someone we want and pay them what they want, but we still don't know if they'll work out until they're on the job.

Attitude and image are probably the most important factors in hiring good people, and you can't teach that to people. If someone is lazy or a cheater, we define it as a character problem. A person has to care about what they're doing.

We go through a lot of people. Sometimes it doesn't work out. We take the attitude that we gave them the benefit of the doubt when they start with us, and if it doesn't work out, we're giving ourselves the benefit of the doubt when they leave.

Q. How do you train your employees?

A. We recruit many people from other companies. Most of the people we hire are already trained, so we have a very limited formal training program. Most of the training we do is on the job.

When they start the job, we give them what we call their "personal management responsibilities," which they must follow. It's easy to train people in the technical work. Personal management is things like coming to work on time in uniform, taking care of the equipment, looking good, having a good attitude. We tell them that productivity and quality go hand in hand.

It's not worth paying for people's mistakes. They want to know what they are supposed to do.

(continued on page 37)



Gerber Landscape maintains a mix of large and small commercial and residential clients.

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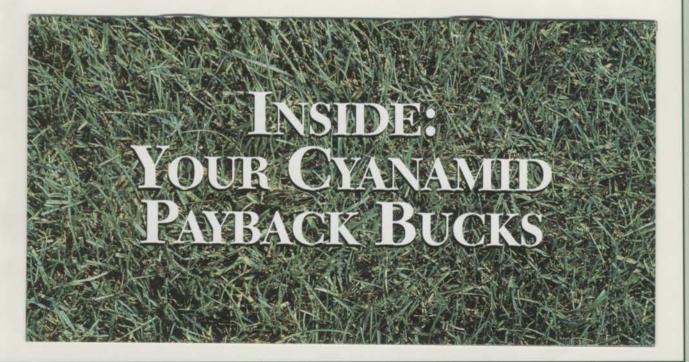
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Cover Story

(continued from page 32)

They need to have job descriptions that firmly state what has to be done for the job.

Q. How do you view relationships with your suppliers?

A. I believe in the concept of internal and external customers. Our employees and our vendors are our internal customers. We teach people to treat each other like customers. An employee could be both an employee and a customer; a vendor could be a customer. I don't like to think of people as a file name or an account number, but as a person. If you take care of everyone in the same way, you're treated well. That's how we're treated by our vendors.

Q. What directions do you see in the future for Gerber Landscape Solutions?

A. I'd like to open other branches in the local market and beyond, diversify and grow our volume. It would be nice to build a fun place like some kind of farm/employee retreat with recreational water, retreat facilities and the capacity to grow live plants.

Again, I'd like to have a self-replicating system — take any part of the business and let it replicate itself. Where a lot of companies get into trouble is that people aren't good at wearing multiple hats. Those that are good at it are the ones that survive. You have to delegate, hire well and do good work. And to survive, you still have to meet your customers' needs.

GERBER'S SOLUTIONS

EVERY JOB description at Gerber Landscape Solutions includes a section titled "Personal Management Responsibilities," which lists the qualities that management requires of employees. It covers attendance, attitude, appearance, initiative, productivity, quality, paperwork and organization steps in great detail. Some employees are asked to maintain daily planners in an effort to be more organized and to help the systems run more smoothly.

The list ends with "Do what you say you will do," which is one of the "Gerber Solutions" that Skipp Gerber constantly preaches to the troops. Some others are:

•Design and implement self-replicating systems.

•Make plans and follow through on them.

•Quality is a balance of productivity, technical expertise and expectations.

•We only have one chance to make a good impression.

·Lead by example.

•Train people by giving them immediate positive and negative feedback with rapid repetition.

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USE READER SERVICE #22

Fitting The Right Mower To The Job

Rotary mowers are the machine of choice for most contractors, but special circumstances mean that specialty mowers must be considered. The choice is almost as varied as the terrain.

By Bob Gitlin



Riding mowers offer flexibility, operator safety and fast mowing on large properties. Credit: Walker Mfg.

ALTHOUGH choosing the proper mower for the job may require the simplest of variables — yard size, number of obstructions, weather conditions — there are fine points to the decision-making process.

On this, manufacturers and commercial contractors heartily agree. Another thing they agree on: rotary mowers have almost completely displaced reel mowers. John Smith, president of Exmark Mfg. in Lincoln, Neb., a manufacturer of commercial midsize walkbehind rotary mowers (both belt and hydrostatic drive), explained: "Reels cut like a pair of scissors. When quality of cut is a priority, you would consider it. But in the landscape maintenance business, they're a thing of the past. They're used more commonly in ballparks

and golf courses. Rotary is the preference by the landscape maintenance professional."

Lower maintenance is the reason. The reel mower requires continual sharpening, said Smith, With the rotary, a stone in the deck may dull the blade, but you're only down for 10 minutes and out maybe \$10 to put in a new blade. Or you just sharpen the damaged blade. "That's an easy job," he added. "With reel mowers, the machinery to sharpen the mower is more complicated."

What about walk-behinds vs. riders? In the 52-inch size and up, rotary models tend to come with riding capability. But are there any considerations beyond that?

"With the walk-behind, the investment in equipment is less," said Smith. "And maneuverability in very heavily landscaped areas can be compromised with riders — although zero-turn technology has made a lot of riders almost as maneuverable as walk-behinds."

Aside from budget, factors in mower selection include terrain, geography, and grass type.

GAUGING OBSTRUCTIONS. "Is it a very heavily landscaped area with a lot of trees to maneuver around?" said Smith. "Or is it fairly open? There's where you decide walkbehind vs. rider. A small yard doesn't require a 48-inch mower. You want to get down and off in a hurry; consider a 32-inch size. How wide are the gates going into the property? You need a mower that fits if the property's fenced."

A major consideration is what will fit on the contractor's hauling vehicle(s).

"Alot of maintenance firms don't use trailers," Smith said. "If you have a trailer, space may be limited. If you don't, you need a piece of equipment that will fit in the back of your pickup. You can't have a 52-inch mower when you only have 48 inches between wheel wells."

Virtually all manufacturers, including Exmark, offer a mulching kit. But you still have to match it to

the grass and climate. "I don't think there's a mulching kit on the market today that will mulch in all mowing conditions," Smith noted. "In Michigan, New England and Pennsylvania, they use a fine-bladed bluegrass. If you are mowing

Walk-behind mowers move easily in tight spaces. Credit: Kubota



TYPICAL MOWER CHARACTERISTICS

									Management Requirements				
Туре	Examples & Description	Terrain	Vegetation	Debris & Foreign Material	Typical Mowers	Typical Mowing Heights		Mowing Freq.	Level	Irrigation	Fertilizer	Pest Control	Mulch/ Catch Req.
AAA	Golf Greens & Tees	Flat to rolling	Grass, single type	None	Reel	Less than 1/2"	1/8" to 1/4"	daily to every other day	Very High	Frequent	High	High	Catch
AA	Golf Fairways & Sports Fields	Flat to hilly	Grass, single type	Little	Reel/ Rotary	1/2" to 1"	1/4" to 1/2"	2 to 3 times per week	High	Frequent	High	High	Catch
A	Residential, Condo, Office Complexes	Flat to hilly with landscaped berms	Grass, single type	Some, twigs & branches	Walk- behind & small riding rotary	1" to 3"	1" to 3"	at least once per week	High	Frequent	Medium	High	Catch/ Mulch
В	Apartments, Business, Smaller Public Areas, Maintained Golf Roughs	Flat to hilly with landscaped berms	Grass, single	Some, twigs & branches	Walk- behind and small riding rotary	1 1/2" to 3 1/2"	1" to 4"	at least once per week	Med.	Some	Low	Medium	Catch/ Mulch
C	Utility Turf, Parks, Schools, Colleges, Industrial Sites, Cemeteries and Memorial Gardens, Golf Roughs	Flat to hilly, some steep slopes	Mixed grasses and weeds	Some, twigs & branches	Riding rotary	2" to 4"	2" to 5"	weekly	Med.	Little	None	Low	Mulch
D	Rough Mowing, Right-of -Way, Dams & Levees	Flat, hilly & steep slopes	Mixed grasses and weeds	High amount, bottles, cans, vehicle parts	Tractors with flails and pull- behind rotary	4" to 8"	3" to 2'	every 2 to 4 weeks	Low	None	None	None	None
E	Extremely Rough, Solid Waste	Hilly, rough, ruts & wash- outs	Wild vegetation	High amount	Tractors with flails and pull- behind rotary	6" to 10"	6" to 5'	2 to 4 times per year	Low	None	None	None	None
S	Specialty	Steep slopes	Grass & wild vegetation	High amount	Specialty flail and rotary	6" to 10"	6" to 5'	2 to 4 times per year	Low	None	None	None	None

Credit: Excel Industries Inc.

first thing in the morning when the dew is on the grass, you probably are not going to get the highest quality mulching job. At the other extreme — in Florida where they



have a lot of St. Augustinegrass, or even in the Midwest with their widebladed fescues — you can mulch in more adverse conditions."

Jim Wallace, product manager for Toro's ProLine series, based in Bloomington, Minn., explained: "You've got the reel for formal cuts, the rotaries for almost anything, and then the flails for rough cuts. Reels can go anywhere from a 64th of an inch cut on a golf course on up to maybe 3 inches; rotaries, an inch on up."

Rotary is the king of the lawn and landscape maintenance business. And big enough space generally requires the rider's bigger deck, rather than a walk-behind, Wallace added. "When you get above 60 inches, you're going to use a rider. Below 44, you'd probably use a walk-behind. In between, it depends on what kind of territory you're trying to cover."

Zero-turn radius has made mowing more of a breeze in obstructionfilled areas. "Zero-turn radius is for areas where you've got a lot of trimming to do," said Wallace."

Ninety percent of zero-turn radius mowers have hydrostatic rather than belt drives, he said. "They are for a lot of backing up, and probably not very many hills or berms, because they're not particularly good on the steep hills and berms."

Don Kanter, director of sales and

marketing for F.D. Kees Mfg., a Beatrice, Neb.-based manufacturer of commercial walk-behinds (both belt and hydrostatic drives), said zero-turn radius mowers generally are used for tighter areas. "They're used predominantly on residential property. Riders are used more in larger areas because they can mow at higher speeds."

Ken Raney, advertising manager, Excel Industries, Hesston, Kan., said the convenience of riders comes with caveats. "If you've got to get up that curve or that tight little spot, you still have to come back with a walk-behind or a weedeater. In those really small areas, you can't beat a walk-behind."

On larger, wide-open areas, one operator riding can get more work done, whereas operators pushing walk-behinds "often have to horse those things around and that can wear a guy out," Raney said.

Excel makes only zero-turn radius and hydrostatic drives. "We think they're perfect for everything," he added.

Flail mowers, Raney added, although high-maintenance and expensive, are commonly used on roadsides where safety is a concern, as they throw grass and potentially dangerous debris horizontally rather than down. "We offer flail mowers but don't sell that many of them. It's not a big market."

Bob Walker, president of Walker Mfg., Ft. Collins, Colo., reported: "We build a midsize riding commercial-grade mower, a zero-turn radius type. Its cutting width is like an intermediate walk-behind." The relatively little rider is intended to fit in places that commonly call for walk-behinds.

There's only one place, he said, that a walk-behind fits better than the rider: on steep hills. "With that

'Fitting the mower to the job is fitting the right size to the right application to get it done most efficiently.'

exception, I can't think of a time you should walk. One man on our rider can do the work of two with walk-behinds."

MAINTENANCE ISSUES. Contractors grappling with mower issues reflect many of these same attitudes about productivity and the need to balance unimpeded wide-area mowing with requirements for maneuverability and flexibility.

Rodney Bailey, owner of Evergreen Services Corp., a Bellevue, Wash., landscape maintenance company for commercial properties, said that about 90 percent of his mowing is done with various sizes of rotary mowers. "We'd use a reel if a customer demanded that double-A-class lawn appearance, the patterned mow like you see on a football field," he said. "We'd use the flail on a very rough mow, with heavier brush and longer grass, like a hayfield."

Although there are many 50-inch mowers available as walk-behinds, he prefers to have his operators riding.

"One thing we have to deal with up here, more so than a lot of other people, is mowing in rain. The saying up here is, 'If you're waiting for it to stop raining, you'll probably never get it done.' So we have to have mowers that have a proven pickup capability for heavier, wet grass. That affects our riders more than our walk-behinds."

NEW PRODUCT OPTIONS. Bailey keeps his eyes peeled for special features such as "accutrack," which is said to track on side hills, compensating for the tendency of the mower to pull downhill. This helps

the man fighting his way through a crosshill mow. "If we did a lot of side hill mowing, steeper berms and things like that," he said, "that's something we would want."

Jack Sweeney, production manager at Byrne Brothers Landscaping Inc., Essex, Mass., a landscape maintenance firm, said "fitting the mower to the job" is fitting "the right size to the right application to get it done most efficiently."

Riding mowers are his preference. "They're faster. The only time we use the walk-behind is with slopes. We use a 61-inch zero-turn radisu rider with hydrostatic drive quite a bit. Those drives are a lot more efficient than the old belt driven models."

It's mostly ryes, blues and fescues in his area, he said. Mulch mowing is seldom needed. "On a lot of our residential condominium projects, we still pick up and haul away grass. Where we can do it, we just let it fly, and keep on top of it so it works its way in without need for a mulching mower."

Sweeney said he would like to see a standard rider mower come

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USE READER SERVICE #24

out that cuts the ultra-large swath (78 inch), with the same control he gets out of his 61-inch mower. He's still waiting.

MEASURE THE PROPERTY. Scouting the property before or after landing the bid is necessary in fitting the mower to the job. This is standard procedure for most contractors.

"Our people go out and measure. Then we have an idea of what will work. We send out experienced people who are the most efficient and productive. They figure what they would need. Usually they're pretty much on the money. We measure turf areas with wheels that gauge the distance," Sweeney explained.

Unbroken broad expanses may call for an old-fashioned rider, as zero-turning radius can slow an operator on flat-out mowing. Gates, trees and posts on a similar size field might, on the other hand, call for zero-turn radius.

Kurt Kluznik, president of Yardmaster Inc., Painesville, Ohio, uses more than 100 mowers on his Cleveland-area business. The commercial and multifamily-residence contractor said he only runs with four different types of mowers in his Cleveland operation (he's also got business down in Columbus). "We use 36s, 48s, 52s and 60s. And we still use a 21-inch model."

He used to favor riding, but not now.

"We had 60-inch riders, but we have opted to go with sulkies and Velkes." These are attachments that allow the rider to sit on a seat over the mower, or stand on a little attachment behind that makes it look as if he's riding a skateboard.

"We decided we wanted the flexibility of using our mowers as walk-behinds," Kluznik said. "You can use the 60 as a walk-behind. Several employees prefer it on some jobs. We have a fair amount of turnover with our people, and you'll get less damage off of a walk-behind mower, or a Velke or sulky mower, than you will out of a rider. Cost was a minor factor; the rider doesn't run you much more. It's just that we had a lot less operator abuse on a walk-behind."

His one remaining riding mower, used for sports fields and huge industrial complexes, is a 10-foot monster. He no longer has any zero-turn radius riders in his fleet. "We do, however, have hydrostatically driven zero-turn radius walkbehinds. They do the job for tight spaces and trim work," Kluznik said. "We also use a big 15-foot batwing mower, which we pull with a tractor. We use that for big accounts."

REEL FLEXIBILITY. Some commercial cutters do a lot of reel mowing. Perhaps as much of 5 percent of the mowing done by Laflamme Services Inc., a Bridgeport, Conn., landscape management company, is reel mowing, said Ed Laflamme, owner.

"Our high-end corporate accounts often demand it," he said. "We have a number of world headquarters, like Xerox, on which we reel mow. We do 17-acre athletic complexes all by reel." This premium turf is relatively stone- and debris-free, incurring little actual blade damage, he said. "And it's a requirement. Athletic fields need a close cut for fast play."

Maintaining the green carpet look requires mowing every five days with a reel mower, as opposed to seven days with a rotary model.

"And the turf is tighter," Laflamme added.
"When you cut with reels, you cut lower. It's more dense." He has three-gang reel units (72 inches times three) that give a variation in color and pattern. "In this situation, appearance is as important as cost."

The bulk of his mowing, obviously, is rotary. He has three diesel-engine, all-hydraulic, retractable-batwing rotaries, which do 10 1/2-foot cuts. "They do a comfortable 5 acres an hour with extremely high quality — they are tremen-

dous machines. They will do hills like a fourwheel drive machine.

Sometimes a plum bid will prompt an otherwise unadvisable expenditure on a new mower.

"Our bid team advises me on whether we should use existing equipment or buy a special piece. We've done that. Right now, if we can make a deal for a certain multiyear contract, I'll go out and buy a machine that's twice as big as I have, because then nobody can compete against me unless they buy one too."

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

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Conservation— A Tough Sell

WHERE WATER isn't scarce in this country, it's getting expensive, challenging landscape and irrigation contractors to squeeze the most benefit for their customers out of the least amount of water.

But where scarcity or high cost don't sink into the psyche of property owners, contractors face an uphill battle to convince customers that conservation is the best longterm strategy.

In Denver, for instance, water rates in the city itself—thanks to ample supplies in the Rockies—are so low that conservation isn't considered.

"In the city, they still purchase water at extremely cheap prices, about 80 cents per 1,000 gallons," said Tom Garber, president of Colorado Landscape Enterprises in Westminster.

"That isn't to say we have a wasteful environment, though." The primary restriction, Garber noted, is people's perception of the cost of water. Denver sells its water to the suburbs, where the rates are \$2 to \$4 per thousand gallons.

"Those rates have risen about 25% per year, and most of our

homeowner association customers have come to us to ask what they can do to save money."

Garber explained that the best way is renovation of the customers' Despite growing water shortages and rising rates, many consumers are reluctant to accept or invest in water conservation strategies for their landscapes.

By Kevin Tanzillo



The priniciples of water conservation usually hit home for landscape clients when they see costs skyrocket, water-use restraints or massive water waste.

irrigation systems to make them more efficient. The initial cost of such projects intimidates customers, but they tend to go along with inexpensive methods such as rain sensors and digital (instead of electromechanical) controllers.

He cited one 12-acre property with a perimeter sidewalk and an irrigation setup that watered more than an acre of concrete. He videotaped water running down the sidewalks and street and showed it to the owners, but they still balked at the \$100,000 that it would take to do the job right.

SAVING MONEY. Garber's company was able to install rain sensors and digital clocks — a \$10,000 investment that saved the owners

\$22,000 in water bills over two years.

Customers also are open to low-cost improvements such as more efficient longrange sprinklerheads. Rather than older ones that use five to seven gallons per minute, Garbernoted they can use nozzles that put water out at a specific, lower rate.

"Customers just want the generic Colorado landscape - a nice bluegrass yard with a few trees and shrubs," Garber said. "There is a very small market for people who really want to implement the principles of xeriscaping. We have to be sensitive to clients. Some say that no matter what, they still want green grass and no brown spots. If we

can't renovate their irrigation system, the alternative is to double or triple the water use.

"There is a tremendous amount (continued on page 44)



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Water Conservation

(continued from page 42)

of waste and we have a long way to go. But only a small percentage of people will conserve for environmental concerns. Most people must face higher water bills before they will start to conserve."

On the bright side, Garber said, he sees fewer instances of "fence-to-fence grass" and an increase in the use of mulched beds, perennials and native plants.

BIG EXPENSE. In Nashua, N.H., water is plentiful but also costly.

"Some of our water companies have gotten extremely expensive," noted Jim McMahon, landscape management division manager at Coronis Landscaping. "Water is not in short supply, but I am sure it will be, as development starts up again."

Coronis said the Northeast area isn't particularly progressive about water conservation.

"Not a lot of people talk about reclaimed water, but acouple of my large multi-family or commercial groups dug their own wells. That's a gamble, but it can be cost-effective in the long run. You aren't regulated by the town as far as water bans, and we have had those in the past, when it gets very dry."

McMahon stressed that a contractor must be aware of the areas being watered and use plants that don't require a lot of watering.

"We are real strong on making sure all areas get the same amount of water, so we don't have to water the heck out of the turf just to get one area covered.

"We discourage people from trying to water their ornamentals with the lawn part of the system. As the ornamentals grow up they're pretty tough, but you can't back the system off if you are watering it with your lawn. Also, we try to keep the water off the hard surfaces."

Rain sensors also are important, McMahon insisted. "Anyone doing a commercial system should make sure they have a rain sensor on it. I am all for requiring the use of rain sensors, but it has not yet been mandated. The industry here is regulated very loosely."

Cost is forcing an awareness of conservation techniques on customers, McMahon said. Some get an OK from their water companies to install separate water meters for irrigation systems so they don't have to pay sewage charges.

"I think what will happen with us is new development will force the issue and tighten water up."

WATER USE RESTRAINTS. One wouldn't expect water conservation to be a hot topic in South Carolina, but it is for Matt Thomas, irrigation maintenance manager at Ocean Woods Landscaping on Hilton Head island.

"Especially here on the island, water conservation is a big issue with restraints the town recently put on us," Thomas said. "The soils we have don't hold water well, so we are constantly irrigating. We don't want to use more than we have to, and we don't want to dig wells, because then you have salt intrusion. A preventive move is to watch what you are doing."

Hilton Head requires irrigation system installers to be licensed and systems to be checked by a town inspector. Systems that pass are tightly fit ones with rain sensors, backflow prevention and properly spaced heads.

"We typically drip-irrigate shrubs, but use spray heads forturf," explained Thomas. His firm's commercial clients include subdivisionstyle developments inside large plantations.

"Reclaimed water is another option for a lot of commercial installations," he said. "Where it is avail-

'We do what we can to make our clients' use of water as efficient and costeffective as possible. We use the best equipment and design where those heads and drip lines go. We try to be as effective as possible.'

able on the island, it costs one-tenth that of potable water. Where I have hooked it up, it is easy to sell."

BIG INVESTMENT. "The cost of water is a definite concern with our residential and commercial clientele," said Greg Kershaw, principal of McDugald-Steele Associates in Houston.

"There are no local ordinances or restrictions about irrigating, but there is a big concern about water bills. Even our residential projects are large ones, such as estates, and the water bills can be tremendous.

"We do what we can to make our clients' use of water as efficient and cost-effective as possible. We use the best equipment and design where those heads and drip lines go. We like throwing water low, right on the ground — nothing overhead. We try to be as effective as possible in the use of water."

Kershaw explained that McDugald-Steele's design criteria mean a more expensive installation, but the firm convinces customers they will get the money back in water bill savings.

Water-efficient plant choices aren'teven considered because customers don't have that mind-set yet, Kershaw said.

"They still want their place to look premiere," he explained. "If you can do something about their water bills, they'll consider it. We do what we can on our own, realizing that although we don't have the restrictions some states have, ultimately we will be affected."

SENSOR MANDATES. Even in Florida, water conservation is mandated. Sam Carns, irrigation operations manager at Ground Con-

trol Landscaping in Orlando, said a state law requires rain sensors in new landscape installations.

Before the law, "We only used them sparsely, if a client requested it," Carns recalled. "We try to do it on our maintenance properties, to keep relations with them on an even keel. They didn't want to see the irrigation running at the same time that it was raining."

Water management is an issue on

the major properties, Carns said. His staff monitors water use in both rainy and dry seasons, adjusting watering times on all zones. Florida switches to water restrictions during dry periods.

"Initially this was a problem, but now we find it is more of a benefit," Carns explained. "It adds to a sale to let the clients know we monitor their properties. We watch the scheduling of the cycles and the amount of water used."

Cost of water isn't a big issue in Orlando, Carns added. Also, some large properties rely on existing retention ponds for irrigation water.

Still, he said, "Water conservation is probably one of the two top criteria we use when we have a design/build project or a project we have bid on that is handed to us. We try to look closely at it so that there is nothing wasteful."

Carns' firm hasn't modified plantings toward more water-efficient varieties. There is some use of drip irrigation, but it is not deployed extensively. "We're doing what we've always done, only we make sure things don't get overwatered," he concluded.

DROUGHT EASES. On the West Coast, 1995 could be a good year after the fall rainy season got off to a good start.

"This year is looking very good," said a confident Dave Burnley of Contra Costa Landscaping in Martinez, Calif. "As far as water sources from different water districts, there probably will be less publicity about water use because of the easing of the drought."

Explaining that his part of northern California gets 90 percent of its precipitation from November to February, Burnley said, rain sensors are rarely used.

"We have almost no rain from late April to around October. We know we will have to irrigate accordingly through that growing season. We feel we are charged to manage the water and to be responsive to our clients' needs."

Supervisors at Contra Costa Landscaping monitor clocks weekly during the transitional seasons and keep a close eye on evapotranspiration rates, Burnley noted.

Customers don't show much interest in xeriscaping, preferring instead to "fine-tune" their irrigation setup, moving from overhead sprays to drip irrigation, for instance. Such a move is encouraged by water districts, which often rebate half the cost of equipment involved in the irrigation conversion.

Although there is some interest in drought-tolerant plants, clients aren't clamoring for water-thrifty plantings, Burnley said. If there is to be any trend in that direction, the push must come from landscape architects and the industry itself.



Despite California's perennial scarcity of water, the cost still isn't so high that it drives people to conserve, Burnley added. He noted that 100 cubic feet, or 748 gallons of water, goes for \$1 to \$1.45.

WATER HARVESTING. In a place

Drip irrigation plays a major role in fine tuning systems for conservation.

like Tucson, Ariz., smack in the middle of the Sonoran Desert, every drop of rain is precious. For J.D. DiMeglio of Horizons West, that means designing installations to catch as much water as possible.

"We do passive water harvesting," explained DiMeglio. "We rarely get so much water that it would damage the landscape to have it pool. Our rain is spaced far enough apart and is light enough so that even if we get a lawn area a

foot deep with water, it won't hurt. In a couple of days, it drains away."

The Horizons West approach involves grading properties and channeling water to take the runoff from streets and paved areas and bring it to the turf and landscaped areas. Grassy areas may be dropped 4 inches from a sidewalk, for instance, to collect water and keep it where it will do the most good.

Using water this way allows customers to have a lawn or higherwater-use shade trees in places where they would never have considered them. It also helps that Tucson gets 12 to 13 inches of rain a year, almost double the rainfall of Phoenix, so there is more water available to harvest.

"We also use moisture sensors, so if the soil is wet, it avoids that irrigation cycle. That is particularly important with water harvesting."

One thing is for sure, Tucson customers don't question the need for water conservation.

"That's a given here," DiMeglio observed. "People always ask for low-water-use plans. They are real open to the idea. Automated irrigation is the norm, and has been for the past 20 years. Water has always been costly here, so early on there was an incentive to be efficient."





USE READER SERVICE #26

DiMeglio sees a move away from the dirt, gravel and cactus yard design that he jokingly named "zeroscaping," and into a more lush look. The move has been helped by utilities that encourage landscaping designed around low-water-use.

Builders still crown properties out to the street, but the best way is to have water flow into the yards," DiMeglio said, "Many architects recommend that, and on custom

> homes you see this. You don't have street flooding and storm ren, hot and crowned yards, you have the water going to the trees

drains. Instead of barand the lawns."

EYE TO THE FUTURE.

It's not quite as dry in Spokane, Wash., but the rainfall only runs about 16 inches each year, explained Gary Sander, president of Nelson Landscape Service. However, Spokane benefits by sitting over a vast aquiferthat helps keep

The cost of wasted water often forces conservation.

Customers are open to low-cost improvements like more efficient long-range sprinkler heads. Rather than older ones. they can use new nozzles that put out water at a lower rate.

water costs among the least expensive in the Northwest.

"Spokane has not had a problem with water, except maybe with the building boom and a lack of infrastructure to get water out to those new areas." Sander said.

As a result, his firm's water con-

servation practices are "basically with an eye toward the future. We believe it has to start somewhere."

On large commercial sites where not all the property is used, Sander said his company puts in dry land grasses that need almost no water except for the first germination.

"Secondly, we use drip irrigation whenever we can. On lawn areas, we use lower gallonage heads and set the controllers so we can optimize use of the water. In rural areas, we go to more native-type plantings and use drip irrigation.

"We also try to inform the owner with sandy soils that by installing the proper topsoil with proper amendments, they can cut down their water use."

To protect the aquifer, area commercial and subdivision projects must channel their water runoff into a specially designed swale.

The swale area is planted with sod and acts as a filtering basin to purify the water before it returns to the aquifer.

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



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Entering The Interior Market

Establishing a healthy interiorscaping business requires more than an investment in hand sprayers and feather dusters. Different handling of clients, plant management requirements and special equipment are necessary to make the leap successfully.

By Barbara G. Howell

"IN BOTH exterior and interior landscaping, you are selling plants. In interiorscaping, you are selling plants in a coat and tie," explained Jeff Zindel.

Zindel should know. After working for 15 years with his father in the landscaping business in central Illinois, he and his wife, Susie, began an interiorscaping firm, Livingreen Interiors in Omaha, Neb. Now, after nine years of specializing in interiorscapes, Livingreen is going to the outdoors.

Livingreen Outdoors started in April 1994 as Zindel's company began to diversify. He hopes the attention to customer service that made his company successful in inside work will continue to mean success on the outside.

Diversification is going in both

directions. Not only are many interiorscaping firms beginning to enter the exterior market, but many more exterior landscaping firms are considering inside work to add revenues and profits.

It's "anatural evolution" according to incoming Associated Landscape Contractors of America president Terry Anderson, regional vice president of Rentokil Environmental Services in Riverwoods, Ill.

"It's an obvious path for diversification," said Anderson. His division of the United Kingdom-based service company specializes exclusively in interior work.

NEW BUSINESS GROWTH. KEI in Milwaukee is typical of a company diversifying to grow by entering the interior market. Ron Kujawa



Many exterior landscape contracting firms have diversified into interior plantscaping to increase profits and improve year-round cash flow.

started Kujawa Enterprises Inc. 25 years ago specializing in grounds management. Son Chris explained how the business grew.

"In 1967, we were doing the only thing people thought of, which was mowing the grass. We had the idea of expanding into other contracted services like pruning and tree care, annual bed maintenance and lawn care.

"Our next expansion was into restoration work. A large utility company was putting power lines underground and we were hired to repair the lawns behind them. That required large dump trucks and big equipment. From there, with the equipment, we expanded into design/build work by installing land-scape material and moving parking lots around," he continued.

"We are a market-driven company. We let the market dictate what the customers want and provide it from there. We were dragged into interiorscaping by our clients. We were already caring for their lawns and installing landscape and irrigation. We had one guy doing it in maybe three or four places for the last couple of years. We did it as a request, not a planned expansion."

That's the way it was for the last six or seven years. Now, KEI has about 25 interiorscape clients and about 12 employees in that division. It all changed with a phone call just eight months ago.

"We lost a large bid for a major downtown account on price," Kujawa explained, "but the company was so impressed that they

(continued on page 50)

You Can't Beat The Value.

In a recent independent survey sponsored by a leading industry publication, six hundred commercial cutters and landscape contractors were asked to rate the best commercial mowers in the industry. The answer by a wide margin was Scag.

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Interior Market

(continued from page 48)

called back a couple of months later and said they had a contract for interior service. They realized we weren't in the interiorscape business but asked us to take a look at it and consider making a bid on the interior contract anyway. We were very flattered and put together a package and got the contract."

Word of mouth has spurred the growth and, at the close of 1994, Chrisestimated the company would add 7 to 10 percent to sales from the interiorscape business.

Most companies—whether they are exterior landscape contractors going into interior work or interiorscape companies going to outdoor work — relate the same experience.

Don Horowitz with Plantscape Inc., in Pittsburghexplained, "Your clients will request it. Corporate clients want to work with one contractor who can do everything. The move from exterior to interior is attractive to many companies because it's much easier to expand to existing customers who know your work. It's much less costly than going after new customers."

Anderson suggested that natural diversification is only one of the reasons companies move from exterior to interior or vice versa.

"I think there's a less obvious reason for it, too," Anderson said. "People in our industry, the entrepreneurs, get stale doing the same things. The diversification of services gives them a chance to do something new."

DIFFERENT BALLGAME. Indeed, the move to interiorscape gives landscape contractors new challenges.

"You can't assume that because you are successful in one, you'll be successful in the other," suggested Anderson.

The biggest difference, Zindel explained, is the "different strata of clients. In interiorscape, you're not dealing with the groundskeeper in coveralls who works out of the basement or a back building, but the facilities manager who has a corner office on the 14th floor."

According to managers in many companies who have made the move from exterior to interior work, the clients are not the same. Often, landscapers believe that they'll still be dealing with the same person since work is at the same property.



Interior plants require a high level of maintenance and attention to detail.

That's not usually the case. Not only does the switch to interiorscape often mean adding a new contact or client, it means dealing with him or her in a different manner.

In addition to different working contacts and types of communication needed, contractors say the plants are not the same.

"It's a whole new ballgame," continued Zindel. "Tropical foli-

'You can't assume that because you are successful in one, you'll be successful in the other.'

age is an entity all its own. Interior plants are not forgiving. If you trim a ficus two feet too short inside, you can count on replacing it. Outside, you might get away with it and just wait a year. Not inside."

Business is different in the interior market, too.

First, as Zindel noted, there's not as much equipment required for interiorscaping. He also stressed that a landscape contractor can't count on interiorscaping to turn a profit as fast. "Turnaround time and profitability is faster and easier in exterior work." rather than interior work.

Other managers echoed these sentiments. Several suggested they turned profit right away with exterior landscape contracts, but it took more than a year for their interior business to show a profit.

Orkin recently began moving into the interiorscape market with Orkin Plantscaping. Most branches handle interiorscaping primarily, but Brent Totman's branch in Knoxville has 35 percent of its business in exterior work. He noted a number of differences between inside and outside business.

"In operations, the technical skills are unique. There's not a lot of crossover except in doing installation work. There's not even a lot of similarity in the type of service or maintenance work.

"Crossover starts," Totman said, "at the selling level. The difficult part of selling is developing a relationship with the customer. Then, it's easy to come back with other services. Management is similar, too. In interior as well as exterior work, you have to manage people and equipment and work with customers. That's the same."

STARTING THE TREK. Interior landscape firm managers have some good news and some bad news for those thinking about diversifying into interiorscape work.

First, there's the equipment. Exterior landscapers are used to big pieces of expensive equipment. The good news is that interiorscape requires less equipment and the capital investment can be considerably less.

Before venturing into the interiorscape field, the following equipment may be needed:

- A high-cube van for transporting plant material. At the high-end, consider climate controlled transportation.
- Water wells or some type of apparatus to provide water at each job site. Some managers suggest a device that can fold up and store in a closet.
- Spray equipment, mostly smaller scale for use on foliage plants. Several interiorscapers suggest a need for pressurized sprayers for atrium-type trees.
- Lifting equipment (like a forklift) to move large plants. Many say this type of equipment isn't always necessary and suggest that companies may want to rent when needed.
- Appropriate pruners, trimmers, scissors and feather dusters for maintenance.
- Some companies provide vehicles for employees to drive to job sites. Other companies pay mile(continued on page 54)

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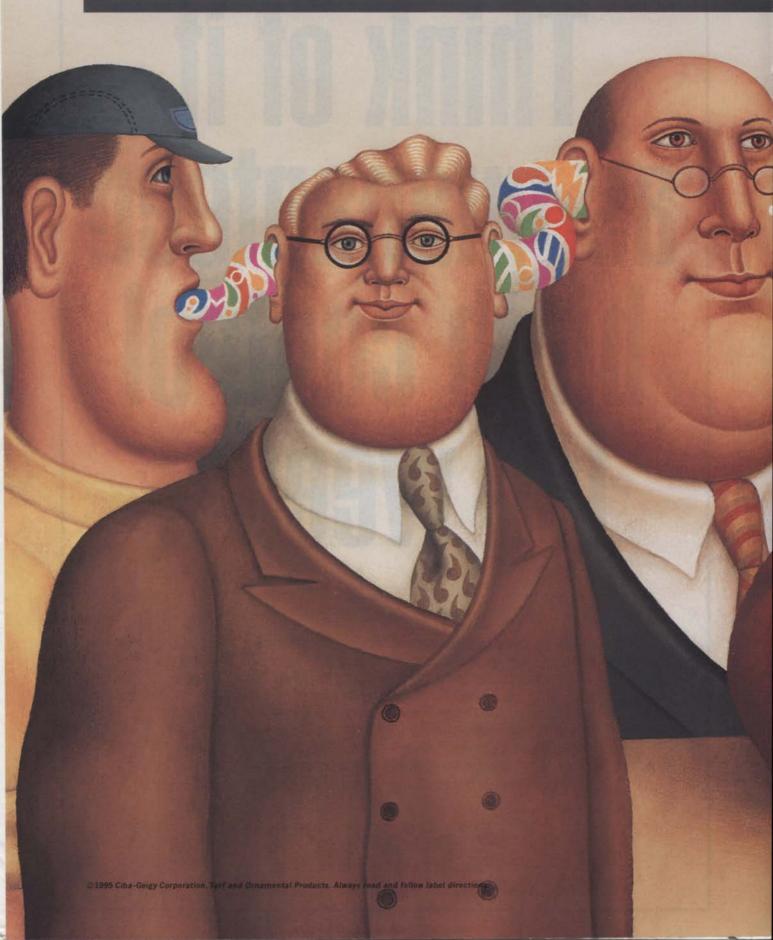
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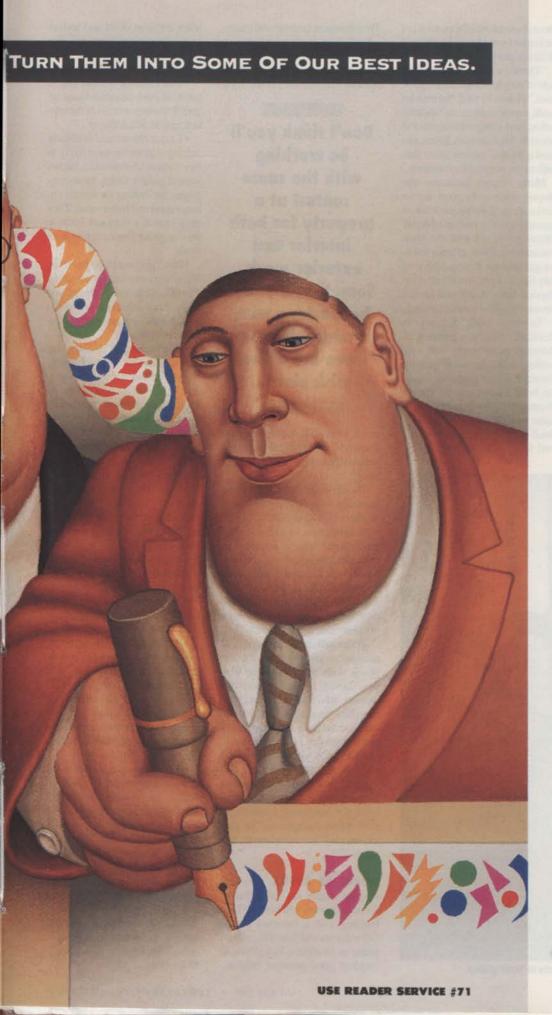
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Interior Market

(continued from page 50)

age for employees to use their own cars for work.

• An inventory of tropical plants for replacement or installation also is necessary. This inventory requires either a greenhouse or a heated storage facility. Estimates on the size required varies from several hundred square feet to 5,000 square feet, depending on the size of the business operation.

GETTING GOOD PEOPLE. One of the major differences in setting up an interior landscaping business is the type of people needed to work inside.

Few schools have training programs for interiorscape. While many managers suggest one key to success is having a competent person to run the business — someone who knows interiorscape — most agree that person would likely come from another company already in the business.

Interior service employees need to be special, too. Knowing a lot

about diseases and plant care is not the key for front-line staffers. People skills are most important.

"There's a big difference in the type of people to staff these operations," Horowitz said. "In exterior work, we use ornamental horticulturists, lawn care professionals and arborists. Most are men. Inside, you need a 'fussier' person. More than half our interior people are women."

Many exterior landscape employees don't make good interior landscapers. Some people have no patience with the amount of detail. Others get bored with the same routine work. Many exterior workers get into the business because they like to work outside or enjoy physical labor. A different kind of person is required for interior work.

"In interior work," Kujawa emphasized, "there is a personal attachment to the plants. You need workers who can work with the clients and their employees, who can build a bond with the clients. Women have been successful because they have more attention to detail and, mostly, because they tend to have more people skills.

They also have the heart and imagination to be creative, which is a necessity in interiorscape.

"It's all personal. You may hate a plant and the secretary or manager

Don't think you'll
be working
with the same
contact at a
property for both
interior and
exterior work.
Sometimes, you'll
be working with
as many clients as
there are offices
with plants.

might just love it. You have to understand that and be able to create a personal communication with your clients."

The success of the interiorscaping company depends on its everyday workers, said Anderson.

"Clients expect a well-scrubbed professional who is schooled in customer service and who communicates well. Customers don't judge on the face value of the plant material. They judge on the experience they have when that person comes in to take care of their plants."

Training, therefore, needs to concentrate on customer service and people skills. Many managers suggest hiring people, especially women, who like plants and give them basic training in plant identification, reading a moisture meter and recognizing plant problems.

ALCA has videos which help with the training. Anderson also suggested that the new employee be paired with a competent trainer to learn the necessary horticulture skills. Many managers say "on-the-job-training" is most necessary and successful.

words of Advice. Interiorscaping clients are all different. Some customers will have a whole building with a thousand plants. Other clients will have a few dozen plants in 10 offices. In addition to building good personal relationships between client and technician, interiorscape managers offer other pieces of advice for those diversifying into interiorscaping.

• Don't assume because you're successful in exterior landscaping, you'll also be a success in the interior market. It's different.

• Larger clients you're already serving may be the most likely to buy consolidated services, but beware of pitfalls. Often, those companies are looking for service enhancement and better value. They may expect a discount because they're giving your company more work.

•Don't put your business at risk. If you've diversified and are doing a lot of work for one client and you make a few mistakes, you could risk losing 10 percent of your customer portfolio.

• Don't think you'll be working with the same contact at a property for both interior and exterior work. You may expect communication to be simpler, but that's not usually the case. Sometimes, you'll be working with as many clients as there are offices with plants.

• Remember every customer has different service expectations. Interiors caping is more visible and perishable. Interiors caping is used to create a positive image. Things can't look bad. There is more of a sense of urgency.

• Be prepared to learn some new regulations and techniques for indoor pest control.

• Be prepared to face a higher public sensitivity to pesticide use indoors.

• Be prepared to work odd hours. Much of the interior work is done at night or on weekends.

• Most importantly, get active in professional organizations and learn from others' mistakes. Many people in the industry are willing to share knowledge. Take advantage of it.

One source of guidance is the Interior Plantscape Division of ALCA. Its provides a variety of services, industry conferences and materials on developing a profitable business. ALCA also sponsors the Interior Plantscape Conference and Trade Show, which offers technical and interior business seminars.

The author is an industry consultant with Key Solutions, a division of Iris Sales & Solutions Inc., Rocky River, Ohio.



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Checking Soil Fertility

For Plant Health Solutions

Drought, insects and diseases often are blamed for turf and ornamental damage, but the problem might be low soil fertility.

By Charles H. Darrah III, Ph.D.



Soil tests verify the level of mineral nutrients available to turf and ornamentals.

SOIL FERTILITY and plant nutrition go hand-in-hand. One of the most important functions of soils is to provide a reservoir of plant nutrients. Most of the essential elements for plant growth and development are taken up by the roots anchored in the soil. The

term "soil fertility" describes the amount of plant nutrients available in the soil.

There are 15 essential elements for plant growth (Table 1). Plants take up carbon, hydrogen and oxygen as carbon dioxide; water and oxygen from the atmosphere; and air and water from the soil. The other elements, often referred to as the mineral nutrients, are supplied by the soil. These mineral nutrients are frequently supplied by fertilizers used on lawns and landscapes.

Mineral nutrients are taken up from the soil reservoir by the root systems of turf and ornamentals. These nutrients must be in the proper quantity and in the proper form in the soil solution before plant uptake can occur. Soil fertility is the term used to describe the availability of the essential plant elements in the soil.

Often, all of the essential plant nutrients are contained in the soil minerals. If this were not the case, natural landscapes would be devoid of plant life. As soil minerals break down from weathering and microbiological activity, plant nutrients are released to the soil solution. Topsoils usually have higher fertility than subsoils because of increased weathering and microbial activity at the soil surface.

HIDDEN DAMAGE. In most landscape situations, the breakdown of the soil minerals will not supply sufficient nutrients to sustain active growth of turf and ornamentals. These plants may not grow well and may even show signs of nutrient deficiencies, unless additional nutrients are supplied from fertilizers.

For example, turfgrasses readily show signs of low nitrogen (continued on page 58)



Topsoils are reservoirs for nutrients.

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USE READER SERVICE #87

Soil Fertility

(continued from page 56)

fertility as thin, weak stands of light green to yellowish grass. Nutrient deficiencies also can be seen as foliar symptoms on ornamental plants. Chlorosis (yellowing) on oak leaves frequently indicates an iron deficiency, while this same symptom on maple leaves often indicates a manganese deficiency.

More subtle, but no less important, are the effects of low soil fertility on resistance to environmental and biotic stresses. Low levels of phosphorus, potassium, manganese, iron and other nutrients decrease root growth of turf and ornamentals, making them more susceptible to drought and heat stress. Ad-

equate levels of several nutrients are needed to increase their tolerance to low-temperatures. Winter survival of warm-season grasses and many woody ornamentals decreases when potassium, iron and other nutrients are deficient.

Adequate soil fertility is important in promoting overall plant health for resistance to and recovery from biotic stresses. Certain weeds may thrive under low soil fertility conditions, while stands of turf remain thin and weak. Low levels of nutrients that are important for root growth will make turf and ornamentals more susceptible to damage from root feeding insects like white



Low levels of essential nutrients in the soil can result in slow root growth and susceptibility to stresses.

grubs in turf or black vine weevil larvae in ornamentals. In addition, low soil fertility will slow recovery from insect damage.

Disease susceptibility often is related to the nitrogen, phosphorus, potassium, calcium and manganese status of the plant. Many of the leaf spot diseases of turf and ornamentals are related to nitrogen fertility. Several other diseases of turf and ornamentals are directly related to levels of calcium, phosphorus, manganese and other nutrients in the soil.

Low soil fertility frequently is a problem in (continued on page 60)

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NON-MINERAL NUTRIENTS

Nutrient	Source	
Hydrogen (H) Oxygen (O) Carbon (C)	Water Air Air	
MINERAL NUTRI	ENTS	

Nitrogen (N)	Soil and fertilizer (some plants use nitrogen from the air
Phosphorus (P)	Soil and fertilizer
Potassium (K)	Soil and fertilizer
Secondary Nutrients	
Calcium (Ca)	Soil and fertilizer
Magnesium (Mg)	Soil and fertilizer
Sulfur (S)	Soil and fertilizer
Micronutrients	
Boron (B)	Soil and fertilizer
Manganese (Mn)	Soil and fertilizer
Zinc (Zn)	Soil and fertilizer
Copper (Cu)	Soil and fertilizer
Iron (Fe)	Soil and fertilizer

Table 1.

Soil and fertilizer

Soil and fertilizer

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Chlorine (Cl)

Molybdenum (Mo)

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Barricade Herbicide THE PROFITABLE PERFORMER

USE READER SERVICE #88

Soil Fertility

(continued from page 58)

residential and commercial landscapes and other places where plants are placed into subsoils. The minerals in subsoils are largely unweathered and not available for plant growth. In addition, subsoils can be low in organic matter.

Because of this low organic content, these soils mineralize more slowly and hold less nutrients following fertilizer applications. Even rich looking topsoils often are found to be low in fertility, especially when the nutrients have been depleted by farming practices.

A soil test is the only way to determine the level of mineral nutrients in the soil. Soil testing, using accepted methods of analysis, can provide an accurate picture of most plant available nutrients in the soil. Interpretation of the results of a soil test must be made according to the unique needs of turfgrasses and ornamentals.

Many soil testing laboratories do not provide interpretations based on the soil test calibration research that has been done on turfgrasses and other landscape plants. As a result, fertilizer recommendations from these laboratories frequently are higher than needed to correct low soil fertility conditions for turf and ornamentals.

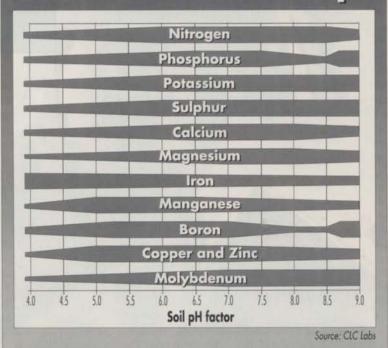
NUTRIENTS NEEDED.

The macro- and secondary nutrients are needed by turf and ornamentals in the greatest amounts. Often, the demand for macronutrients exceeds the soil's ability to supply adequate amounts.

Therefore, the macronutrients nitrogen, phosphorus and potassium are the ones commonly

High- and low-pH soils affect the availability of nutrients. Plants treated with remedial mineral nutrients often show improvement.

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found in most types of turf and ornamental fertilizers.

Secondary nutrients also may be very low in the soil. When calcium or magnesium fertility is low, liming can correct this deficiency.

Low calcium soils are found in the higher rainfall areas of North America, like the Northeast, Southeast and in the Pacific Northwest. Low magnesium soils are much more widely distributed across North America.

Sulfur deficiencies in turfgrasses and ornamentals are rare. Sulfur (available in the atmosphere from the burning of coal and other hydrocarbons) often meets plant needs. Estimates of sulfur fertilization from rainfall range from 20 to 50 pounds of sulfur per acre. In addition, many turf and ornamental fertilizers contain sulfur in the form of sulfate of potash, sulfurcoated urea or other sulfur containing fertilizer sources.

Micronutrients typically are needed by turf and landscape plants in very low amounts. Most soils, even sub-soils, supply the needs of landscape plants. The ability of a All too often, nutrient deficiencies are masked in turf and landscape plants by excess nitrogen applications. Although the plants may look good for the short term, they can be more susceptible to environmental and biotic stresses.

soil to supply micronutrients often is directly related to its organic matter content.

Adding organic matter to landscape soils can correct low micronutrient fertility. It also can be corrected by the use of fertilizers containing the appropriate micronutrient in a readily available form.

Many complicated soil reactions are involved in nutrient availability. One of the best understood soil reactions involved in nutrient availability is pH (see chart). Nutrient availability can be strongly influenced by pH. For example, in the high pH (7.8 to 8.2), low iron soils in the Rocky Mountain states, Kentucky bluegrass often exhibits chlorosis.

Likewise, in high pH soils in the Southeast and Gulf Coast states, St. Augustine-

grass and bahiagrass often show chlorosis and respond to iron and manganese fertilization. Many of the woody ornamental landscape plants show deficiency symptoms when soil micronutrient fertility is at low levels.

On the other hand, turf and orna-

mentals may not show foliar symptoms of deficiencies. All too often, nutrient deficiencies are masked in turf and landscape plants by excess nitrogen applications. Although the plants may look good for the short term, they can be more susceptible to environmental and biotic stresses.

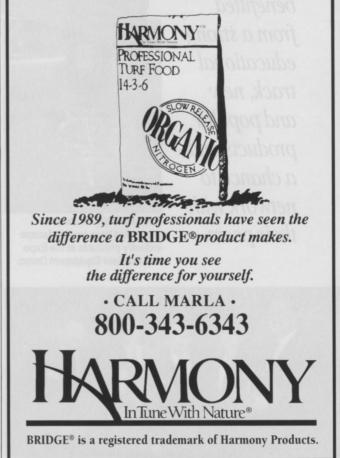
Heat or drought, insects or disease may be blamed for the damage, but the real cause is the lack of adequate soil fertility.

If one or more of the essential elements are missing from the soil or in low supply, plant health will be affected adversely. Healthy turf and landscape plants need all 15 of the essential elements. Maintenance fertilizers and liming may not be enough to overcome severe deficiencies in nutrients or pH commonly found in landscape soils.

Deficiencies can be determined by soil testing. Corrective applications can then be made so that fertilizer and lime applications will continue to produce healthy lawns and landscape plants.

The author is general manager of CLC Labs, Westerville, Ohio.





Strong Economy Benefits GIE

Attendees at the fifth annual Green Industry Expo benefitted from a strong educational track, new and popular products and a chance to network with their peers.



More than 280 exhibitors presented lawn and landscape industry products at the Expo and Outdoor Equipment Demo.



Representatives of GIE's three sponsoring groups meet Rocky Bleier.



GIE exhibitors and attendees gathered at a reception sponsored by Lawn and Landscape Maintenance magazine.

THE ECONOMIC FORECAST is sunny for 1995, according to exhibitors, attendees and sponsors of the Green Industry Expo. Business for 1994 was up for almost everyone interviewed, and most of them expect it to continue through this year.

The positive outlook was obvious in the interest that attendees gave to educational seminars, industry association events and exhibitor displays. About 2,300 people and 280 exhibitors attended the event which covered 60,300 net square feet of exhibit space. Exhibit floor space represented 12 percent growth over 1993. Exhibitor attendance was close to 1,500.

"The numbers show that there is confidence in the economy and the show," said Eleanor Ellison, GIE trade show manager. "Time and again the



GIE board members (L to R) George Gaumer, Joe Williams and Steven Glover share ribboncutting duties for the GIE Expo.



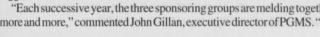
Several hundred people gathered to hear the keynote speech, given by Rocky Bleier (above), former running back for the Pittsburgh Steelers. Attendance at the Expo (left) was estimated at 2,300 people. The Outdoor **Equipment Demo** (right) drew more than 300 people.

exhibitors told us that they were pleased with the buyer at the show. They were able to reach the level of executive where the buying decision is made."

Sponsors of the Expo are the Associated Landscape Contractors of America, the Professional Grounds Management Society and the Professional Lawn Care Association of America.

Ann McClure, executive vice president of PLCAA, commented on the show's reception: "We're very pleased with the turnout and feedback we've gotten so far. It was a successful show and we're looking forward to an even bigger and better one in Fort Worth."

"Each successive year, the three sponsoring groups are melding together more and more," commented John Gillan, executive director of PGMS. "It's



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Virginia Firm Snags Community Service Award

CURB APPEAL LANDSCAPING, Stafford, Va., received a Community Service Award for the participation of its employees in Stafford County's all volunteer fire service.

Curb Appeal owner Charlie Robertson and employees serve as fire fighters in the volunteer program which provides emergency response service to about 78,000 residents and responds to 1,200 emergency calls annually.

"Not only does the community benefit by the direct provision of this life-saving emergency service through the manning of Curb Appeal employees," Robertson explained, "but the savings of tax dollars through the all-volunteer service is incalculable."

The award was sponsored and presented by Lange-Stegmann, St. Louis, on behalf of the Professional Lawn Care Association of America, which established the award in 1993 to recognize lawn and landscape companies contributing leadership and dedication to the betterment of the community. In addition to the award, Curb Appeal received a \$500 donation to further the firm's community service efforts.

Top entrants for the community service award included the New York State Lawn Care Association, Rochester, N.Y.; the Ohio Lawn Care Association, Columbus, Ohio; and Edmonds Landscape and Construction Services, Halifax, Nova Scotia, Canada.

very satisfying to see almost everything we planned years ago come to fruition in this event."

In the host city, St. Louis, municipal and business groups joined the bandwagon by decorating city street lights with special GIE welcome flags and offering special services at a downtown mall.

Each attendee comes to GIE with plans to participate at different levels. Some find enormous benefit in the associations' roundtable discussions, educational sessions on a variety of topics, or certification programs. Many come to shop for equipment, supplies and services.

Attendees also had a choice of association business meetings, tours of the St. Louis area, social events and pre-conference seminars to fill their days. One highlight of the week was the Professional Lawn Care Association of Mid-America's tour of the famed Missouri Botanical Garden, home of a fragrant garden for the blind, tropical and temperate rain forests under glass, a 14-acre Japanese garden with a lake and several thematic gardens and plantings with statuary.

Keynote speaker Rocky Bleier, former running back for the Pittsburgh Steelers, gave a dramatic presentation on the meaning of determination in achieving personal success.

Exhibiting companies reported much interest in their products and services. This was confirmed as more than 300 attendees braved chilly weather to try out equipment that had been displayed on the floor of the Expo at the Outdoor Demonstration. About 47 exhibitors participated, up significantly from the 35 who participated in



A growing confidence in the economy was evident in the GIE attendees, who showed much interest in new products and services introduced by many of the show exhibitors.



Roundtable discussion participants relished the opportunity to share their experiences.



The GIE Expo attracted exhibitors offering a wide range of products for contractors.

the 1993 Outdoor Equipment Demonstration.

Exhibitors with new products had a number of opportunities to present their materials. New to GIE this year was the GIE Theater, where exhibitors presented a variety of materials. Also making a debut in St. Louis was the New Product Showcase, in which 98 exhibitors participated.

"The GIE Theater is a concept with lots of strength and interest. It keeps people on the trade show floor," Ellison said. "We may modify it slightly next year to incorporate some ideas from exhibitors and attendees."

The showcase was located at the entrance to the trade show and was stocked with news releases from participating exhibitors.

GIE traditions, such as the breakfast and lunchtime roundtable sessions sponsored by the three associations, PLCAA's Live Auction, ALCA's Ask the Experts and PGMS' Brag Night were especially well attended.

ALCA presented its Exterior Landscape Division Board Member of the Year award to Steven Glover, L&L Landscape Services, Santa Clara, Calif., for his service as chairman of the board and other ALCA activities.

Harry Collins of Total Lawn Care, Tupelo, Miss., served as the auctioneer at the PLCAA event, which sold more than \$18,000 worth of merchandise, including an autographed Rocky Bleier football.

The sixth annual GIE will be held Nov. 13-16 at the Fort Worth Tarrant County Convention Center, Fort Worth, Texas.

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Smith	10/1/94	123_	Mowing	35.50		450000		
Jones	10/7/94		Payment	50.00				
Carter-325	10/8/94		Remove Brus	h 35.00		2.00_		
Jones	11/1/94		Late Charge_	5.00_		A STATE OF		
Ivey-123_	11/1/94		Payment	82.03				
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Weed Biology:

Taking A Measure Of The Competition

COMPETITION IS A FACT of life. Either in the business world or in sports, success is measured by how well you do against the competition. In weed control, agronomic practices are judged by how well the turfgrass competes against weeds.

When devising a weed management strategy, lawn and landscape contractors should assess the strengths and weakness of weeds and turfgrass. This is a critical step in developing a weed integrated pest management program.

The term "weed" has no taxonomical meaning since it does not refer to a genus or family. Yet more than 2,000 species of weeds have been identified by The Weed Science Society of America.

In general, weeds occur in disturbed situations. Thus, it is no surprise that most weeds are native to Europe where disturbances, primarily farming, were initiated long before North America was settled and subjected to disturbances (Tables 1 and 2).

Since no taxonomic base exists for characterizing weeds, other A weed is not just a weed. They're the most competitive plants around. Contractors that know how weeds get their competitive edge can give healthy grass a winning chance.

By Karl Danneberger, Ph.D.

methods need to be used to assess the competitiveness of weeds. In this article, biochemical, life cycle and something called r- and Kstrategies are used to judge weed competitiveness.

A BIOCHEMICAL PROCESS. All plants, including weeds, carry on a process called photosynthesis. It is the process where a plant captures the energy from the sun and stores it in a usable form.

A critical step in photosynthesis is the fixation of carbon. The carbon is derived from carbon dioxide and is used to construct organic molecules that contain the energy acquired from the sun.

In the process of carbon fixation, plants use one of three reactions. They are termed the Calvin-Benson cycle (C_3) , Hatch/Slack or dicarboxylic acid cycle (C_4) , and Crassulacean Acid Metabolism pathway (CAM).

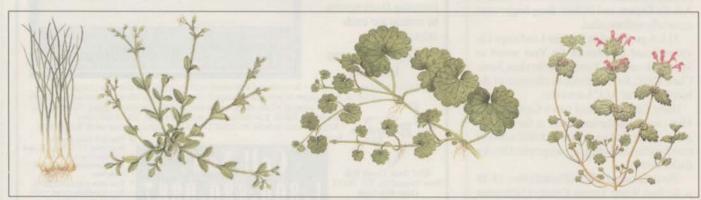
Turfgrasses that have a C₃ pathway are often referred to as coolseason turfgrasses while C₄ species are referred to as warm-season turfgrasses. The CAM pathway does not occur in turfgrasses; rather it is confined to plants such as cacti, which are found in arid climates. Given the diversity in weed species, all three pathways are

found. The majority of weed species found in turfgrass areas are either C₃ or C₄ plants with the exception of purslane, which expresses CAM characteristics, and carpetweed, which has been reported to be a C₃-C₄ intermediate (Kennedy and Laetsch, 1974).

In 1969, Black proposed that plant-weed competition could be based on photosynthetic efficiency. In general, C₄ plants are more efficient at capturing CO₂ under increasing temperature and light intensity than C₃ plants. Based on the efficiency of capturing CO₂, the competitive outcome between a C₃ and a C₄ plant would result in the C₄ plant winning.

Thus, the more efficient capture of CO₂ (C₄) would provide a competitive advantage over the less efficient C₃ plants. Although the competitive outcome between C₃ and C₄ plants will not always result in a C₄ advantage (Gifford, 1974), this generalization will hold true in turf under many high light and temperature situations.

For example, a Kentucky bluegrass lawn is at a distinct disadvan-



Growth characteristics can give weeds an advantage. Left to right: wild onion, mouse-ear chickweed, ground ivy and henbit.

COMMON DICOT WEEDS FOUND IN TURF

COMMON NAME	BOTANICAL NAME	PHOTO- SYNTHETIC APPARATUS	LIFE	STRAT- EGIST	ORIGIN	
Common Yarrow	Achillea millefolium L.	C,	P	K	Native	
Wild Onion	Allium canadense L.	C,	P	K	Native	
Wild Garlic	Allium vineale L.	C,	P	K	Europe	
Yellow rocket	Barbarea vulgaris Br.	C,	P	r	Eurasia	
Sheperdspurse	Capsella bursa-pastoris L.	,	A	r	Europe	
Mouse-ear Chickweed	Cerastium vulgatum L.	C,	P	r	Europe	
Common Lambsquarters	Chenopodium album L.	C,	A	r	Eurasia	
Prostrate Spurge	Euphorbia supina Raf.	C.	A	r	Native	
Ground ivy	Glechoma hederacea L.	C,	P	K	Eurasia	
Hawkweed	Hieracium pilosella L.	C,	P	K	Europe	
Pennywort	Hydrocotyle sibthorpioides Lam.	C.	P	r,K	Asia	
Purple Deadnettle	Lamium pupureum L.	C,	A	r	Eurasia	
Henbit	Lamium amplexicaule L.	C.	A	T	Eurasia	
Mallow	Malva neglecta Wallr.	C.	A	r	Eurasia	
Black Medic	Medicago lupulina L.	C.	A	r	Eurasia	
Common Yellow Woodsorrel	Oxalis stricta L.	C ₃	A,P	r,K	Native	
Cinquefoil	Potentilla spp. L.	C,	P	K	Native	
Buckhorn Plantain	Plantago lanceolata L.	C,	A.P	r,K	Eurasia	
Broadleaf Plantain	Plantago major L.	C.	A,P	r,K	Europe	
Prostrate Knotweed	Polygonum aviculare L.	C.	A	r	Eurasia	
Common Purslane	Portulaca oleracea L.	C CAM	A	r	Europe	
Healall	Prunella vulgaris L.	C.	P	r	Native/Europe	
Curly Dock	Rumex crispus L.	C.	P	r	Eurasia	
Largeflower Pusley	Richardia grandiflora Steud.	C.	P	r	South America	
Common Chickweed	Stellaria media L.	C.	A	r	Europe	
Common Dandelion	Taraxacum officinale Weber	C.	P	r,K	Native/Eurasia	
White Clover	Trifolium repens L.	C, C, C,- CAM C, C, C, C, C,	P	K	Europe	
Puncturevine	Tribulus terresris L.	C.	A	r	Mediterranean	
Speedwell	Veronica spp.	C.	P	r.K	Europe	
Field Pansy	Viola arvensis Murr.	C,	A	r	Europe	

Photosynthetic apparatus refers to the carbon dioxide fixing pathway. The pathways include Calvin-Benson (C.) cycle, Hatch (C,) cycle or Crassulacean Acid Metabolic Pathway (CAM).

Sources for some of the information in the table was obtained from:

1) Elmore, C.D. and R.N. Paul. 1983. Weed Science 31:686-692. 2) Muenscher, W.C. 1987. Weeds. Cornell University Press. Ithaca. Cooperative Extension Service, ANR 616.

3) Murphy, T.R. Weeds of Southern Turfgrasses. Alabama

tage against C, weeds like crabgrass, goosegrass and foxtail during the summertime. The C, weeds are often the ones that literally take over an improperly maintained lawn.

In the southern United States, a different situation exists. Warmseason turfgrasses are very competitive against weeds. A properly maintained bermudagrass turf in sunny, warm areas has very few weeds. However, bermudagrass grown in shade is noncompetitive against a number of weeds.

LIFE CYCLES OF ANNUAL WEEDS.

Table 1.

The life cycle of an annual weed is very intensive in that the weed seed germinates, grows vegetatively and produces seed within one year. University research has shown that the weed seed can occur at levels in the millions per acre (Danneberger, 1993).

Light is a requirement for many weed seeds to germinate. Thus, the need to maintain a dense turf provides a means of control by limiting light penetration to the weed seed. However, in numerous experiments where researchers exposed an array of weed seeds to optimum temperatures and light, the weed seeds failed to germinate.

Weed seeds contain an internal clock called dormancy that prevents them from germinating at the wrong time. Winter and summer annuals exhibit annual cycles of dormancy and nondormancy. The winter annual life cycle starts with seed germination in the fall. These plants grow vegetatively during the winter months, then culminate with the production of a seed in the spring. After seeds are dispersed, the plants die.

The newly produced seed are either conditionally dormant or innately dormant. Conditionally dormant seeds can germinate when soil temperatures are low. However, soil temperatures are normally too high at this time of the year. Innately dormant seeds cannot germinate at all.

As summertime approaches, the seeds undergo biochemical changes that convert the seeds from dormancy to non-dormancy. The process of conversion from dormancy to non-dormancy is referred to as afterripening.

Afterripening is completed in late summer when: 1) the optimum and maximum temperatures for germination are high for the



Weed life cycles can affect successful turfgrass establishment. Left to right: black medic, broadleaf plantain, white clover and speedwell.

COMMON MONOCOT WEEDS FOUND IN TURF

COMMON NAME	BOTANICAL NAME	PHOTO- SYNTHETIC APPARATUS	LIFE	STRAT- EGIST	ORIGIN
Quackgrass	Elytrigia repens L. Nevski	C,	P	K	Europe
Alexandergrass	Brachiaria plantaginea Hitchc.	C,	A	r	Central America
Smallflowered Alexandergrass	Brachiaria subquandripara Hitchc.	C ₄	P	K	Asia
Sandbur	Cenchrus longispinusp Fern.	C.	A	K	Central America
Yellow Nutsedge	Cyperus esculentus L.	C	P	K	Europe/Native
Purple Nutsedge	Cyperus rotundus L.	C	P	K	Asia
Smooth crabgrass	Digitaria ischaemum Schreb.	C. A	A	r	Europe
Large crabgrass	Digitaria sanguinalis L.	C.	A	r	Europe
Blanket crabgrass	Digitaria serotina Mitch.	C	A	r	Europe
Barnyardgrass	Echinochloa crusgalli L.	C	A	r	Europe
Goosegrass	Eleusine indica L.	C.	A	r	Asia
Tall fescue	Festuca arundinacea Schreb.	C,	P	K	Europe
Bearded sprangletop	Leptochloa fascicularis Lam.	C.	A	r	Central America
Nimblewill	Muhlenbergia schreberi Gmel.	C.	P	K	Native
Carpetweed	Mullugo verticillata L.	C, - C,	A	r	Central America
Witchgrass	Panicum capillare L.	C. A	A	r	Native
Fall panicum	Panicum dichotomiflorum Michx.	C	A	r	Native
Torpedograss	Panicum repens L.	C.	P	r,K	Europe
Dallisgrass	Paspalum dilatatum Pior	C.	P	K	Europe
Kikuyugrass	Pennisetum clandestinum Hochst.	C.	P	K	Europe
Annual bluegrass	Poa annua L.	C,	A,P	r,K	Europe
Giant foxtail	Setaria faberi Hevrm.	C.	A	r	Europe
Green foxtail	Setaria virdis (L.) Beauv.	C.	A	r	Europe
Smutgrass	Sporobolus indicus L.	C ₄	P	r	Central (tropical) America

Photosynthetic apparatus refers to the carbon dioxide fixing pathway. The pathways include Calvin-Benson (C_3) cycle, Hatch (C_3) cycle or Crassulacean Acid Metabolic Pathway (CAM).

Sources for some of the information in the table was obtained from:

1) Elmore, C.D. and R.N. Paul. 1983. Weed Science 31:686-692

2) Muenscher, W.C. 1987. Weeds. Cornell University

Press. Ithaca.

3) Murphy, T.R. Weeds of Southern Turfgrasses. Alabama Cooperative Extension Service, ANR 616.

Table 2.

species; 2) a large percentage of seeds germinate within a very short time over a relatively wide range of temperatures; and 3) small percentages of seeds of some species will germinate, usually at low temperatures, in darkness (Baskin and Baskin, 1985). Those seeds near the soil surface germinate while those seeds at deeper soil depths

do not, and thus reenter dormancy.

Summer annuals complete their life cycle during a single summer season. Summer annual seeds germinate during either the spring or summer and complete their life cycle by producing seed before the first frost. The seeds that are produced are either conditionally dormant or dormant. Since soil tem-

peratures in the fall are too low to promote germination, conditionally dormant seeds will not germinate.

Those summer annuals undergo afterripening during the winter. Afterripening is completed by early spring when: 1) the optimum and minimum temperatures for germination are as low as they can ever be for the species; 2) a large per-

centage of seeds germinate in a short time over the widest range of temperatures possible for the species; and 3) in some species a small percentage of seeds germinate, usually at high temperatures, in darkness (Baskin and Baskin, 1985).

At this point, those seeds at the soil surface will germinate, while the vast majority of nondormant seeds deeper in the soil will reenter dormancy over the summer.

TIMING FOR TURFGRASS. From a weed control perspective, turfgrass establishment should be timed to account for the life cycle of the weeds. Cool-season turfgrass establishment in the spring faces stiff competition from summer annual weeds.

In the spring, the seeds of summer annuals in the soil have broken dormancy and are able to germinate at temperatures below their optimum. If the soil is disturbed (rototilled for example), weed seeds are brought to the surface, thus increasing the number of potential seeds that could germinate.

Given that most of the summer annuals are C₄ plants (Table 1) and an increased number of seeds are present from soil disturbance, a very tough environment exists for cool-season turfgrasses to compete. Conversely, in the late summer or early fall period, establishment of cool-season turfgrasses is favored due to cooler temperatures and lack of competition from C₄ annual weeds.

STRATEGIST WEEDS. How competitive weeds are depends on the environment, the density of turfgrass plants present and how the weed allots its resources. Weeds

(continued on page 72)



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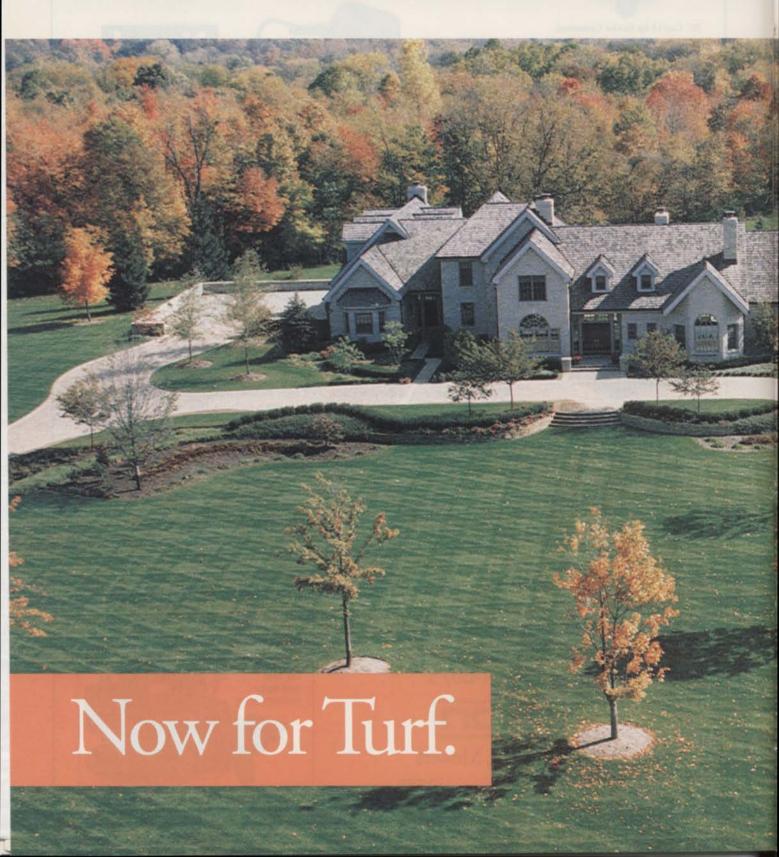
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Something Here

(continued from page 68)

are classified as r-strategists or Kstrategists. The r-strategists are density-independent (do not compete well with turfgrass plants present), grow quickly and put most of their resources into reproduction. The K-strategists on the other hand are density-dependent (compete well among other plants), and place more resources into growth and development.

How competitive weeds
are depends on
the environment, the
density of turfgrass
plants present and
how the weed allots its
resources. Weeds are
classified as r-strategists
or K-strategists. Some
weeds can be either
r- or K-strategists,
depending on
the environmental
situation.

The r-strategists colonize open turf areas quickly. Crabgrass is a good example of an r-strategist. It germinates quickly in open or thin turfgrass areas. Crabgrass colonizes these open areas by quickly growing and developing in a short period of time. By late summer, crabgrass has completed its life cycle and produced seed.

Due to the fact that crabgrass plants place so much energy into completing their life cycles and reproduction, little resources are available for them to compete in existing stands. Thus, management practices that promote good turfgrass density discourage the appearance of r-strategist weeds.

The K-strategists are more competitive than r-strategists in situations where turfgrass competition exists. K-strategists such as clover are able to survive and grow in fairly dense turfgrass stands. These types of weeds are more difficult to control with cultural practices. Most K-strategists require hand or chemical removal.

Some weeds can be either r- or K-strategists, depending on the environmental situation. These weeds adapt to the given turfgrass situation. On golf courses in the northern United States and Canada, annual bluegrass is a classic example of being both an r- and K-strategist.

Dandelions on lawns can adapt and be either r- or K-strategist. These weeds are difficult to con-

trol and often depend on a combination of proper cultural practices and some degree of chemical control.

TURF RENOVATION.

The type of weed strategist can be important in renovating a turfgrass site. For example, if a renovated site has a thatch layer present and good seed-soil contact does not occur, r-strategist weeds are going to have the competitive advantage over turf.

The ability of r-strategists to complete their life cycles in an inhospitable thatch layer has a definite advantage over turfgrass seed trying to germinate under the same conditions.

We tend to group all weeds together and say "a weed is a weed." Yet, weeds are the most competitive plants we face. Knowing the type and competitive fitness of weeds present on a site will guide you toward the most effective means of controlling them, and also avoiding them.

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Long-Term Success: Managing Your Business in the 1990s and Beyond

Experts can't stress enough the importance of following a careful business plan for long-term success. Don't forget to add good management practices and a professional attitude.

By Kevin Tanzillo ANAGING A lawn and landscape contracting business today is more challenging than ever. While the basic ingredients for success haven't changed, the required skills have.

Everyone can recite the basics, even if they don't necessarily practice them: put the customer first, develop and stick to a business plan, hire good people and make sure your work in the trees doesn't block your view of the forest. Follow these simple rules and you increase the odds that your business will be around next year.

Where it gets tough is in coping with regulations and the seemingly trivial aspects of keeping a business afloat. Not too many people get into the lawn and landscape business because they want to sit behind a desk and be an administrator. They do it because they love to get out and do the work.

It's still possible to do that and run a business, but when you spend too much time outside instead of running the business, prepare yourself to look failure right in the eye.

HAVE A PLAN. "You have to learn to manage both your financial resources and your human resources, and do them both equally well," said David Minor, president and CEO of Minor's Landscape Services, Fort Worth, Texas, who has led numerous profit-making seminars.

"So many people get into our business who like landscape work, but



As any lawn or landscape contracting business grows, so do the demands on its managers. A solid business plan is critical to its long-term growth and success.

BUSINESS MANAGEMENT: PART 1

they are not really business people. It is the people who take that next step who succeed. They have financial statements and profit centers. They know who to hire, how to motivate them, how to pay them and the benefits that are important."

Since no one is born with that kind of knowledge, Minor said, it's a matter of educating yourself. For that, he suggested joining ALCA, the Associated Landscape Contractors of America.

"They have all kinds of resources on bidding and estimating, managing people and pricing jobs. The publications are endless. Also, go to the conferences for industry-specific continuing information."

POOR MANAGEMENT. The top three reasons businesses such as lawn and landscape operations fail during tough times are poor management, poor management and poor management. To be precise, it is poor planning, poor marketing or poor execution of a good marketing plan.

For newcomers in an area, market research is the key to success. This includes diversifying into new areas, such as a landscape firm offering irrigation or design services. If you think there is a market and there is no market, you will fail eventually.

Once in business, executing a business plan and controlling costs are the keys to success.

Another key goal is to keep the staff busy. If a business has enthusiastic, energetic people sitting around for an entire afternoon with no work, even if they are being paid, they are not going to be happy. That may be the time to introduce pricing that is less expensive or broken into smaller bites, rather than the normal year-round or seasonal contract.

This gives clients, who are fighting financial woes of their own, a break. It also will ensure a more even work load for the staff.

However, don't get into price wars with competi-

tors. Experts agree that, in the long run, you're going to lose that battle no matter where you are on the price spectrum. Remember that lawn and landscaping is a service business. Promote it and compete on that level.

A tough economy is not the time to cut back on advertising and public relations. Experts suggest getting an image-building advertisement in the local weekly or daily paper, or perhaps a radio spot or two. Public relations does not require hiring an agency — it can be an appearance on a local talk show to give advice about liming lawns, or providing expert insight into a recent insect outbreak. Public relations funds also can be allocated to buying high quality thank you cards and postage stamps.

The old rule of thumb for service businesses was to earmark 2 percent of a budget for advertising and public relations. Today, 3 percent is a more reasonable figure.

Richard Akerman, president of Northwest Landscape Industries in Tigard, Ore., said a good plan is the heart of any business' chance at short- or longterm success.

"You need a business plan that tells you exactly what you are going to be doing, what your market is and how you will go about competing in that market," Akerman insisted.

"You need to pick a niche market, whether it's commercial, residential, construction or something else, and know what you do the best. Recognize how big your market is and how big you want to be in that market," he continued.

"Then identify what you need to be a player and the kind of person you need in each position in your company. You need to know the financial consequences and financial planning involved. For instance, does your budget match the going service prices in your area?"



Quality landscape work is just one part of building a contracting business.

PLAYING SOCCER. For Terry Anderson, regional vice president of Riverwoods, Ill.-based Rentokil Environmental Services doing business is like playing soccer—it's not the same without a specific goal.

"What is most important is goal setting," Anderson observed. "No matter where a business is in its evolution, you need a road map, something to measure up against.

"In the simplest form, you need to know what kind of revenues you want for the year. Also, you should have an idea of the margin you want to deliver," he said. "You need a budget in place — a roadmap to follow to manage the costs of the business.

"A lot of people aren't as focused in goal setting as they pro-

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SBA has a library of booklets available, most selling for about 50 cents or \$1. They are well worth ordering: Creative Selling: The Competitive Edge (MT1, 50 cents), Researching Your Market (MT8, \$1), Planning and Goal Setting for Small Business (MP6, 50 cents), and Business Plan for Small Service Firms (MP11, 50 cents).

Most cities have an SBA office. It is listed in the blue pages of the telephone book under U.S. Government, Small Business Administration. If you can't locate a nearby office, dial toll-free 800/368-5855 for the SBA National Answer Desk.

The odds are good that the SBA will offer to put you in touch with SCORE, the Service Corps of Retired Executives. SCORE offers free business counseling by men and women who have had successful careers and are willing to share their expertise and knowledge. These people are not your competitors, although they may have been just a few years ago. They offer advice on purchasing, marketing, advertising, computer technology, machinery and management.

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fess to be. Businesses can run for a number of years with enough success that they can continue, but that doesn't necessarily speak to how successful they might be if they were more goal-oriented."

Anderson also suggested referring to ALCA's publications for guidance. He said that networking with other businesses is critical. Also, he added, last year's financial performance can serve as a guide for this year's expectations.

Time-tested traits such as honesty and openness are the basics that head Dale Amstutz's list. The president of Northern Lawns Inc. in Omaha is the new president of the Professional Lawn Care Association of America.

"First and foremost, you have to be straightforward and honest with your employees and customers. There should be no hidden agendas or anything that you're not being up-front about," said Amstutz.

"Also, be honest and open with your vendors and bankers. If you have a problem paying a bill, don't hide it or make excuses. Tell them. Most creditors are interested in getting their money when it's due, but if you have a problem, the quicker you let them know, the better off they will be," he explained.

STARTUP CHANCES. Who is more likely to succeed in a business startup? The person who knows land-scaping but has no business training or the person with business experience who has yet to learn the technical side?

Odds are, it's a draw. For both, entry into the business isn't expensive, and the landscaper is likely to take an early lead based on experience. Once the business-type person gets a handle on the technical skills, though, the race gets tight.

"In the short term, the person from the landscape business has the edge, because they're smart agronomically," said Amstutz, whose background combines agronomy with years spent on the corporate side, working for an agricultural chemical company.

"You'll see the people without business knowledge do well for a couple of years, then fizzle out because they lack business savvy. On the other hand, the people who know business may stumble at first, using the wrong weed control or fertilizer, but once they get the agronomical part down pat, they will do better," he noted.

Akerman doesn't hold much hope for someone who gets downsized out of an accounting job and decides to launch their own landscape business. "If you haven't had experience, your odds are not good at succeeding," he said.

People who get their start with major lawn care companies do get good experience, he added, because they get training and an immersion in the company's objectives.

RISING EXPECTATIONS. One thing contractors must cope with are the rising expectations among their customers, whether those customers are commercial, residential or a mix. It takes a quality job and a decent price to hold customers' loyalty.

"There is an expectation out there that landscape professionals are more professional than ever before. I find that in my market," said Minor.

"When you go into a presentation, they don't expect you to wear a suit and tie, but they don't expect blue jeans and cowboy boots, either. The industry is maturing and as people become knowledgeable about the services we can provide, their expectations become higher. They expect a quality job and a responsive company, and they expect those two things at a pretty good price."

"Public expectations are constantly increasing,"

BUSINESS MANAGEMENT: PART 1

agreed Amstutz. He said state and national organizations are doing a good job of educating their members, which in turn better equips members to educate the public.

Anderson, however, thinks the industry must do more to shape the public's view.

"Companies that have been around the longest are focused on that and do all they can through their own resources, as well as through association involvement," he said. "I think everyone in the industry would love to see a national media campaign, but nobody has figured out how to pool our resources so we can afford it.

"We have evolved more quickly on the commercial level," Anderson added. "That customer tends to be more demanding and sophisticated in determining who they will do business with and what they will accept in performance. But on the consumer side, where the big numbers are, there is probably still a low perception of what landscapers do."

MORE NEGATIVES. There always has been competition and Uncle Sam still has his hand out, but the natures of both have changed in ways that make it rough on the business operator.

"Government regulations alone take more and

more of your business. It doesn't affect the small company so much, but when you have 25 to 50 employees, you have to live by all those regulations. It takes you away from what you enjoy doing," said Akerman.

"There are more negatives today than there were 20 years ago. It will get worse with increased regulation, and that's in every field, not just in landscaping. That is why you find people saying it is too hard to be in business. They would rather work for someone else. They want to work hard, but leave the job behind at night."

Minor agreed: "Ten years ago, it was easier. Things were booming, there wasn't as much competition and there was some flexibility in pricing because of that. It is getting tougher each day to maintain the competitive edge and the margins to which a lot of companies are accustomed. There are more people out there doing the work and they are more sophisticated. The sheer numbers have and will drive prices down.

"But that's the American free enterprise system at its finest," Minor added. "It is a challenge, but one that good companies accept. Weaker companies, who don't adjust, will lose out."

This year should be good for business. Industry is



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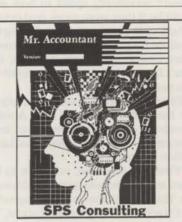
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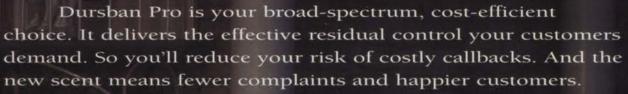
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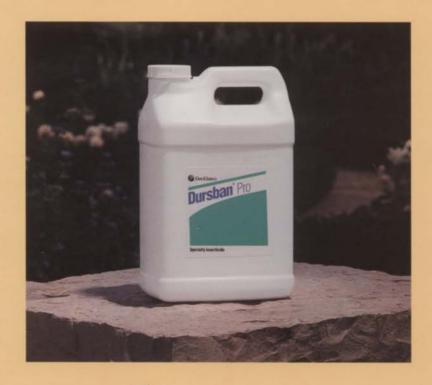


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So continue to look to DowElanco for the latest ideas. We're the company you can count on for quality products, helpful advice and the best service in the business. For more details, call 1-800-352-6776.









BUSINESS MANAGEMENT: PART 1

coming off a strong 1994 and there's no reason to expect anything less for 1995.

"I think the economy will remain strong in 1995 and into 1996," predicted Akerman. "Even though interest rates are up, they are still a bargain compared with 10 years ago. Housing demand is still moving along, although material costs have risen."

"Times were good in 1994, and I am even more optimistic going into 1995," added Anderson. "Interiorscaping was impacted more negatively by the last four or five years of difficulty in the economy. My friends in exterior maintenance have grown their businesses, but most businesses in interiorscaping have shrunk. In 1994, we began to see more money available for improvements."

Minor also sees a promising year ahead: "The majority of people I talk to around the country say 1994 was a good year and they are really optimistic for 1995. We share that opinion. We're continuing to grow and maintaining the margins we set."

WORDS OF WISDOM. The experts quoted above offered some advice on mistakes to avoid:

•"Don't get so wrapped up in the day-to-day business that you can't see the forest for the trees," said Minor. "You have to look down the road and plan.

Lack of planning probably is the biggest mistake many of us make."

•"Join your state professional association and PLCAA, and mingle with your peers. You'll learn more from them than any school," Amstutz advised. "That's one thing people do — times get hard and they skip paying their dues. That's probably the worst thing they can do."

• "Try not to grow too fast and take on more than you can," Akerman offered. "Also, you do have to understand the costs of doing business."

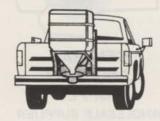
•"You can't pay too much attention to the people you hire and the way you train those people to deliver the standards you've built into your business," Anderson said. "If they do all the right things technically, that side of the service is covered. If your people are equally skilled at customer relations, that can only enhance your reputation and build up the price people are willing to pay."

•"The biggest mistake people can make is not placing enough importance on returning telephone calls. They get too busy doing their business and they forget to run the business," Amstutz added.

 ${\it The author is a free-lance writer based in Norwalk,} \\ {\it Ohio.}$

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wide. The cost is so reasonable, it's a good way to break the ice with any customer.

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People

PHILIP TRALIES was appointed president of Textron's Jacobsen division. He has been with Textron for 17 years, most recently as senior vice president, finance and administration for E-Z-Go Textron.

New vice president of sales for Earthgro is Steven Liffers. He brings a variety of experience in the horticulture industry to this newly created position.

Lofts Seed has promoted Dr. Richard Hurley to vice president, director of research and professional sales. He has served as Lofts' director of research for 17 years. Mary Beth Ruh has been named manager of the company's branch in Allentown, Pa.

DHM named two new partners: Gregg Brown and Michael Gasper. Brown has led several landscape projects since he joined DHM in 1985; Gasper has 18 years in the field of landscape architecture.

The position of executive vice president of Turf-Seed was created for Gordon Zielinski. He will handle new product development, marketing, acreage expansion and other management duties.

Mike Stoll has joined the landscape products division of Netafim Irrigation as a member of the distributor account team. He will work with distributors in several regions from Colorado to New York.

Lucy Polk was named director of finance/ controller for Husqvarna Forest & Garden, where she will oversee the firm's financial services department.

L.R. Nelson Corp. appointed Mike Smith the northern California sales manager. He formerly had sales and management responsibility at Environmental Care. Jeff King was named as the company's Texas/ Oklahoma sales manager. Previously, he owned an irrigation installation company.

Paul Grosh has been named national sales and marketing manager for Lebanon Turf Products. He joined Lebanon in 1987, bringing experience in the landscape, golf course and nursery industries.

New regional sales managers at Hunter Industries are: Curt Bruce, California and Nevada; O.J. Warner, Pacific Northwest and western Canada; Derick Wright, Texas and the Southwest; Troy Leezy, Great Lakes; Jeff Crean, New England and eastern Canada: Mike Cucchiara, the Southeast and Mid-Atlantic regions; and Kevin Colesworthy, Florida.







Zielinsk

John Oswald was appointed product manager for Briggs & Stratton's small engine division. He will serve as liaison between the division's engineering and the company's domestic, industrial and international sales divisions. Bill Chernohorsky will serve as the company's

inside account representative for M.T.D. He joined Briggs & Stratton in 1978.

New appointments at Shemin Nurseries include: Nancy Kovacs as marketing specialist at company headquarters in Ridgefield, Conn.; Henry Whalen as general manager in Oaks, Pa.; Jeffrey Waters as Mid-Atlantic region sales manager; Bill Bynum as facilities manager in Charlotte, N.C.; and Dan Whitehead as operations manager in Lawrenceville, Ga. -

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Products

The PowerBrush topdresser/spreader from **Milkreek Mfg.** combines stiff-bristled polyethylene brushes with a set of adjust-



able fins to direct a wide variety of material into different spreading patterns.

"Moving floor" design makes it easy to spread sand and peat topdressing mixes, powdery lime, fertilizers, compost, topsoil, grass clippings, sand, wood chips and deicing materials of inconsistent particle size.

Circle 126 on reader service card

Model TA-19 self-propelled roll-type core aerator from **Classen Mfg.** is powered by a 4-hp Honda engine. It is designed to fit through a 30-inch gate and can cover up to

PRODUCT SPOTLIGHT

A broader label expands the uses of Pendulum® herbicide from **American Cyanamid** for pre-emergent control against most grassy and broadleaf weeds on a wide variety of cool and warm season turf grasses. With the active ingredient pendimethalin, Pendulum controls 45 kinds of weeds in over 260 labeled ornamentals, making it suitable for both turfgrass and landscape management.

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Two formulations of Pendulum are available: Pendulum WDG in 10-pound jugs and 1.2-ounce premeasured water soluble bags, and Pendulum 3.3 EC in 2-1/2-gallon containers.

Circle 125 on reader service card

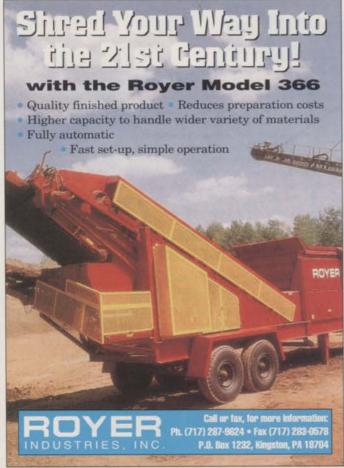


24,000 square feet of turf per hour. The aerator also features a one-piece frame with removable weight bar, as well as user-friendly handle and controls.

Circle 127 on reader service card

Maxforce® Professional Insect Control ant killer granular bait from **The Clorox Co.** mixes sugars, fats, proteins and carbohydrates with hydramethylnon delayed-action

(continued on page 88)







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- Easy shift bar



Products

(continued from page 84)

insecticide to attract and kill 12 species of common ants. It works against fire, pharaoh, Argentine, field, carpenter and ghost ants when applied as a mound, perimeter or broadcast treatment.

Bait remains palatable and effective when exposed to light rain or irrigation, as well as direct sunlight and humid weather. It is available in refillable 10-ounce packages and in 6-pound bulk containers.

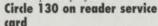
Circle 128 on reader service card

The **Goossen** Vac 'n' Load vacuum system provides one-pass cleanup for practically any front-mount mower working large-scale groundskeeping jobs. Its 4.74-cubic yard trailer extends productive mowing time and debris cleanup. System is powered by an 11-hp Honda engine with electronic ignition and features an automatic endgate and adjustable, sealed connection between the vacuum chute and enclosed trailer.

Circle 129 on reader service card

Convenient one-pound, resealable packages of Barricade® herbicide from Sandoz Agro give contractors the flexibility to treat ornamental plantings or smaller turfgrass areas. Its low water solubility provides up to 26 weeks of residual control in and around more than 100 species of landscape ornamentals.

One box will treat several lawns or ornamental beds and applicators can measure small amounts for use in backpack sprayers.





DowElanco presents an 11-page guide designed to help nursery professionals comply with new Worker Protection Standard requirements. *Meeting Worker Protection Standard Guidelines* details pesticide safety, equipment safety, application restriction, decontamination, personal equipment and emergencies. Label specifications for DowElanco products are included.

Circle 131 on reader service card



John Deere introduces Model 45 BP commercial power blower with a maximum air speed of 180 mph and an air-cooled, 2-cycle singlecylinder engine.

Design features include spark arrester mufflers for low noise levels, adjustable harness and padded backrest, flexible pipe with twist lock section for direct air blast in hard to reach areas and controls mounted on the adjustable handle

for one-hand operation. A vacuum attachment is available.

Circle 132 on reader service card

The Vulcher mulcher from **Butler & Wilson Research & Development** is an adjustable mulching chamber/deflector that bolts over a mower's discharge opening to trap grass and materials and continue to mulch them until they are powder-like particles. This "cyclone" action works on both wet and dry grass with equal effectiveness, while it virtually eliminates blowing.

The Vulcher's rear discharge action removes side discharge hazards

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because it deflects objects down, not out. Raking and bagging are not necessary. Circle 133 on reader service (ard.

Primo® WSB from **Ciba** is a new wettable

powder formulation packaged in watersoluble bags, giving turf managers the

benefits of turf growth management in a closed system that reduces exposure. The entire bag and its odorless contents disperse completely when mixed in water.



Primo WSB is labeled for use to

reduce turf growth on all major turf species on residential and commercial lawns, athletic fields and golf greens, sod farms and similar areas. To mix, applicators just drop Primo bags into a partially filled sprayer or mix tank and agitate.

Circle 134 on reader service card

System XF-416[™] irrigation controller from **Toro's Irrigation Division** lets commercial users expand a system as site demands



change. Four-station expansion modules upgrade the standard 8-station controller to 12 or 16 stations as needed. It features four independent irrigation programs that can be assigned to any station.

The SurgePro™ system safeguards each module from lightning damage and power surges, while a built-in sensor port can be used with the Rain Switch® automatic system shutdown that prevents water waste.

Circle 135 on reader service card

Eliminator walk-behind mowers from

Encore Mfg. have 14-hp Kawasaki engines, 5-speed transmissions, reinforced steel decks, high-lift blades and matched dual V-



belts. Both 36- and 48-inch models also feature yoke-style casters, parking brakes, tubular front bumpers and top access to grease fittings.

Circle 136 on reader service card

Merit® 75 WP insecticide from **Miles Specialty Products** is packaged in a convenient two-ounce bottle that mixes as little as 2.5 gallons of dilution for smaller foliar applications. Merit contains the active

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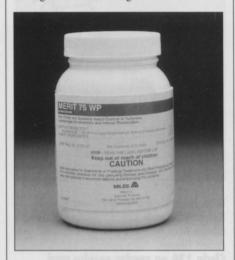
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Circle 137 on reader service card

Series 10 fertilizer spreaders from **Gandy** rely on precision cam gauge metering for accuracy and simplicity in gravity flow applications. Spreaders have a steel bottom with stainless steel slide mated for accuracy. Hopper capacity is about 100 pounds per linear foot. Sizes range from 6 to 12 feet in four drive styles.

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on the internal rotors for agitation when applying granulated lime.

Circle 138 on reader service card

Micro-Mower MP340X attachment from **R.L. Parsons & Son Equipment** features individually controlled cutting heads, full-width roller, 1/4-inch mowing increment adjustments, hydraulic drive and even

mulching without windrows. Three 41-inch high-speed cutting heads perform verticutting or special grooming. Attach-



ment fits on standard tractors for flexible and productive operations.

Circle 139 on reader service card

Masking agent Spray Scent W from **Terra International** adds a wintergreen scent to weed and brush sprays that masks objectionable chemical odors. Convenient 1-gallon jugs let applicators mix batches of 2-4 ounces to a water carrier or 8 - 10 ounces per 100 gallons of oil or oil emulsion. Spray Scent W can be used on ditch banks, as well as residential and commercial areas.

Circle 140 on reader service card



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Circle 141 on reader service card

A multipurpose power hauling cart from Joe **Built** is constructed to handle a variety of landscape jobs while it saves back muscles. Model HD-500 is powered by a two-cycle

engine and features front-wheel drive, forward and reverse gears, four-speed transaxle and a sturdy polyethylene tray.



The cart hauls up to 1,200 pounds of material. Wide front tires and a platform with stake body are some options available. Circle 142 on reader service card

Chemical and hazardous material storage lockers in the N-series from Safety Storage come in six different sizes for single or double-tier storage. The prefabricated steel lockers measure over 6 feet deep and have lengths up to 31 feet, 6 inches. Design elements include heavy-gauge steel construction, a secondary containment sump with capacities to 660 gallons, removable floor grating, chemical-resistant coating



inside and out and a security system. Circle 143 on reader service card

Loveland Industries offers two marker dyes to help applicators improve the visibility and accuracy of their work. Marker Dye WSP comes as a water-soluble packet of blue dye to be mixed in the tank water of pesticides and liquid fertilizers. It dissolves quickly and leaves no residue that clogs nozzles. Marker Dye in liquid formulation is available in one-quart bottles for turf applications by tank or backpack sprayers. Circle 144 on reader service card

Drift Guard WB70 walking boom spray applicator from Environmental Technologies is said to eliminate spray drift and guide spray to the proper ground areas. The 3section boom follows ground contours for

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accurate applications and folds when finished for easy storage. Standard model has a nozzle flow monitor, pressure gauge and digital speedometer.

Circle 145 on reader service card

A 91-inch mowing deck from **Howard Price Turf Equipment** handles large projects with ease. The deck is available on



a choice of three traction units and can be folded to make a 56- or 74-inch cut. Flexing action eliminates problems with knolls and berms. Wings flex up 15 degrees and down 5 degrees. Its design allows trimming on both sides of the deck.

Circle 146 on reader service card

Electric hedge trimmers from **Little Wonder** range from 16- to 30-inch blade length for cutting growth up to 1/2-inch thick. Three models come with a double-



insulated motor sealed in a metal gearbox and surrounded by high-impact material for durability. Dual action switches (one for each blade) activate the double reciprocating blades, and stop automatically when either handle is released.

Circle 147 on reader service card

The 60-inch wide Tine Rake™ dethatcher from **JRC0** fits commercial riding mowers having 60- to 72-inch cutting widths. Mowing operators can remove large amounts of thatch while mulching or bagging. The dethatcher lifts grass as it works without damage to turf. Front-mount unit weighs 80 pounds and stores vertically on the mower when placed on a trailer.

Circle 148 on reader service card

This Peugeot Citroen engine was shown in our October products section resting on its side. Its proper configuration is correct as illustrated in this photograph.





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Calendar

FEB. 1-2 Turf & Grounds Expo II, Suffern, N.Y. Contact: NYSTA, 800/873-TURF.

FEB. 2 Nor Cal Spring Trade Show, San Mateo County Expo Center, San Mateo, Calif. Contact: Margo Jonsson, 916/961-6814.

FEB. 2-5 American Association of Nurserymen Management Clinic and Association of Professional Landscape Designers Winter Meeting and Conference, Galt House East, Louisville, Ky. Contact: AAN, 202/789-2900.

FEB. 4-8 Sports Turf Managers Association Conference & Exhibition, Pirate City, Bradenton, Fla. Contact: Bret Kelsey, STMA, 401 N. Michigan Avenue, Chicago, IL 60611; 312/644-6610.

FEB. 6-7 Illinois Landscape Contractors Association Landscape Foreman Training, Holiday Inn, Willowbrook, Ill. Contact: ILCA, 708/932-8443.

FEB. 8-9 1995 Landscape Industry Show, Long Beach Convention Center, California. Contact: California Landscape Contractors Association, 916/448-CLCA. **FEB. 8-10** ProGreen Expo, Colorado Convention Center, Denver. Contact: Associated Landscape Contractors of Colorado/Colorado Nurserymen's Association, 303/756-7282.

FEB. 8-10 Turfgrass Producers International Midwinter Conference & Exposition (formerly American Sod Producers Association), Hilton Hotel Walt Disney World Village, Orlando, Fla. Contact: Tom Ford, 800/405-TURF.

FEB. 14-16 Landscape Contractors Association MD-DC-VA Winter Workshop and Landscape Expo, Holiday Inn Crowne Plaza, Rockville, Md. Contact: 301/948-0810.

FEB.14-18 NAA Annual Meeting and Management Conference, Buena Vista Palace, Orlando, Fla. Contact: National Arborist Association, 603/673-3311.

FEB. 17-18 Masters in Management in the Landscape Industry seminar, Chicago. Contact: Associated Landscape Contractors of America, 12200 Sunrise Valley Drive, Suite 150, Reston, VA 22091; 800/395-ALCA.

FEB. 20-27 International Golf Course Show, Moscone Center, San Francisco. Contact: Golf Course Superintendents Association of America, 913/841-2240.

FEB. 21-23 Illinois Landscape Contractors Association Winter Seminar '95, Lisle/ Naperville Hilton, Lisle, Ill. Contact: ILCA, 708/932-8443.

FEB. 27-28 PLCAA Day on the Hill, Washington, D.C. Contact: PLCAA, 1000 Johnson Ferry Road, NE, Suite C-135, Marietta, GA 30068; 404/977-5222.

MAR. 1 New Jersey Landscape '95, Meadowlands Convention Center, Secaucus, N.J. Contact: 201/664-6310.

MAR 8-9 Metropolitan Detroit Landscape Association Trade Show & Convention, Novi Expo Center, Novi, Mich. Contact: MDLA; 810/646-4992.

MAR. 7-9 1995 Western PA Turf Conference and Trade Show, Pittsburgh Expo Mart/ Radisson Hotel, Monroeville, PA. Contact: Eric Oesterling, 610/837-1402.

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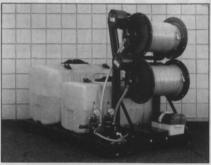
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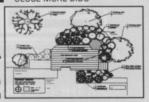
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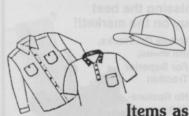
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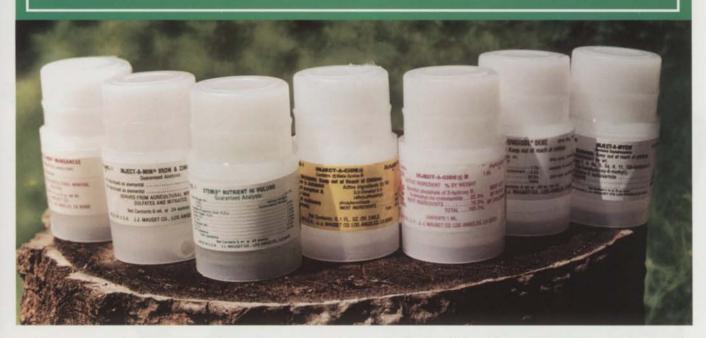
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Ad Index

ALCA	86*
All Seasons	22.26.70.71
American Cyanamid	
American Isuzu	
The Andersons	72
Badger	14
Blue Bird	96
C&S Turf Care	
CBS	
CNA Insurance	15
Central Landscape Supply	100
Central Parts Warehouse	81
Chevy	43
Ciba	
Corontino Corb	
Creative Curb Deere & Co	28 20
Design Imaging	
Dilloware	65
Dixon	69
DowElanco 17*, 19*, 2	21*, 23, 77-80
Echo	18
Encore	
Excel	104
Focal Point	
New Holland	
Frederick MfgGlen Hilton	37 81
Glenmac	102
Grasshopper	83
Green Thumb	60
Greener Pastures	40, 65, 90
Grotech	26
Harmony	
Hunter	
	45
Integrated Digital Products Jacklin Seed	100
Line Ward	
Lofts	
Longhorn	46
J.J. Mauget	93
MetroMail	76
Mutton	60
National Lime & Stone	
Oldham	89
PGMS	
Polecat	
RND	100 102
Rainbird	46
Real Green	99
Recreational Leisure	45
Remay	51
Rohm & Haas	86*, 87*
Royer	84
SPS	
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Scag Sensible Software	49
Shindaiwa	
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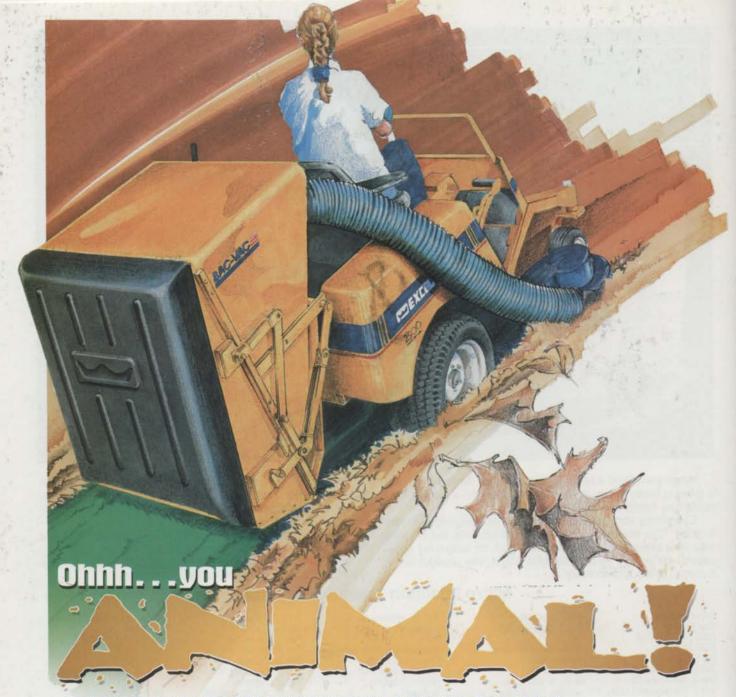
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THE EXCEL HUSTLER 2500 NOW COMBINES COMPACT MANEUVERABILITY WITH FULL 9-BUSHEL GRASS-CATCHING CAPACITY. WITH THE NEW BAC-VAC® MOUNTED ON OUR MOST AFFORDABLE HUSTLER, EXPECT PERFECT REAR VISIBILITY, CLOSE TRIMS, A BEAUTIFULLY VACUUMED CUT UP TO 60°, AND TRUE ZERO-RADIUS TURNS WITH NO FEAR OF BUMPING THE CATCHER.

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THE HUSTLER 2500 FROM EXCEL WITH ITS NEW GRASS CATCHER: QUALITY OF CUT AND MAXIMIZED PRODUCTIVITY WITH FAST, EASY DUMPING FROM THE OPERATOR'S SEAT.

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HUSTLER 2500

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