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In this issue:

Managing Cash Flow

Productive Trucks

Future of Compost

Snow Removal Options

THE CREATIVE TOUCH

**A flair for design
and management
helps Livinggreen
Interiors expand in
its markets.**

JB

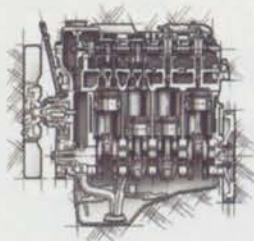
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*Tacoma 4x2 Regular Cab with 5-speed manual overdrive transmission. See your Toyota dealer for details. **Not to exceed GCWR of 9,200 lbs. Requires a Class IV weight-carrying frame-mounted towing hitch receiver. See your Toyota dealer for details. ***17/20 city/highway EPA estimated mpg for One Ton DX with 5-speed manual overdrive transmission. See your Toyota dealer for details.

†To help avoid serious injury, always wear your seatbelt. Driver-side air bag is a supplemental restraint only.

Lawn & Landscape MAINTENANCE

VOLUME 16, NUMBER 9

SEPTEMBER 1995

FEATURES

Cover Photo:
Vern Goff, Lee Vernon
Studio, Omaha, Neb.

26 Cover Story: The Creative Approach

A flair for creative design, innovative marketing and imaginative management has helped Livinggreen Interiors establish itself for the long term at the same time it ventures into the world of exterior maintenance.

36 The Future of the Composting Industry... Spinning the Magic Circle

Effective solid waste management and the growth of the green industry are on a converging course. This "magic circle" of growth and opportunity can benefit both industries.

48 Down and Out in Seed Country

Low-yielding older fields and quirky weather in the Pacific Northwest added up to a less-than-expected grass seed harvest. With little carryover from last year, strong fall demand could create spring shortages.

54 Big Trucks Help Make Big Bucks

From standbys to customized vehicles, manufacturers and the aftermarket service lawn and landscape contractors' many needs.

66 Basics of Micronutrients (Part 1): Iron Builds a Healthy Foundation

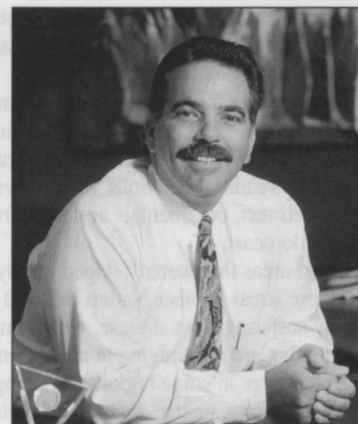
Iron is the most common micronutrient, yet soil conditions may limit its availability to plants. Adequate levels ensure green, lush turf and ornamental plants.

72 Taking the Bite Out of Snow Removal

When the busy snow season hits, no contractor seems to have enough equipment to get the job done as fast as customers want. The right tools and good communication make the difference.

77 Business Management Series Part 9: Go With The (Cash) Flow

A healthy cash flow assures that your business will stay afloat, and keeps you on the best of terms with your creditors.



p. 26



p. 36



p. 48

DEPARTMENTS

94
Advertisers' Index

91
Buyers' Market

4
Editor's Focus

81
People

18
Association News

90
Calendar

8
Environmental Forum

82
Products

6
Business Watch

92
Classifieds

80
Irrigation News

22
Seed Basics

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Editor's Focus

CONTRARY to popular belief, I did not run off to Tibet to join the landscape crew of the Dalai Lama. I was, however, on a professional sabbatical which enabled me to travel extensively throughout the country observing a wide variety of sights, people, attitudes and perceptions.

Along the way, I was never far from the professional lawn and landscape industry. Nor was I far from the intense heat, rain and related weather conditions which have plagued turf, ornamentals and trees from coast to coast.

Turf areas that weren't wiped out by the intense stress Mother Nature inflicted are now suffering from disease, weeds and insects that are multiplying at almost unprecedented rates in some regions. In strange weather years such as this, it's important to maintain your cool and increase and/or improve relations with your customers. Impossible, you say? Not necessarily. The overall management of a landscape belongs to both the service contractor and the client and/or property manager.

Customers, both commercial and residential alike, need to be reminded to water after any given treatment, need instruction on the time of day watering should occur and should be reminded how to correctly set the height of a mower (if you're not providing these services for them). These instructions can easily be provided on a door hanger, dropped off with your invoice or discussed in a brief meeting with your client.

In addition to specific instructions, the homeowner and/or property manager need to understand the results they can expect from a requested treatment, particularly in an unusual weather year like this.

Expectations need to be realistic based on the level of service, the maintenance provided (either by the professional or the customer) the overall landscape profile and the variable weather conditions.

Your customers need to know that this is an exceptional weather year and as such, perfect results can't always be achieved. It's not a cop-out, nor are you offering excuses. You're working with your customers to set realistic expectations for their properties. And you're promoting and sending a knowledgeable, professional message to your clients and the industry in general. Don't let the weather or your clients' unreasonable expectations beat you.

CHANGES AT LLM. I'm excited to be back at *Lawn & Landscape Maintenance* magazine and to announce the promotions of two well-deserving individuals. Sue Gibson, managing editor of LLM since October 1994, was recently named editor. Sue, whose face and comments you've seen here over the last few



months, has been involved in the professional lawn and landscape industry for a number of years and ably handled the reporting, writing and production of your magazine in my absence.

She has been visible at both regional and national industry events, and has pursued your views and industry observations by conducting in-depth interviews for the monthly departments and features in LLM.

Paul Schrimpf, special projects editor for GIE Publishing since December 1994, is now managing editor of LLM and our new publication *T&O Service Tech*. Paul will work closely with Sue and me to cover all aspects of the professional lawn and landscape market.

As Group Publisher of LLM and *T&O Service Tech* you'll continue to see me reporting on industry events, attending conferences and trade shows and working on some exciting new product introductions for the months ahead.

TRUE INDUSTRY FRIEND. The green industry recently lost a true friend and dynamic supporter in the death of Don Sweda. Sweda died from a stroke at the young age of 48. He was the superintendent at Columbia Hills Country Club and immediate past president of the Ohio Turfgrass Foundation.

His participation didn't end there. He was active in a variety of local, state and national associations and was always willing to lend a helping hand to a friend or peer in need. I worked closely with Don on the board of the OTF and his enthusiasm and love for the industry pervaded his words and actions. Don's leadership and friendship will be missed. — Cindy Code

Cindy Code is Group Publisher of LLM magazine.

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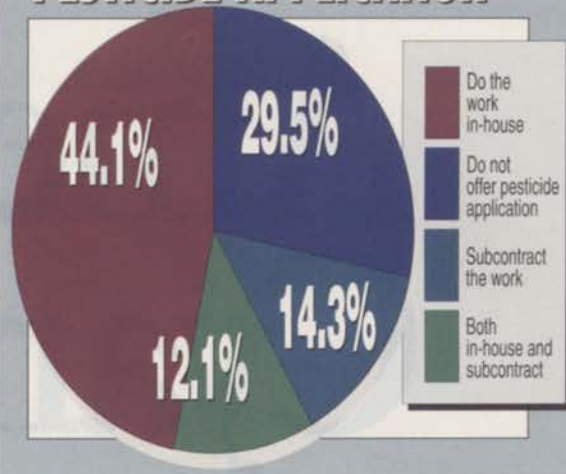
CONTRACTORS HANDLE PESTICIDE WORK IN-HOUSE

PESTICIDE APPLICATION services continue to grow as lawn and landscape contractors either perform the services in-house or subcontract the work, according to a survey of *Lawn & Landscape Maintenance* magazine readers done by Research USA, Chicago.

The survey asked a random sample of contractors to list if they offer such services in-house, if they subcontract the work or if they do both. The results are: 44.1 percent do the work in-house; 14.3 percent subcontract the work; 12.1 percent do both; and 29.5 percent do not offer pesticide application. Of the sample in the survey, 70.5 percent offered pesticide applications.

The survey also asked respondents the percentage of their customers under written contracts. Approximately 52.4 percent reported that more than 50 percent of their customers were under contract for services; while 21.5 percent reported that less than 50 percent of their customers were under contract. Slightly more than one-fourth, or 26.1 percent, indicated that they did not use contracts at all.

PESTICIDE APPLICATION



CHOOSE ZERO COUPON BONDS FOR PREDICTABLE RETURNS

ZERO COUPON bonds are one of the most popular investments available today in the fixed income marketplace. Led by U.S. Treasury STRIPS (Separate Trading of Registered Interest and Principal Securities), the zero coupon bond market has grown significantly over the last few years. The safety, security, affordability and convenience of zero coupons, along with their unique structure, have made them a favorite with investors who wish to provide for their children's education, help fund their own retirement or meet any other future financial need.

FRACTION OF THE COST. Zero coupon bonds are purchased at a deep discount to their maturity value and pay no periodic interest over the life of the security. Instead, interest accrues at the stated yield level and compounds toward

maturity as the bonds grow in value.

These bonds offer traditional investors goal-oriented benefits while providing possibilities for capital gains and hedging for aggressive investors. You may wish to add these fixed-income instruments to your portfolio to receive the following benefits:

- **Guaranteed principal and interest payments.** No matter how small your initial investment may be, you are entitled to the full interest and principal payment on your investment, if held to maturity, because the financial instruments underlying them are backed with the "full faith and credit" of the U.S. government.

- **Accreted interest accumulation.** The deeply discounted purchase price of zero coupons enables investors to accumulate compounding accreted interest and if the bond is held

to maturity, the difference between the bond's discounted purchase price and its face value may represent a return of two, three or even 10 times the original investment.

- **Attractive yields.** The bonds can provide attractive yields that are competitive with other comparable quality investments.

- **Wide range of maturities.** Zero coupon bonds come in maturities ranging from six months to 40 years, which is a distinct advantage when structuring college or retirement portfolios or hedging against interest rate fluctuations.

- **No reinvestment risk.** If zero coupon bonds are held to maturity, their interest will compound semi-annually for the life of the bond at the rate quoted at the time of the initial investment. This eliminates reinvestment risk, "locking in" the yield regardless of changes in interest rates.

- **Liquidity.** You may sell your bonds in the secondary market at any time prior to maturity. The price you receive will depend on prevailing interest rates at that time.

Because these bonds compound semi-annually on a taxable basis, but do not pay out any interest until maturity, many investors choose to place these financial instruments in tax-advantaged or tax-deferred accounts such as IRAs or custodial accounts for minors. Making the investment within these types of accounts allows investors to avoid any current tax obligation.

The alternative would be to place zero coupon bonds in taxable accounts where the annually accreted (but unpaid) interest is treated as ordinary income and is taxed accordingly. Be sure to consult with your tax advisor before investing in zero coupon bonds. — John Houlihan, Dean Witter Reynolds Inc., Melville, N.Y.

SATURATED AIR

As the air temperature increases, the amount of water vapor needed to saturate the air increases. The chart below shows how many cubic inches of water vapor per cubic yard of air permeate the air when it is saturated.



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USE READER SERVICE #34

Environmental Forum

GOOD GAS. Kudos to the Portable Power Equipment Manufacturers Association, which has become a fact-provider about and advocate of reformulated gasoline containing MTBE. This cleaner burning fuel, targeted by the Clean Air Act to account for nearly one-third of the country's gas supply at the beginning of this year, came under fire as a rash of reports blamed the gas for causing problems in lawn and garden equipment and vehicles.

PPEMA did extensive testing in conjunction with six manufacturers in four countries, and found no link between the gas and properly maintained equipment, according to Karen Hutchinson, director of public affairs. In addition, the organization conducted a nationwide survey of power equipment dealer associations to determine whether any of their member dealers had received complaints from customers. No dealer reported a complaint.

As one of the few organizations with data on reformulated gasoline, PPEMA representatives have been called into discuss its findings with local and national government officials, the media and other decision making bodies. Recent sessions included town hall meetings in Maine and Massachusetts, press conferences in Washington, D.C., Wisconsin, Michigan and Maine, an April 7 briefing for Congressional staff and a May 10 meeting of the 19-state Governor's Ethanol Coalition.

Dispelling myths about reformulated gasoline has helped keep the product available, and has helped to make the green industry even greener.

SAVING TREES. When developing a site, keeping existing trees safe and thriving is all in the advance planning. This is the reason for a series of lectures called "Building With Trees," presented by the National Arbor Day Foundation with the support of Pella Corp.

The workshop is instructed by Charles Stewart, president of Urban Forest Management Inc., Fox Grove, Ill., one of the nation's leading consultants of the techniques of saving trees during construction.

Last year, each of six of these successful programs were attended by between 45 and 100 professionals in the areas of building and development, construction management, architecture, tree care, government and urban forestry, urban planning and real estate, said conference coordinator Steve Pearson.

Workshop attendees learn the PCM, or planning, construction and maintenance, method of saving trees. Stewart's program explains that about 90 percent of the trees saved are determined in the planning process, according to Pearson.



"Attendees learn techniques during construction to mitigate damage, but it has to be built into the plan," he said.

It is also important to consider the maintenance plan after construction is complete. "For example, if the grass will be mowed with a 32-inch machine, the gap between plant beds can't be 18 inches," he noted.

The conference uses audio and video presentations as well as lectures, and attendees receive a full outline of the course to take with them. Those completing the course receive a certificate of achievement and a six-month introductory membership in the National Arbor Day Foundation.

**Dispelling myths
about reformulated
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even greener.**

The remaining conferences on the schedule for 1995 are Sept. 26 in Bonner Springs, Kan., and Nov. 3 in Grand Rapids, Mich.

The first scheduled Building With Trees session in 1996 is Jan. 25 in Houston, Texas, with at least five other dates to be announced. For registration or course information, contact the National Arbor Day Foundation at 402/474-5655.

FUEL-ISHNESS. The U.S. Environmental Protection Agency estimates that 17 million gallons of fuel are spilled each year during refueling, which can evaporate and contribute to the formation of ground-level ozone.

As frequent refuelers, lawn and landscape professionals must treat proper gasoline use and handling as an important part of the job.

The Ohio Lawn Care Association recently published the following guidelines to avoiding spills as recommended by the EPA:

- Use a gasoline container that can be easily handled and hold it securely so it can be poured slowly and smoothly.
- Use a spout or funnel to pour gasoline from container to equipment.
- Avoid overfilling the power equipment gasoline tank or allowing fuel to run over. Special nozzles are available with an automatic stop device.

• Close the gap or spout and vent hole on the gasoline container tightly after filling the gas tank and after filling the container at the gas pump.

• Transport and store the gasoline container and power equipment out of direct sunlight and in a cool place, if possible.

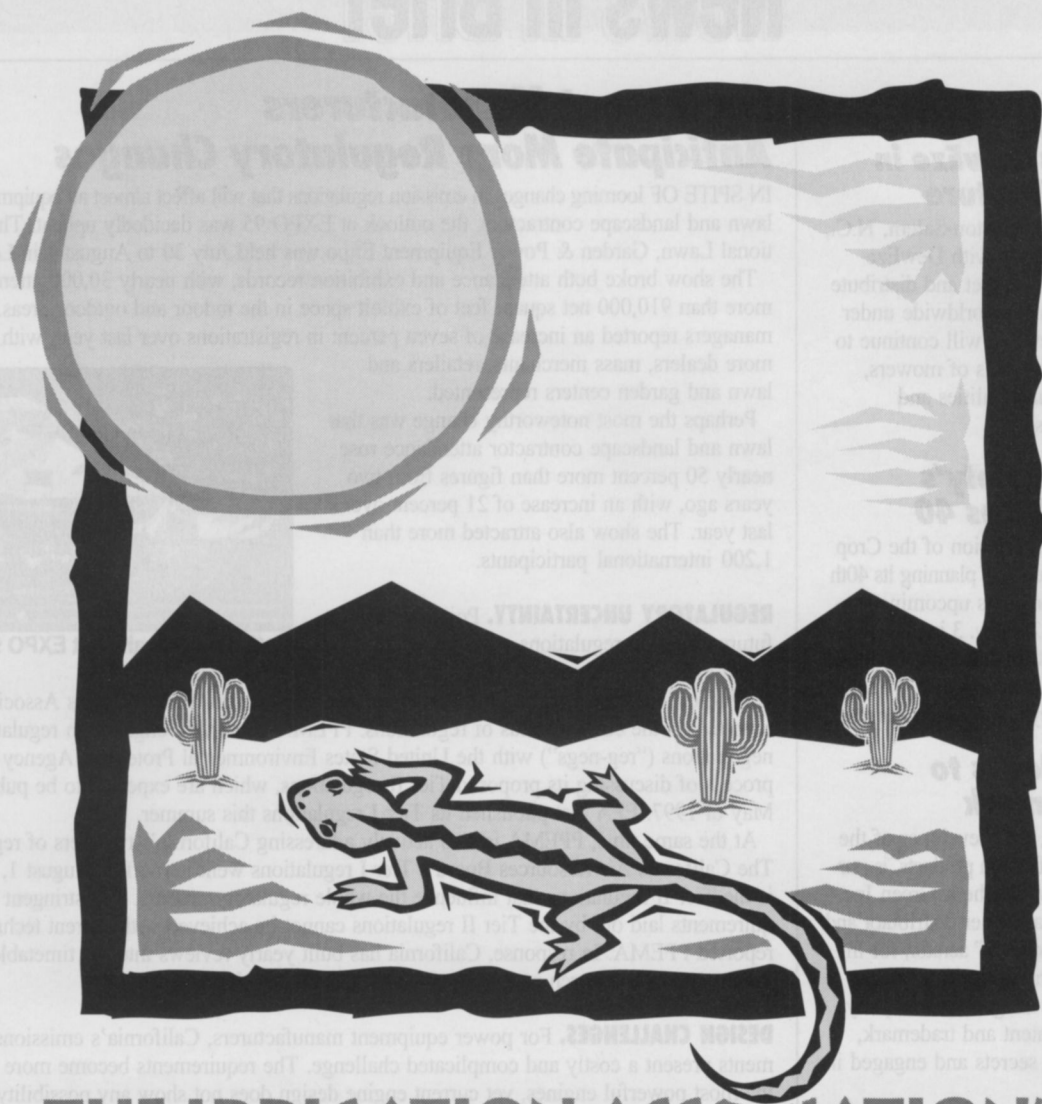
• Use caution when putting gasoline into a gas can at the pump.

A WIN-WIN SITUATION. Since golf courses are part of the world of professional pesticide applicators, what they do to be good environmental citizens affects everyone in the lawn and landscape industry. Recently, the Golf Course Superintendents Association of America showed it takes its responsibility seriously as it entered into a sponsor relationship with the Audubon Society of New York State.

The program, called the Audubon Cooperative Sanctuary Program for Schools, is designed to teach elementary and secondary school children about the environment. Students will learn about nature, wildlife, water and waste, and will participate in hands-on habitat enhancement and conservation projects in the classroom and on school grounds.

"GCSAA is proud to sponsor a program that brings schools and golf courses together to teach the benefits of good environmental practices. We believe this program will help students understand the importance of green spaces such as golf courses in their communities," said Gary Grigg, president of GCSAA.

The organization will provide financial support and professional services such as developing videos and training materials, according to Grigg.



THE IRRIGATION ASSOCIATION'S INTERNATIONAL EXPOSITION & TECHNICAL CONFERENCE NOVEMBER 12-14, 1995

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NEWS DIGEST

Gravely Joins DewEze in Joint Mower Venture

Gravely International, Winston-Salem, N.C., has entered a joint venture with DewEze Mfg., Harper, Kan., to market and distribute DewEze mower products worldwide under the Gravely name. DewEze will continue to manufacture its three models of mowers, which are used by municipalities and commercial customers.

Crop Science Society's Turf Division Turns 40

The Turfgrass Science Division of the Crop Science Society of America is planning its 40th anniversary celebration at its upcoming Agronomy Meetings Oct. 29-Nov. 3 in St. Louis. Featured speakers will include Drs. James Beard, Paul Reike, Victor Gibeault, Thomas Watschke, William Meyer and Albert Turgeon.

Verti-Drain Moves to Protect Trademark

Redexim of Kingston, Pa., developer of the Verti-Drain line of aerification products, is pursuing litigation against Southern Green Inc. of Baton Rouge, La., a former distributor and marketer of the "Soil Reliever" aerator, for infringement of Redexim's patent and trademark rights. Redexim alleges the company has infringed on its patent and trademark, misappropriated trade secrets and engaged in unfair competition.

Woods Equipment Buys Assets of Gill Manufacturing

Woods Equipment Co., Oregon, Ill., recently acquired the assets of Gill Manufacturing Co., Charlotte, N.C. Gill's product line will be integrated into Woods' Turf and Grounds Care business.

Kubota Grows Into New Facility

Kubota's Engine Division has relocated to accommodate its continued growth and to better serve its distributor and OEM customers. The facility is now located at 2100 Golf Road in Rolling Meadows, Ill., near O'Hare International Airport.

Nibco Shopping Streak Continues; Buys Wade

The shopping spree at Nibco Inc., Elkhart, Ind., continued with the purchase of the Micro-irrigation Division of Wade Mfg., Portland, Ore. Nibco recently brought Pepco Water Conservation Products under its wing as its Pepco Division.

Equipment Manufacturers Anticipate More Regulatory Changes

IN SPITE OF looming changes in emission regulations that will affect almost all equipment used by lawn and landscape contractors, the outlook at EXPO 95 was decidedly upbeat. The International Lawn, Garden & Power Equipment Expo was held July 30 to August 1 in Louisville.

The show broke both attendance and exhibition records, with nearly 30,000 attendees and more than 910,000 net square feet of exhibit space in the indoor and outdoor areas. Show managers reported an increase of seven percent in registrations over last year, with 12 percent more dealers, mass merchants, retailers and lawn and garden centers represented.

Perhaps the most noteworthy change was that lawn and landscape contractor attendance rose nearly 50 percent more than figures from two years ago, with an increase of 21 percent over last year. The show also attracted more than 1,200 international participants.

REGULATORY UNCERTAINTY. Pointing out that future emission regulations will eventually affect every type of power equipment sold at EXPO, officials representing the Portable Power Equipment Manufacturers Association reported on the current status of regulations. PPMEA is actively engaged in regulatory negotiations ("reg-negs") with the United States Environmental Protection Agency and is in the process of discussing its proposed Tier II regulations, which are expected to be published in May of 1997. EPA just published its Tier I regulations this summer.

At the same time, PPMEA is also actively addressing California's two tiers of regulations. The California Air Resources Board's Tier I regulations went into effect August 1, 1995, but it is the Tier II regulations that influence the whole regulatory process. The stringent emission requirements laid out by the Tier II regulations cannot be achieved with current technology, reported PPMEA. In response, California has built yearly reviews into the timetable to check the progress of research and state-of-the-art technology development.

DESIGN CHALLENGES. For power equipment manufacturers, California's emissions requirements present a costly and complicated challenge. The requirements become more stringent for the most powerful engines, yet current engine design does not show any possibility of meeting the new regulations.

This has forced manufacturers to devote their resources to research and development of entirely new engine technologies — ones that could combine one of four possible exhaust designs with one of four possible fuel systems. As yet, no definitive design has emerged.

Yet manufacturers are under pressure to produce new technologies and gear up their manufacturing facilities for production by January of 1999 in order to sell power equipment in California, which represents a huge market.

REFORMULATED FUELS. Further complications will probably develop when manufacturers deal with the issues of performance using various fuel blends. Both California and EPA have adopted requirements for reformulated fuels. In addition, several manufacturers are developing new fuel delivery systems that limit the fumes' escape into the atmosphere during fueling.

Another complication is the nature of portable power equipment, which integrates engines into the entire design. New engine systems that will emerge by the turn of the century may be so different that they will drive entire redesigns of power equipment products themselves.

Manufacturers are also discussing methods of monitoring actual product use with EPA. Current options under consideration are EPA spot checks of products actually being used by landscape contractors, in-plant simulation tests or manufacturers buying back used equipment for emissions tests.

The EPA and California regulations are expected to have a major impact on the power equipment industry, and more regulations are appearing on the horizon. PPMEA reported that Texas has adopted Tier I regulations similar to those of California that are scheduled to become effective in August of 1996. Maryland, Virginia and Washington, D.C. are considering adopting voluntary use restrictions for lawn and garden equipment on ozone-alert days.

PPMEA representatives estimated they have spent more than \$47 million on research and development prior to 1993. The group estimated that all portable lawn and garden equipment contributes only 0.8 percent of all U.S. emissions of volatile organic compounds.



Optimism prevailed at EXPO 95.

Workshops Focus on Risk, Customer Service

"What can you do for your customer today?" is one of the questions that will be explored at a regional seminar on September 27, sponsored by the Professional Lawn Care Association of America. The seminar, to be held at the Sheraton Columbia Hotel in Columbia, S.C., will stress customer expectations, providing quality service and maintaining it over the long term.

Risk communication and customers' concerns are covered in the second part of this seminar. The session will explain how customers react to pesticide applications, how to communicate effectively about risk and treatment methods and how to respond to consumer or media questions.

Both sessions will be taught by industry experts. For more information, call PLCAA at 800/458-3466.

Milorganite Starts Turfgrass Donations

Milorganite has initiated a new program that donates \$10 to the contractor's favorite turfgrass research organization for every ton of 50-pound bags or new 1,000-pound mini-

bulk bags purchased before November 30, 1995.

Alan Nees, director of marketing for the Milwaukee, Wis., firm, explained: "Milorganite and its distributors have been long time supporters of turfgrass research at the national level through our involvement with the O.J. Noer Turfgrass Research Foundation. We are excited about this program because it enables Milorganite customers to support turfgrass research at the local level as well."

Gateway Fountain Livens St. Louis View

The nation's tallest fountain, the Gateway Geyser, recently debuted just across the Mississippi River from St. Louis. The 600-foot geyser was built in an abandoned section of East St. Louis, Ill., and can be seen for miles around.

The project was designed and executed by Missouri Machinery and Engineering Co. of St. Louis, a firm noted for designing and fabricating fountains across the nation and overseas. Sverdup Corp., another St. Louis firm, constructed the \$4 million, 17-acre fountain project, which took over two years



The 600-foot Gateway Geyser gives St. Louis residents a splashing view.

to complete.

The design includes 20-inch diameter supply piping and three diesel-driven generators supplying power to three 800-hp motors that turn turbine pumps discharging 8,000 gallons of water per minute with an axial thrust of 103,000 pounds. The

water travels at a velocity of 245 feet per second through a five-foot nozzle.

Regulatory Reform Plunges Into Limbo

Despite great promise and wide initial support, regulatory reform legislation in the U.S. Senate was officially tabled. On July 20, a vote to end debate on the reform package fell just two shy of passage. All 54 republicans and four democrats — John Breaux and

(continued on page 16)

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News in Brief

(continued from page 13)

Bennett Johnston of Louisiana, Howell Heflin of Alabama and Sam Nunn of Georgia — voted for the measure.

"There are still a host of ways to get done what we want to accomplish," said Ben Bolusky, governmental affairs expert with the American Association of Nurserymen. "But it would be on a piecemeal basis. Unfortunately, a vote against this bill was a vote against the small business community."

Golfer Norman Producing Turfgrass

A giant in the world of golf, Greg Norman is trying his hand in the world of turfgrass production. He has established a 140-acre turf production facility in northwestern Highlands county in Florida for the development of improved warm season grasses.

The first variety in production is called GN-1, a hybrid bermudagrass said to have dark green color, cold temperature and parasitic nematode tolerance and resistance to excessive thatch. Two new varieties of bermudagrass are also being planned for full-scale production in the near future.

ACRT Publishes Entry-Level Arboriculture Guide

The ACRT Institute of Arboriculture & Urban Forestry recently released its *Student Activity Guide*. Originally developed for use as the urban forestry textbook in the Job Corps' urban forestry training programs, ACRT is making the guide available for organizations and individuals. This 525-page volume provides a complete urban forestry training program for apprentice line clearance tree trimmers, commercial and municipal tree trimmers, trimmer helpers and grounds maintenance personnel.

The guide features 29 illustrated lessons, each with a corresponding written performance test. The curriculum covers the basics, such as ropes and knots, terminology and personal safety, and progresses into electrical hazard awareness, work site management, hazardous tree recognition and integrated pest management. For more information, call 800/622-2562.

Kansas Nurseries Finally Get Tax Exemption

The state of Kansas recently ended a long history of discrimination against the nursery

trade following its decision to grant the same tax considerations to nurseries as it does other agricultural producers in the state. The law change included in state Senate Bill 88 allows nurserymen to purchase machinery, equipment and parts used in production on a tax-exempt basis.

The law passed thanks to the lobbying efforts of John Hermes, CEO and co-owner of Hermes Landscape & Nursery in Lenexa, Kan., Cameron Rees of Skinner Nursery, Roger Bell of Willis Nursery and the Committee for Kansas Farm Organizations.

Aeration Equipment Makers to Set Standards

Defining performance standards is the primary goal of the Fresh Water Aeration Equipment Manufacturers Association, which held its first meeting in Minneapolis, Minn. in June. These standards will define how manufacturers and users compare equipment performance and effectiveness, and will help lawn and landscape contractors better use water aeration products. Those in attendance included several manufacturers, as well as Chris Ellis of the University of Minnesota St. Anthony Falls Hydraulic Laboratory, who provided technical assistance. ■

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Association News

MORE THAN 130 people participated in the **Associated Landscape Contractors of America's** annual meeting. Various meetings at the conference were aimed at reviewing current projects of the association, planning for the rest of the year and launching new projects. Below are a few highlights:

- The Board of Directors voted to investigate an ALCA health insurance plan, and to look into the development of a scholarship fund through a foundation or trust. In addition, Dana Point, Calif. was approved as the location for the 1996 Summer Meeting, July 18-21.
- The Certification Board of Governors approved the appointment of an Interior Task Force to develop a hands-on interior test similar to the CLT-Exterior exam.
- The Curriculum Committee finalized areas to add to an Internship Guide, to be distributed to members this fall, and discussed the possibility of an international internship. It also decided to pursue accreditation of the current certification program for two- and four-year colleges with approved ALCA curricula.
- The Education Committee discussed

For more information...

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PLCAMA

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Bethesda, MD 20814
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developing a new program — ALCA University — for which faculty and state associations will be surveyed to determine interest in partnering.

- The Legislative Committee agreed on ALCA positions on several issues, including repeal of the Davis-Bacon Act, immigration, health care reform, chemical usage and indoor air quality.
- The Membership Committee noted a

constant increase in membership in the past 12 months. It agreed to pursue a mentoring program, using active members to get new members acquainted with the organization.

In related news, ALCA announced that 1996 Student Career Days will be held March 21-24 at California Polytechnic University-San Luis Obispo.

(continued on page 20)

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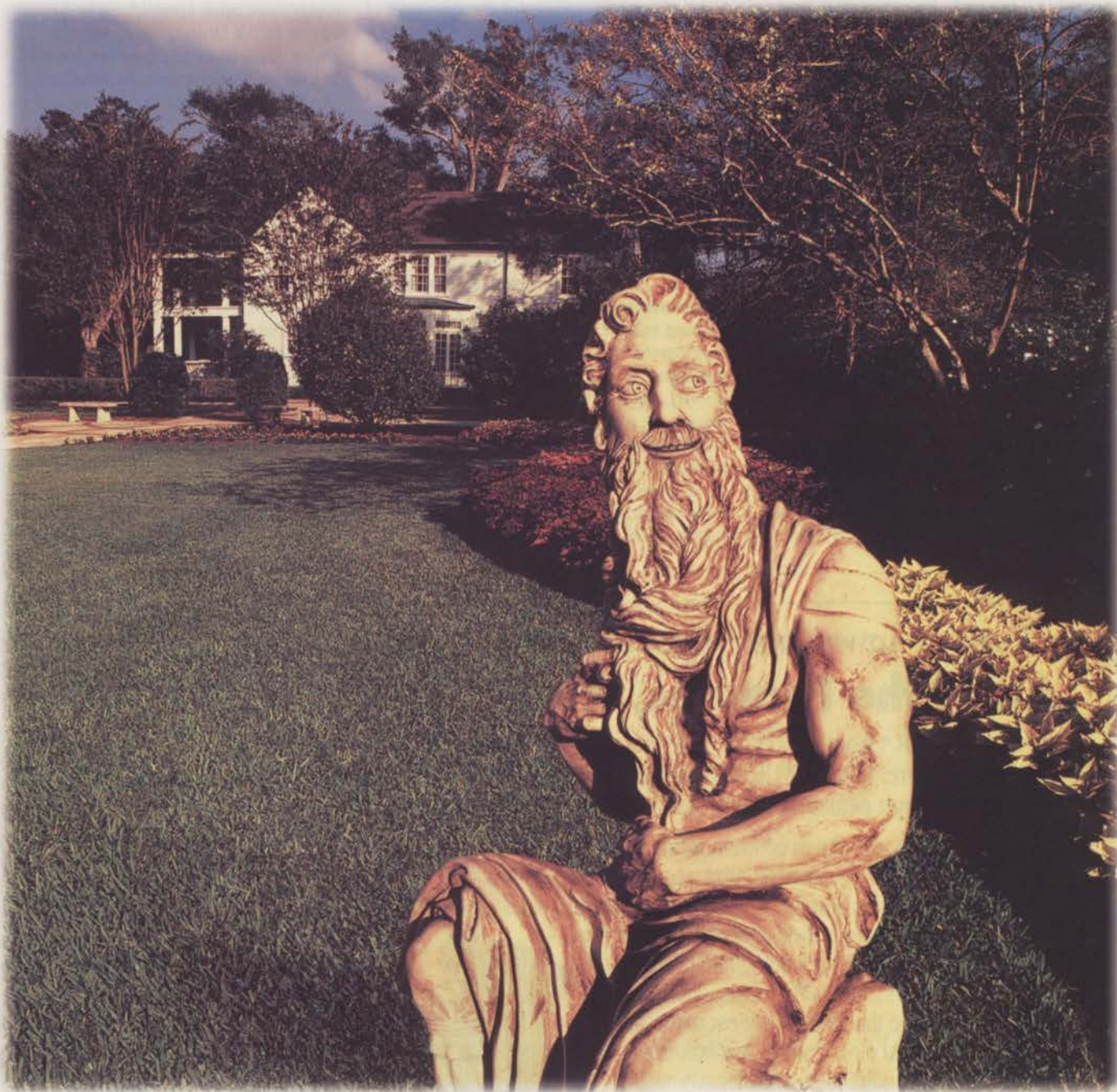
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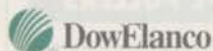


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Association News

(continued from page 18)

The **Professional Lawn Care Association of Mid-America** will hold its 1996 Mid-America Green Industry Convention January 16-18 at The Plaza Inn, Kansas City, Mo.

MAGIC '96 will feature 50 exhibitors, and is attended by 300 lawn maintenance professionals, according to executive director Olivia Golden. Along with business and technical sessions, Kansas City Royals general manager Herk Robinson will give the keynote address on team building.

The event will also offer recertification programs for lawn maintenance professionals. Call Golden at PLCAMA for more information.

The **American Society of Landscape Architects** is putting the finishing touches on the 1995 Annual Meeting and Expo, Oct 7-9 at the Cleveland Convention Center in Cleveland, Ohio. Show management reports that almost 300 exhibitors will be showcased, a 20 percent increase over last year.

The second presentation of LandTech will be twice as large as in 1994, and will in-

clude a hands-on demonstration area, a theater for video and real-time demonstrations of CAD, 3-D modeling, GIS and other high-tech applications.

LandNet, ASLA's new World Wide Web homepage, will debut at the Expo. LandNet is a complete remake of Designnetwork that will put landscape architecture on the Internet and link it to other design and planning profession sites.

In addition, a special integrated lighting display sponsored by General Electric will feature lighting products and techniques, as well as innovative research and future products.

Fred Whyte, president of Stihl, was unanimously elected as chairman of the board of the **Portable Power Equipment Manufacturers Association** at its annual meeting in June. Whyte noted that the development of reasonable air quality regulations will continue to be a top priority, but that the future of PPEMA will rest on the concept of "strategic standards management." This includes active participation in the negotiation and development of reasonable laws, regulations and private sector standards which impact portable power products.

At the organization's annual meeting in July, the **American Association of Nurserymen** elected its board of directors. Jack Long, president of J & L Nursery, Silverton, Ore., is the new president. A 21-year member of AAN, Long served on several association committees, is the director of the Oregon Nurserymen's Garden Association and past president of the Oregon Nurserymen's Association.

AAN reported that its convention and trade show in Minneapolis drew almost 2,000 attendees from the U. S. and Canada. Highlights of the event included a presentation on national politics by analyst Robert Novak and a showcase of 11 new plant varieties.

AAN and its co-host, the **Minnesota Nursery & Landscape Association**, donated a tree to the Minneapolis Convention Center as a gesture of goodwill. The tree, an *acer rubrum*, was planted at a ceremony attended by city and association leaders.

Joining Long as AAN officers are vice president and Region I Director Alfred Hicks, president of Hicks Nurseries, Westbury, N.Y.; and treasurer and Region III Director Thomas Pinney, president of Evergreen Nursery, Sturgeon Bay, Wis. ■

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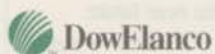
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Seed Basics

UNDERSTANDING SEED PRODUCTION

ONE OF THE most widely misunderstood aspects of the seed industry is the actual production of seed. Few people outside of the Pacific Northwest realize that grass seed is a crop that is planted, cultivated and harvested. Like many other crops, seed production is driven by markets and dictated by the weather. Understanding the process of turfgrass production will help you make better choices about when you buy and what you buy in turf seed.



Turfgrass fields are usually maintained as perennial crops and can remain in production for three to five years. Credit: Skip Lynch

TURFGRASS IS A CROP. Corn, wheat, barley and oats are all grasses. We realize that the seed for these commodities must be planted in uniform rows at prescribed depths. We know that these crops are left in the field to mature and produce seed heads (or ears), and the harvesting combine separates the seeds from the chaff. These crops are harvested once a year, and the size of the harvest is dictated by weather, number of acres planted and market demand. All of these influences affect the price of the commodity.

Many elements of turfgrass seed production and marketing are essentially no different from the food crops. Turfgrass seed fields are planted in uniform rows, cultivated to maturity and harvested with combines once seed heads have ripened. The price of seed is influenced by the number of acres in production, the effects of weather on the yield, time of the year, field maturity and market demand.

There are, however, important differences. First and foremost, turfgrass fields are generally maintained as perennial crops. Once the seed has been harvested, the fields are prepared for winter and the following year's production. Sometimes these fields remain in production for three to five years.

Also, because the crop to be harvested is to be reseeded rather than eaten, timing the harvest requires great skill in determining the proper moisture levels of the seeds. If the seed is too wet, the germination will be hindered. If too dry, the seed heads may shatter before the crop is combined. When a seed head shatters, the seed falls from the stalk to the ground, and is lost to the harvest.

DECIDING ON A CROP. There are many factors that go into a decision to plant or plow-out a turfgrass seed crop. Most of the decisions are economical, although turfgrass seed production may be used in a crop rotation schedule. Among these economic fac-

tors, seed companies and growers look for:

- Expected industry demand
- Expected yield of the crop
- Availability of suitable acreage
- Perceived market trends
- Introduction of new products to the market.

Obviously, supply and demand play a huge role in any crop acreage decision. As an example, if a farmer foresaw a glut of tall fescue in the turfgrass market, he might opt to plow out some of his acres in favor of a crop that will give him a better profit margin.

Similarly, if a farmer foresees a shortage in the bentgrass market, he may seek to plant as many acres as he has available in bentgrass production to take advantage of rising prices.

Still, the decision making process is rarely easy. Many questions need to be answered long before a decision is reached:

- How much of a particular species will we need next year?
- How much is already planted?
- How long have those acres been in production?
- How many of those acres will need to be replanted to sustain production?
- What varieties will we need?
- Will we add new varieties?
- On which varieties can we reduce production?
- Can we use those acres for another crop?

SEEDING RATES FOR TURFGRASS SEED FIELD PRODUCTION

	LBS./ACRE
Annual ryegrass	10
Perennial ryegrass	5-7
Kentucky bluegrass	5
Tall fescue	7
Fine fescue	5-7
Bentgrass	1-2

- How many acres are available for new turf seed production?
- How many certified fields are available?
- Should we plant the field in spring or fall?

YIELD FACTORS. The more successful a seed company and/or grower is at answering the previous questions related to market trends, the better its chances are of being profitable. Research and development of improved varieties is a very

significant aspect of the market, but nothing is gained if production is lacking.

Good Seed Producing Varieties. A seed company or a seed grower can have the very best turfgrass variety on the market and still lose out if it is not successful in producing enough seed to meet demand. Many great varieties end up being left by the side of the road due to poor crop yields or poor production techniques.

Weather. Neither the seed company nor the growers can control the weather. Because turfgrass seed is a commodity, crops are at the mercy of the weather. The climates in the Northwest (Idaho, Oregon, and Washington) are ideally suited to grass seed production. Cold, wet winters are followed by dry, temperate summers. Because grass seeds are so small and do not grow very tall, dry summer weather is essential for harvesting.

Crop management. Production costs are also a major consideration. For example, Kentucky bluegrass is generally more expensive to produce than annual ryegrass. From pesticides to fertilizers to irrigation, the inputs required to produce market quality bluegrass can be expensive. Therefore, a farmer may choose a crop based on the expense of production and/or his ability to manage the crop to harvest.

Certification. Last, a seed company or a farmer may choose to plant a crop based on the crop's value as an Oregon Blue Tag Certified or other certified variety. Usually, the value of a certified crop is greater than an uncertified crop, and requires little additional management input.

Seed companies and growers may also choose seed field crops in order to improve or enhance their future ability to have fields approved for certification. As an example, an annual ryegrass crop will generally disqualify a field for certified perennial ryegrass production in the near future.

(continued on page 24)

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Seed Basics

(continued from page 22)

GREAT QUANTITIES. In 1994, Oregon's seed producers had over 387,215 acres in turf-grass seed production. From these acres over 527,702,000 pounds of seed were produced. Of the total acreage, 183,800 were approved for certified seed production.

TIMING IS EVERYTHING. Perhaps the most important aspect of the production cycle relates to the new crop harvest. Because turf-grass seed is harvested once a year, and yields vary from year to year, it is important to order seed as early into a project as possible. Since most of the seed is harvested in July and August, it will not be cleaned, bagged and ready for shipment until the latter part of August or early September. Seed shortages are at their worst in June, July and August because all of the seed available during these months is carryover from the previous year's harvest.

Unlike trucks and toasters, grass seed is a commodity that is produced for harvest only once a year. Just as seed companies and growers must predict the market trends to produce enough seed for the industry, the turfgrass professional must also look into the

Annual ryegrass
Perennial ryegrass
Tall fescue
Kentucky bluegrass
Fine fescue
Bentgrass

1994 OREGON GRASS SEED HARVEST

AREA HARVESTED	PRODUCTION
(acres)	(lbs.)
126,600	231,825,000
131,070	182,023,000
68,470	73,849,000
18,190	12,670,000
28,845	22,057,000
14,040	5,278,000
387,215	527,702,000

Extension Economic Information Office, Oregon State University. Compiled by William C. Young, III

Certified Seed Production In Oregon	1995*	1994	1993
Bentgrass (Colonial, Creeping & Velvet)	9,934	9,221	10,558
Bluegrass			
(Kentucky, Rough, P. supina, etc.)	15,263	15,845	11,966
Fine fescue (Blue, Chewings, Hard, Sheep, Red, etc.)	17,035	22,555	25,250
Tall fescue (turf-type & forage)	59,014	52,929	60,421
Annual & Intermediate ryegrass	4,646	4,712	3,856
Perennial ryegrass	78,458	78,538	70,492
	184,350	183,800	182,546

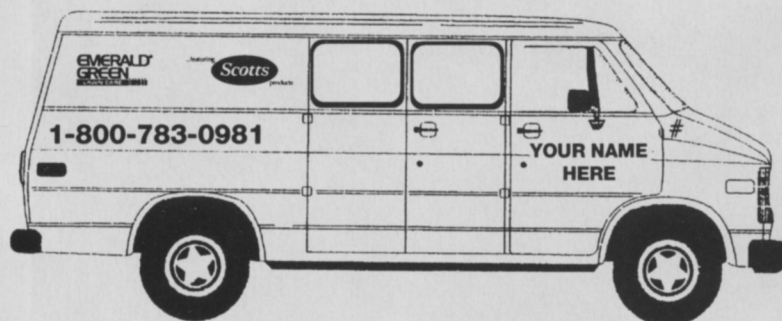
*Estimate

crystal ball to get a handle on his or her seed needs. Astute calculation of needs and early booking of seed is the turfgrass professional's best guarantee that the product will

be available when it is needed. — Skip Lynch

The author is technical agronomist at Seed Research of Oregon, Corvallis, Ore.

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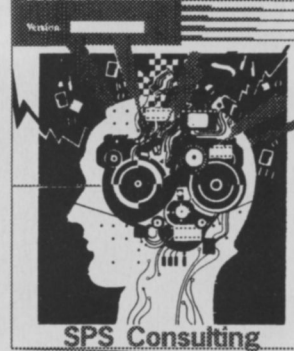
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HEADQUARTERS: Omaha, Neb.

FOUNDED: 1985

OWNER: Jeffrey Zindel

PRIMARY SERVICES: Interior plantscape design, installation and maintenance (approximately 75 percent commercial, 25 percent high-end residential); exterior maintenance and annual plantings; Christmas and holiday design and lighting; retail shop. Interior plantscape totals approximately 50 percent of the business; exterior maintenance is 20 percent; Christmas and holiday work is 20 percent; annual installations are 5 percent; and retail sales are 5 percent.

EMPLOYEES: 42 peak season;
32 year-round

1995 SALES: \$1.5 million

1996 PROJECTION: \$1.6 to 1.7 million

EXECUTIVE SUMMARY

THE CONCEPT: "Whatever It Takes"

FUTURE CHALLENGES: Become more proactive than reactive to anticipate clients' problems before they are problems. Make sure we're doing what we say we're doing.

THE PRESIDENT

JEFFREY ZINDEL, CLP

AGE: 37

BACKGROUND: Grew up in his father's exterior tree and lawn care firm in Decatur, Ill. Graduated from Creighton University in Omaha, Neb. in 1979 with a degree in psychology. After going into partnership in the family's exterior firm, moved to Omaha in 1985 and established Livinggreen Interiors that year.

EQUITY HELD: 100 percent.

Jeff Zindel established Livinggreen Interiors in 1985 and has expanded its service offerings to include exterior maintenance

Credit: Vern Goff,
Lee Vernon Studios,
Omaha, Neb.





The Creative Touch

A flair for creative design, innovative marketing and imaginative management has helped Livinggreen Interiors expand its interior and exterior divisions in Omaha's growing market.

By Susan Gibson

MANAGING a successful business depends on having a variety of skills, but the most elusive is creativity. No business or horticultural school can teach a person how to see a market from a new perspective, how to design a landscape that is truly unique or how to handle employees with a fresh approach.

Those skills depend on an innate sense of creativity, and for those who have it, business can be very interesting and rewarding. Such is the case at Livinggreen Interiors Inc., a firm started by Jeffrey Zindel in 1985 when he moved to Omaha, Neb. Originally, Livinggreen was an interior plantscape firm, providing landscape design and guaranteed maintenance for commercial and high-end residential clients. Interiorscape continues to be Livinggreen's major line of work and brings in approximately 50 percent of the company's revenues, but it has widened its base through creative expansions into Omaha's vibrant economy.

BRANCHING OUT. The first expansion was a natural offshoot from interiorscape. "We started doing Christmas and holiday designs about nine years ago," Zindel recalled. "We do both commercial and residential perimeter lighting and displays." This work has grown steadily in recent years and now accounts for approximately 20 percent of the company's business.

A large part of Livinggreen's Christmas work is the storage of trees and trimmings. "We keep large Christmas trees up to 18 feet tall in storage," he noted. "I'd say we keep about 150 trees and as many as 350 wreaths in storage right now." This area of the business is helped along by the ample space available for storage in years to come.

Livinggreen's new headquarters building in downtown Omaha is a renovated building from 1912 offering more than 16,000 square feet of space (approximately 2,400 square feet are used for offices). The renovation project involved an award-winning interior design that combined recycled building elements such as original tin ceiling panels and lumber with a strikingly modern, spacious plan.

"The area was gutted and now has a wall of glass from ceiling to the floor, plus a 14-foot ceiling," Zindel noted. The renovation includes an abstract painting that interprets Livinggreen, curved and diagonal steel wall partitions, high-tech lighting systems, a waterfall, brick walls and terrazzo flooring. The birch and steel reception desk represents recycled materials from a junkyard. The building also houses Livinggreen's retail showroom.

MOVING OUTDOORS. Annual plantings became a second area of expansion about five years ago. Although most of the work is outdoors, it is managed under the company's interior division and currently accounts for about 5 percent of total revenues.

Although the expansion into exterior maintenance seems to be a radical departure for an interiorscape firm, Zindel saw it as an opportunity for increased growth from current commercial clients. The division was started in 1993 and was launched with a direct mail

(continued on page 30)

PREEMERGENCE TURF HERBICIDES

- A lot of them focus on low price.
- That's usually because they don't have much else to offer.

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- Fall applications help you manage unwanted *Poa annua*, as well as crabgrass and other weeds.
- Altogether, Dimension takes care of more than 20 tough weeds.
- Dimension works before or after crabgrass appears, extending your application window.
- It's *completely non-staining*—all you see is great-looking turf.
- You can stretch the long-lasting control of Dimension *even further* with split applications.
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Cover Story

(continued from page 27)

program to those customers. It was well received from the start. To date, the division's growth has been phenomenal and now brings in about 20 percent of total revenues.

Other areas of expansion have been a retail showroom established at the company's headquarters in 1994 and a short-term rental operation for special events.

Under Zindel's guidance, Livinggreen's annual rate of growth has averaged approximately 10 to 15 percent. The company that started with first-year revenues of \$40,000 now reports revenues in the area of \$1.5 million.

Current rates show good growth, down slightly from the early years. "We ran about 8 to 9 percent last year and have not had any down years," he pointed out. "In fact, between our first and second year offering exterior maintenance, the contracts tripled." The steady interior business serves as a source of "recurring revenue with an incline that is not as dramatic."



OMAHA'S MARKET. One key to Livinggreen's growth has been a comfortable fit with Omaha's market. The interior division services commercial operations such as malls and office buildings. The area, with approximately 350,000 residents, is home to several insurance and service-oriented firms.

"I'd describe Omaha as an 'eco-

Guaranteed interior maintenance services are a major segment of Livinggreen's work.

omic island' with its Midwest location," Zindel noted. "The economic pinch of a few years ago didn't get here because we have a diverse economic base." This includes being the "world headquarters" of telemarketing and credit card processing, he said. The area's geographic location makes it a natural center for this type of services.

"As a result, there are lots of people making good money here," he explained. It also means that the unemployment rate hovers at a very low two percent or less. The relative prosperity also means steady growth of income and the construction of luxury homes and malls—two more potential sources of busi-

ness for Livinggreen Interiors.

The company's work with high-end residential customers has shown steady growth. "This is a service-oriented area and people are not afraid to buy services like mine," Zindel said. Such customers value the firm for its creative landscape designs and installations, as well as for its guaranteed maintenance.

"We have a lot of residential work in this area. I've found that the average residential job brings between \$3,000 and \$7,000. We service some of the largest homes in the area—some of which cost between \$1.7 to \$7.5 million."

He explained that he will get the work through connections with local interior designers, who call him directly. "If plants are to be used in an interior project, typically we are the first choice. We've always marketed to designers. We've gone after the architect and interior design community heavily over the years."

Zindel has found that the typical high-end homeowner usually leaves the technical aspects to his firm. "They let us decide the plants

(continued on page 32)

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Cover Story

(continued from page 30)

and the containers." These elements are critical for high-end plantscapes and he prides himself on being able to create unique designs.

"I feel there's nothing we can't do. We know what's available for foliage and containers. We've got so many sources and we feel the container is as important as the plant in these settings. For instance, a residential client may select a \$5,000 oriental vase of porcelain or clay," he explained.

The initial landscape design and installation often leads to long-term maintenance business for this type of client, Zindel maintained. "I'd estimate that 90 percent of those clients follow up with a maintenance program from us."

Livinggreen's retail showroom gives many of these residential clients new ideas and options. "They know we're different and that we've got many sources for containers. In this respect, we're a different type of company."

The perception of being different continues to attract business from local interior designers and architects. In fact, the long-term relationships help move the selection process along during bidding.

Zindel explained: "We're usually not the low-est bid. If a contract is weighted for factors other than price, we'll rank high and often get the work. The best situation is when we get asked to write the specs for a job."

Business in Omaha has naturally led to geographical expansion. Livinggreen currently services interior customers in Omaha and Lincoln, Neb. It has also subcontracted projects as far away as Iowa, Kansas and Tennessee.

POSITIVE ENVIRONMENT. A thriving service industry in the same market could wreck havoc on a manager interested in attracting good employees. Zindel admits that the employment scene is competitive: "We have to compete with those telemarketers who offer \$7 to \$10 per hour, plus flex time. To compete, we have to offer year-round work, make it a good place and keep it challenging and fun."

He added that employees need to see career opportunities in a company and be challenged by a variety of work. "Sometimes, we'll have interior employees switch to exterior work, or vice versa. It works because they're acclimated to our philosophy."

The community and the business opportunities it represents is a challenge itself for Livinggreen's managers. "Whatever it takes" is the general philosophy and the positive working environment encourages creative and productive work.

New employees learn this during their orientation. "After they spend time with their manager and learn how the company

**Omaha's healthy economy
offers many commercial
maintenance opportunities for
Livinggreen Interiors.**

works, they meet with the safety manager. Then I explain why we do what we do, why there's no management hierarchy at Livinggreen and how the jobs interact. For instance, I'll explain that if they don't mow well, I'll have a hard time selling the next mowing job."

Zindel maintains that his door is always open. In fact, employees can glance through his floor-to-ceiling window office and easily see if he's available. The company's can-do philosophy, as well as its unusual offices, add a unique dimension to the day-to-day operations. "It's obvious that Livinggreen has a different atmosphere and environment," he added.

BUSINESS ACUMEN. This attitude carries over into other arenas of business, including working with vendors and networking with peers.

Because Livinggreen depends so much on connections for plants and unusual containers, Zindel has gone to great pains to establish good relationships with his vendors.

"I started out working with brokers, then became directly involved with growers in sort of a roundabout way," he explained. Some of these growers have supplied him for nearly 10 years. "They're in business too, and they understand the ups and downs of doing business. In some ways, they're like my partners. I couldn't stay in business without fostering that kind of relationship."

His growing specialty rental business serves as a good example. He cited one recent private party with a Hawaiian theme that needed more than 50 palm trees and 450 jasmine plants provided on short notice. Through his connections with growers around the country, Zindel was able to supply the materials.

The image of professionalism also helps the firm gather business. Zindel is one of the first contractors to become a Certified Landscape Professional and he displays the designation prominently. He has been actively involved in the Associated Landscape Contractors of America for several years, with good reason.

"I believe we wouldn't be where we are without being a member of ALCA," he stressed. "It's been so valuable to talk about problems with other contractors and network with them."

The move toward professional regulation doesn't worry Zindel, because he believes it will maintain higher standards of work. "I see more rules and regulations coming, but they're not all bad, as long as they don't tie our hands. If all contractors were licensed or certified, I'd be thrilled."



Regional *Outlook*

Lawn & Landscape
MAINTENANCE

September

cover feature

Natives, Mulches and Hydro-Sprigging

In the West, where brush fires and landslides are front-page news, the revegetation industry still depends largely upon commercial and residential developers for its bread-and-butter work. However, research into optimizing the effectiveness of revegetation efforts on fire-damaged hillsides is changing the way contractors and developers perceive all types of revegetation. Doing it correctly takes years, not months, and contractors are expected to be certified in erosion control.

"Developers who used to expect a mature look in two or three months now understand that it takes two or three years to revegetate an area in order to achieve the best results," said C.C. Willis, general manager of Western Sere, the revegetation division of Western Sod in Phoenix, Ariz. "It's part of an ongoing educational process among developers, landscape architects and revegetation contractors. We

used to plant containerized shrubs in common areas and install temporary irrigation to shorten grow-in as much as possible. Now we have the support of the architect and developer to seed native grasses, flowers and shrubs without irrigation."

A more patient approach has also taken hold in California, where exposed slopes make erosion a certainty during the winter rainy season. "The logic of establishing cover quickly, regardless of its long-term consequences, has changed," pointed out Michael Harding, chief erosion control consultant for the cities of Laguna and Malibu, after their devastating fires in 1994. "Less than one percent of the 200,000 acres in Southern California that burned last year were reseeded."

Lessons From Oakland

"We learned a great deal in Oakland," said Harding. "That ex-



Developers understand that revegetation takes years. Photo: Weyerhaeuser

perience gave experts the opportunity to move away from things like annual ryegrass, used in the past because of its rapid germination, to slower establishing, native plants with lower biomass. Less biomass means less fuel for future fires."

Harding and others found that by protecting the topsoil from erosion by other means, they were able to give the natives time to reestablish successfully. The industry took a harder look at erosion control blankets, mulches, and availability and rates of native plant seed.

WEST/S.W.

"In general, I think the industry has improved the application of current technology," he explained. "In Oakland, we used rates as low as six pounds per acre. Considering some native seed mixes cost hundreds of dollars per pound, every pound is important. You also have to consider things like the cost of labor to remove stubble before installing blankets, the cost effectiveness of different mulches, the speed of degradation of any type of soil stabilizing technology and the productivity of different types of equipment."

The urgency of the revegetation situation in Southern California accelerated the introduction of hydraulically applied mulch that dries into the form of a blanket. Called a bonded fiber matrix, the material is applied by a hydraulic seeder. "Two trained applicators can cover four acres a day with the matrix," Harding pointed out. "In Oakland, it took a crew of 30 people a week to apply erosion control blankets to three acres."

Like any product, the matrix is ineffective if it isn't applied correctly. The material is applied at fairly high rates (3,000 pounds per acre) and must dry to create a seamless blanket on the soil surface. Weyerhaeuser has created a certification program for applicators.

Two more companies have entered the matrix market. "We're waiting for the Texas DOT to put matrix on its approved list," said Chris Clamm, materials division manager for James Lincoln Company in Dallas, Texas. "Once they do, Oklahoma, Louisiana and New Mexico will add it to their lists."

Quality and Price Adjustments

Hydraulic mulches have become an issue of debate among ma-

ny contractors lately. Environmental pressure has forced paper and wood fiber mulch suppliers to adapt. The result has been higher prices and a change in the quality of both materials.

Research by Gilberto Urroz and C. Earl Israelsen at the Utah State Water Research Lab in Logan gave the edge to wood fiber for stability. However, some contractors prefer the water holding characteristics of paper mulches. In the past, contractors would mix wood fiber with paper mulch, since paper was less expensive.

Burt Harrington, head of the revegetation division of Contra Costa Landscaping in Contra Costa, Calif., prefers using paper mulch.

"We are more comfortable using a heavy rate of paper in our machines," he said. "We won't cut the amount of mulch we apply. We have seen germination go down with the rate of mulch. When you're seeding with more expensive natives, germination is very important."

Pumping Shrubs

Environmental pressure to restore the natural vegetation of damaged or developed areas has forced architects and erosion control specialists to expand the

number of plants that can be applied hydraulically. Prostrate acacia, common yarrow, woolly blue curls, sun and rush rose, western redbud, rockrose and prickly pear cactus can be planted with hydraulic seeders today.

"Improvements in harvesting, cleaning and conditioning have enabled us to bring some prices down," explained Bruce Berlin, horticulturist with S&S Seeds of Carpentry, Calif. "We are starting to build production acreage of the more popular varieties."

Shrubs are also becoming available. "The price of purple needle grass, which used to be around \$100 per pound, is now closer to \$45," said Berlin. "Prices are coming down as demand for specialty seeds becomes more predictable."

The combustibility of the landscape is a major factor in the demand for native plant seed. "Agencies now have recommendations for fuel modification zones," Berlin said. "Plants such as cedar, cypress, juniper pine, and fountain grass are now undesirable for revegetation work in fire-prone regions. Lower growing natives with less biomass are taking their place."

Concern over regrowth into fuel for future fires is a reason annual ryegrass is now discouraged in sensitive areas. Very finely leaved hard and red fescues provide longer lasting and less hazardous cover against erosion.

Setbacks for landscaping and wet (irrigated) zones are now required in many areas. Plants such as chamise, California sagebrush, common buckwheat and red shanks have been targeted for removal.

Turfgrasses Top the List

Hydraulic seeding began as a method to plant hundreds of acres of highway roadside and hard-to-access areas quickly. Tall fescues, redtop, common bluegrass and a few flowering ground covers now keep dust down along our highways.

As highway and revegetation of developments has slowed in some areas, other types of work for hydraulic seeders has been found. "Golf courses, parks and schools have become an important part of our business," explained Gary Weems of Hydro-Plant, Inc. in San Marcos, Calif.

"Much of our work is with turf-type tall fescues. But, we're now planting new materials like buffalograss and the improved common bermudas with our machines. We are also seeding high quality creeping bentgrasses and sprigging hybrid bermudas with the same equipment."

If you're going to try sprigging with a hydraulic machine, you'll need to take a look at the pump. "You need a progressive cavity pump to apply the sprigs without clogging and with the least amount of damage," advised Weems.

Association Urges Certification

Because of the growing complexity of revegetation technology, the International Erosion Control Association in Steamboat Springs, Co., strongly endorses certification. The IECA holds training sessions each year to help its members pass the test to become Certified Professionals in Erosion and Sediment Control (CPESC).

"There are only about 700 CPESCs in the world," noted Tracy Zuschlag, program administrator for IECA, cosponsor of the program.

"About one-eighth of our members are currently certified. We receive calls regularly from developers and architects asking about certified revegetation contractors in their area."

"It's worth exploring if you want to keep abreast of the technology and bid on the bigger jobs," she added. — Bruce Shank

The author has been writing about the landscape industry for 25 years and is a partner in VERDEcom, a communications company in Los Angeles.



Fiber matrix can be applied at 3,000 pounds per acre. Photo: Weyerhaeuser

Arizona Joint Effort Produces Residential Drip Guidelines

After agreeing that residential low-volume irrigation systems in their state were not achieving design efficiency because of a lack of guidelines, nine Arizona organizations have published a 38-page booklet to correct the problem. In July, "Guidelines for Residential Drip Irrigation Systems" was officially presented to Michael Goldwater, the Arizona registrar of contractors, and is now available from irrigation equipment dealers and the Water Conservation Office of the Phoenix Water Services Department.

"Drip irrigation is an efficient way to water plants," stated Bill Derryberry, a Scottsdale irrigation consultant who participated on the Arizona Landscape Irrigation Guidelines Committee. "Unfortunately, few drip irrigation systems are developed to handle the needs of a maturing landscape. Many plants fail to thrive because their needs are not met."

Kent Miller, from the Tucson office of The Groundskeeper and past president of the Arizona Landscape Contractors Association, chaired the drip irrigation committee.

The publication, patterned partially on the Florida Irrigation Society's "Standards and Specifications for Turf and Landscape Irrigation Systems," consists of language designed to be used in irrigation installation contracts. It included definitions of relevant terms, specifications for materials and installation details. Seasonal irrigation needs for plant material are described, along with suggested watering frequencies and run times.

Environmental Industries Surprises Scofield Upon Retirement

This past July, Bob Scofield expected to pack up his things after 25 years at Environmental Industries in Calabasas, Calif., and quietly slip away to retirement. He anticipated a small retirement party, but to his surprise was greeted by Dr. Joseph Jen, dean of the College of Agriculture; Dr. David Wehner, head of the Environmental Horticultural Sciences Department; and a group of professors from Cal Poly, San Luis Obispo. Environmental Industries' CEO Burton Sperber had arranged a surprise gift for Scofield—a \$10,000 scholarship to Cal Poly in Scofield's name.

Cal Poly is a big part of his life and career, and Sperber wanted Scofield's contributions recognized in perpetuity. In 1953, Scofield graduated from Cal Poly with a degree in ornamental horticulture, as did his son in 1973. He spent years on the advisory committee of the College of Agriculture.

Scofield played a major role in Environmental Industries' growth as the largest landscape company in the country, with divisions in golf, nursery, tree care and landscape construction.



Scofield



regional outlook fax survey

LLM is interested in learning more about market conditions in the West/Southwest, so we've incorporated a Fax Survey into the inaugural issue of Regional Outlook. If you would like to assist us in learning more about your market — as well as find out how others are doing in your market area — please fill out the following questionnaire and fax (216/961-0364) or mail a copy to LLM magazine at 4012 Bridge Ave., Cleveland, OH 44113. We'll report the results of the survey in future editions of Regional Outlook. Thanks for your assistance.

1) Is business up, down or about the same as this same time in 1994? Up ☐ Down ☐ About The Same ☐

2) If your business is "up" or "down" this year, please list the percentage increase? + -

3) Please list any additional news items or market observations that might be of interest to you and our readers.

4) Please rate your company's business performance for each of the following service areas when compared to 1994 (check only one in each category):

Service	Above Average	Below Average	Average	Not Involved In This Market
Mowing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aeration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tree Care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landscape Design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lawn Renovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sodding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landscape Installation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pesticide Applications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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SETTING THE STAGE. Achieving a positive work environment is challenging while building up a business. For Zindel, the process was purposely slow and handled with a good bit of self-knowledge. He expanded on the role of leadership in a recent interview:

Q. What kind of manager are you?

A. I'd describe myself as both hands-on and hands-off. I have managers who meet once a week to report on new projects. When I hire them, I expect them to sink or swim. I get involved to the extent that I know what's going on, but I don't get involved on a day-to-day basis. I make the rounds and let them run their departments.

Q. How do you keep from being too hands-on with your managers?

A. The managers have to stand on their own two feet and defend an idea they believe in. If they say a project is something worth doing, then I'll say we should go after it.

My managers tell me that I have no tolerance for incompetence. Mistakes, however, are OK. If they make a mistake, we'll talk about it. I tend to manage from the heart and I expect a lot out of them. I've done a lot of work to foster them.

Q. As your company grows, how do you communicate your ideas with new managers?

A. Actually, I think that while it was harder to hand off work at the beginning, those managers were most successful because they had most of my time and training. They had my undivided attention—I used to think we were joined at the hip! Now, I don't get involved in training the managers as much.

I see my role becoming that of a coach, or team leader. I know that's the current "buzzword," but it's also a good description. My job is to gather information and if someone has a problem with something, walk them through to a decision.

Q. What did you find most challenging?

A. I think it was finally handing off a lot of the day-to-day work. I don't really enjoy the operational work as much as I love selling. In the last 18 months, I've finally felt that I had enough good people that I'm comfortable with handing off the work. I trust them. I like to see a manager be on the same wavelength as myself.

Q. What function do you like best?

A. I've come to realize that I love to do sales. I'm good at selling and designing. I now have an administrative assistant who takes care of the details, which allows me to do the creative work that I really like to do.

Q. What ventures are you planning in the future?

A. We are looking to develop more Christmas and holiday work, as well as retail. I'd like to see us provide fresh flowers and decorate special events. For exterior, I'd like to fine tune our performance to be more proactive than reactive. This takes good training and good tools. ■

Livinggreen Interiors Inc. is located at 2215 Harney St., Omaha, NE 68102. Telephone is 402/346-4200.

The author is Editor of Lawn & Landscape Maintenance magazine.

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The Future of The Compost Industry... Spinning the Magic Circle

Effective solid waste management and the growth of the green industry are on a converging course. This "magic circle" of growth and opportunity can benefit both industries.

By Rod Tyler

THE PAST FIVE years have been an organizing and planning time for most solid waste officials and composting has emerged as the preferred method of effectively handling organic residuals. Although the two main sources feeding compost facilities are yard trimmings and biosolids, there is reason to believe that these represent only the tip of the iceberg when the entire palate of compostables is considered.

For that reason, there has been overwhelming fear about a tidal wave of compost that will devastate the market once composting is fully accepted in each community. It has yet to happen, but the potential exists if the markets do not develop along with the producers. For instance, about 200 million tons of solid waste are produced each year, of which about 60 percent is compostable. That will produce about 120 million tons of compost products.

But the agriculture sector—the largest market for compost products—is also one of the largest producers of compostable feedstocks...manure. A total of 1.4 billion tons are produced yearly, a figure that dwarfs all solid waste combined. If and when these materials are composted, there will be plenty of product to go around.

COMPOST ECONOMICS. There are really only two ways to begin composting. Either a program begins as a form of alternative waste management or the market demands organic products so strongly that it justifies producing a product. To justify producing compost strictly from the sales of the product, sales may need to be over \$35.00 per cubic yard, even for simple outdoor windrow technology.

The composting industry has grown tremendously over the last five years with the help of the green industry, a natural fit almost too good to be true. As long as gardening fever continues in the retail sector, the demand for compost products will continue to expand in each urban area.

The public has begun to expect to be surrounded by flowers. Compare anywhere you shop today with the same location ten years ago. You'll find more green, more color and more entertainment. In fact, some horticulturists like Rob McCartney from Sea World of Ohio, Aurora, insist that landscaping for entertainment has become a main attraction at their locations. Other locations like parks, restaurants and even corporate centers have put major emphasis on increasing total green space.

Just how much compost can the green industry consume? It is obvious that the first market sector to develop for compost products from urban locations has been the green industry, which includes professional landscape contractors, nurseries, topsoil blenders and mulch dealers.

Quality products will always be welcome at reasonable prices in the green industry. However, the paradigm for producing compost has changed over the last five years in a positive way — toward manufacturing — more than before.

EXPECTATIONS. Sometimes we get what we expect. If we expect to get something out of a compost industry report, we probably will. The same is true for what we should expect from



As lawn and landscape contractors expect the production of high quality compost materials, the market will increase and more producers will use the "compost factory" approach. Credit: Rod Tyler



the two converging industries. A crucial issue to future the expansion of both industries is to keep the positive results of using compost front and center, while limiting exposure to negative experiences.

It is best to consider the composting process as a manufacturing process yielding high quality products. Expect it. This production mentality, or "compost factory paradigm," is in fact the main theme guiding the most successful composting operations today.

The benefit to the green industry is that the products produced by compost factories help to increase plant growth significantly, making the eventual demand in the green industry for landscaping services increase accordingly.

THE MAGIC CIRCLE. The magic circle can be applied to almost any aspect of a contractor's business. Mowing, planting, fertilizing and other activities all have their respective challenges to make sure

the magic circle stays closed. If the loop is completed, customers are happy and the industry builds upon its own success.

If the loop breaks anywhere along the line (generally this happens after project completion), the contractor's reputation and the industry's are at stake. As it relates to good compost, the magic circle depicts the need for us to correctly use high quality products capable of providing plant growth benefits.

There are many ways in which incorrect use of compost can break the magic circle. Contractors who use compost incorrectly may produce poor results. Or, they may not be using enough compost for the project at hand.

The magic circle covers projects performed by landscape contractors or do-it-yourself weekend gardeners. These weekend gardeners are becoming more prevalent as the gardening trend increases, but they too run the same risk as contractors in selecting the right product for the

right application.

How many potential customers are lost when negative experiences occur from either improper use or low quality of compost? It is hard to say, but the table on page 38 helps define negative experiences as they relate to products or services.

It is evident that both service experiences (product use issues) and product experiences (product quality issues) must be positive to hope for repurchases from customers. Even if the repurchase intent is about 85%, current customers would still be slowly slipping away at a rate of about 15% per year.

These lost customers must be replaced with at least as many "new" customers each year to keep the market the same. Thankfully, it seems that gardening is increasing everywhere we look, at a much higher rate than first projected. But first, compost producers need to take an oath of quality production.

When compost producers accept the production mentality mandated

COMPOST RESOURCES

The following sources can offer information and further guidelines on composting techniques, applications and economics:

The American Society for Horticultural Science

113 S. West St., Suite 400
Alexandria, VA 22314-2824
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This group sponsors two-day seminars on "Using Compost and Other Organic Products" at various sites around the country.

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by the compost factory paradigm, they will keep the magic circle fully closed, guaranteeing them a long-term, profitable market. It is in their best interest to produce only the best possible compost.

How do potential compost users know what to expect if they have never used compost? Contractors and their respective clientele will naturally compare results with what is standard or acceptable in the industry. They may also ask someone in their profession.

The consumer will probably ask a local garden center or extension agent. Although most extension agents have been extremely diligent to stay informed about using compost, it is the garden centers who need to be closely connected

to the information highway to make sure the magic circle stays intact for compost users.

WHO'S COMPOSTING? It seems that several kinds of participation are occurring throughout the green industry. Landscape contractors who still generate grass clippings and other yard debris often bring the materials back to "the yard" to be composted.

Unfortunately, unless the volumes generated justify purchasing a small tub grinder, they often do not grind the materials until a sizable pile is accumulated. At that time, they either rent a piece of equipment or hire a custom grinding operation to come to the site and process the material. Either way, the options result in costs of about \$4 to \$8 per cubic yard of debris, depending on the machinery used.

The common occurrence of a yard debris pile at the contractor's headquarters is now becoming more acceptable, but does not increase the aesthetics of his office grounds. In fact, an unprocessed pile could send negative messages to visiting clients who notice how their ser-

RELATIONSHIP OF PRODUCTS, SERVICE AND OVERALL SALES EXPERIENCE OF THE CUSTOMER

PRODUCT EXPERIENCE	SERVICE EXPERIENCE	REPURCHASE INTENT
Positive	Positive	85%
Negative	Positive	35%
Positive	Negative	12%
Negative	Negative	1%

Table 1

(Source: Tyler, 1995, after Stanley, 1994)

vice providers take care of their own landscapes.

KNOW YOUR COSTS. In many cases, contractors have opted to channel the yard debris to other commercial composters who already possess the equipment necessary to process the material immediately.

Tipping fees for this type of service are not normally as high as surrounding landfill rates, but can be significantly higher than the contractor may pay for processing the material himself.

It is important to include all the costs associated with each process

when considering what to do with all the green debris generated at normal landscape contracting jobs.

For instance, it is easy to leave out labor and management costs associated with processing materials at the contractor's yard, but these costs also have attached variables that must be controlled or problems will arise later.

One example would be grass clippings, which should be processed immediately. But if all the employees are in the field, clippings can be a particularly challenging variable to manage. Yet, they must be managed in a timely

manner.

Nurseries are beginning to compost many of their own green residuals, including culled plants and discarded soils from ball and burlap production. For nurseries growing larger stock like shade trees, again the issue of efficiently handling and processing these bulky brush materials becomes perhaps the most challenging issue relating to on-site composting.

Some nurseries use stumps and large brush for erosion control along edges of fields where forests have developed steep ravines. Although this is a good environmental strategy, there are only so many ravines to fill at each nursery and sooner or later, the problem must be faced.

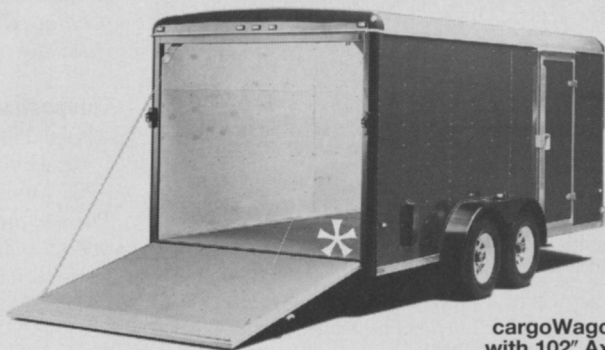
The majority of nurseries have mimicked landscape contractors by hiring grinding crews to come in and process large stockpiles of green debris.

An issue of quality concern usually arises for green industry companies who compost their own materials. For the operators who establish their own composting

(continued on page 42)

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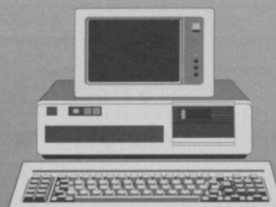
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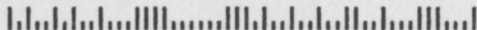
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9. Odds of winning will be determined by the number of entries received. All entries become the property of Lawn & Landscape Maintenance magazine and GIE Publishing Co.

10. By participating, you agree to these rules and decisions of the judges which shall be final in all matters relating to this sweepstakes.

11. To obtain the name of the winner of this sweepstakes, send a self-addressed, stamped envelope to "LLM Product Sweepstakes," 4012 Bridge Ave., Cleveland, Ohio 44113, Attn: Fran Franzak.

Compost

(continued from page 38)

operations, the compost itself is secondary to their core business. This means that many important items needed to generate a high quality compost may be overlooked during the busy season. Items like weed seed destruction may not occur evenly and when the compost is used in the future, it may become a source of problems for weed infestation.

It is clear that local composting facilities in partnership with the green industry have a lot to gain. Integrated programs offer collection of green debris in roll-off containers, semi-trailers

or strategically located drop-off sites to make it easy to participate. Some composting companies offer to place roll-off containers at nurseries, with the idea that the landscape contractor already comes there to pick up plants, so they might as well drop off their green debris at the same time.

WHO'S BUYING COMPOST? A recent study identified landscape contractors, nurseries and topsoil blenders as the first markets for products produced by compost facilities. In fact, the study also indicated that compost supply was not enough to keep up with demand in the top 12 urban markets in the United States.

"THE MAGIC CIRCLE"



The "magic circle" shows how the compost and green industries benefit each other.

Collectively, the green industry has the lion's share of the market for compost from private or public sites. Table 2 shows major programs around the country and originated from a study conducted by the U.S. Environmental Protection Agency, focusing on 30 "compost factories." Average price varies from \$5 to \$10 per cubic yard of compost.

FUTURE OPTIONS. As we look to the future to contemplate how and when the compost industry and green industry will in fact converge, we cannot help but wonder if this whole issue is somewhat ironic.

The same industry that generates a majority of organic debris in urban areas in the form of yard trimmings is also the industry that is willing to pay the most for high quality recycled organic products. It should be no surprise to learn about some of the programs offered which focus on providing education to both industries. It has been rewarding to finally see these two industries begin to work together toward a more common goal of environmental enhancement.

The compost industry is quite active in doing something about keeping the magic circle healthy. The Composting Council, located in Washington, D.C., is dedicated to promoting the development of composting and recently completed a "Compost Information Kit," which is available to anyone interested.

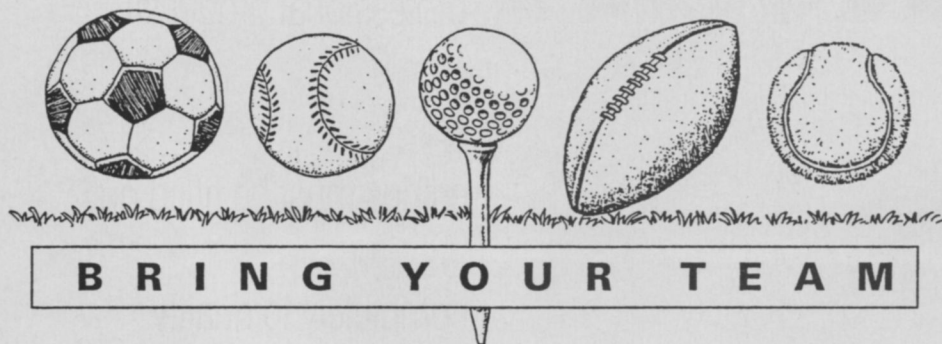
The kit includes a large wall chart about making, using and selling compost products and what a vendor should consider before building a composting facility. It also has a compost calculator, or slide rule, which shows how much compost is needed for various depths and for area measurements.

The Council is also promoting the magic circle by offering best practices training sessions to teach enterprising composters how to achieve that magical level of quality which all marketers dream about. The seminars provide technical insight into making compost and how to troubleshoot known pitfalls that have popped up on compost site failures in the past.

"Use guidelines" for the most popular compost uses in the green industry discuss using compost for flower bed preparation, as a garden

(continued on page 44)

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USE READER SERVICE #38

Compost

(continued from page 42)

amendment, as a mulch, etc. They are based on sound research and have a tremendous amount of science behind them.

There seems to be no better place to properly mix the compost industry with the green industry than at major theme parks, zoos and other highly attended public facilities.

The opportunities that could be created by promoting lavish landscapes installed with compost are

limited only to the imagination. The trend of "landscaping for entertainment" will surely increase, providing impetus for stimulating more retail demand and driving the magic circle around again. Hopefully, efforts to close that loop will keep the compost and green industries alive and prosperous. ■

The author is a Certified Professional Agronomist and free-lance writer residing in Medina, Ohio. He is employed by BFI in Oberlin, Ohio.

COMPOST/MULCH/END PRODUCTS

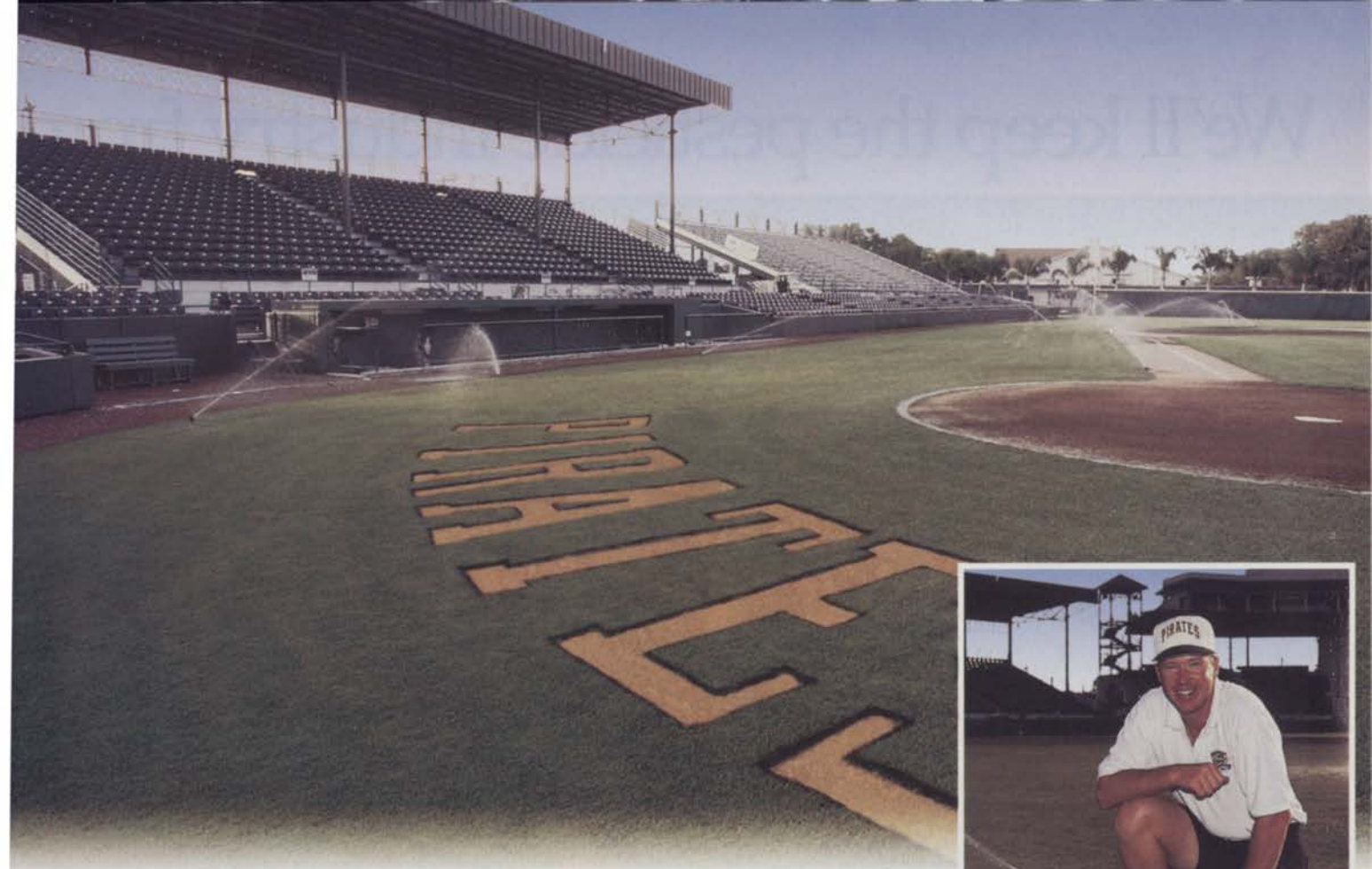
COMMUNITY	END PRODUCT	END USER
Akron, Ohio	Compost	Landscape, residents
Austin, Texas	Compost	Landscape, retail
Berkeley, Calif.	Compost, mulch	Wholesalers, nurseries, residents
Berlin Township, N.J.	Compost	Residents
Boulder, Colo.	Mulch	Residents, public facilities
Bowditching, Maine	Compost	Residents
Columbia, Mo.	Mulch, wild-life habitat	Residents, landscape contractors
Dakota County, Minn.	Compost, mulch	Residents, landscape
Fennimore, Wis.	Compost, farm application	Farmers
Hamilton, Ohio	Compost	Landscape, residents
King County, Wash.	Compost, mulch	Privately marketed
La Crescent, Minn.	Compost	Residents
Lafayette, La.	Compost for Public facilities	Public facilities
Lincoln, Neb.	Compost for land-fill, mulch	Landfill, landscapes
Lincoln Park, N.J.	Compost, mulch	N/A
Mecklenburg County, N.C.	Compost, mulch	Residents, landscape contractors
Monroe, Wis.	Compost	Residents, public facilities
Naperville, Ill.	Compost, mulch	N/A
Newark, N.J.	Compost, mulch	Rutgers Univ. urban gardening, businesses
Perkasie, Pa.	Farm applications, mulch	Landscapes, farms
Peterborough, N.H.	---	---
Philadelphia, Pa.	Compost, mulch	Residents, landscapes, public gardens
Portland, Ore.	Compost, mulch	Residents, landscapes nurseries
Providence, R.I.	---	---
San Francisco, Calif.	Compost, mulch	Retail and residents
Seattle, Wash.	Compost	Retail and wholesale
Sonoma County, Calif.	Compost	Landscape, residents, farmers
Tacoma Park, Md.	Compost, mulch	Residents, garden shops
Upper Township, N.J.	Compost, mulch	Wildlife habitat, county, residents
Wapakoneta, Ohio	Farm application	Residents, farmers
West Linn, Ore.	Compost, mulch	Residents, public facilities
West Palm Beach, Fla.	Mulch	Residents, landscape

N/A = Not available

--- = Not applicable

Table 2

(Source: Adapted from EPA 530-R-92-015, 1994)



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*Mike Hurd, Grounds Superintendent
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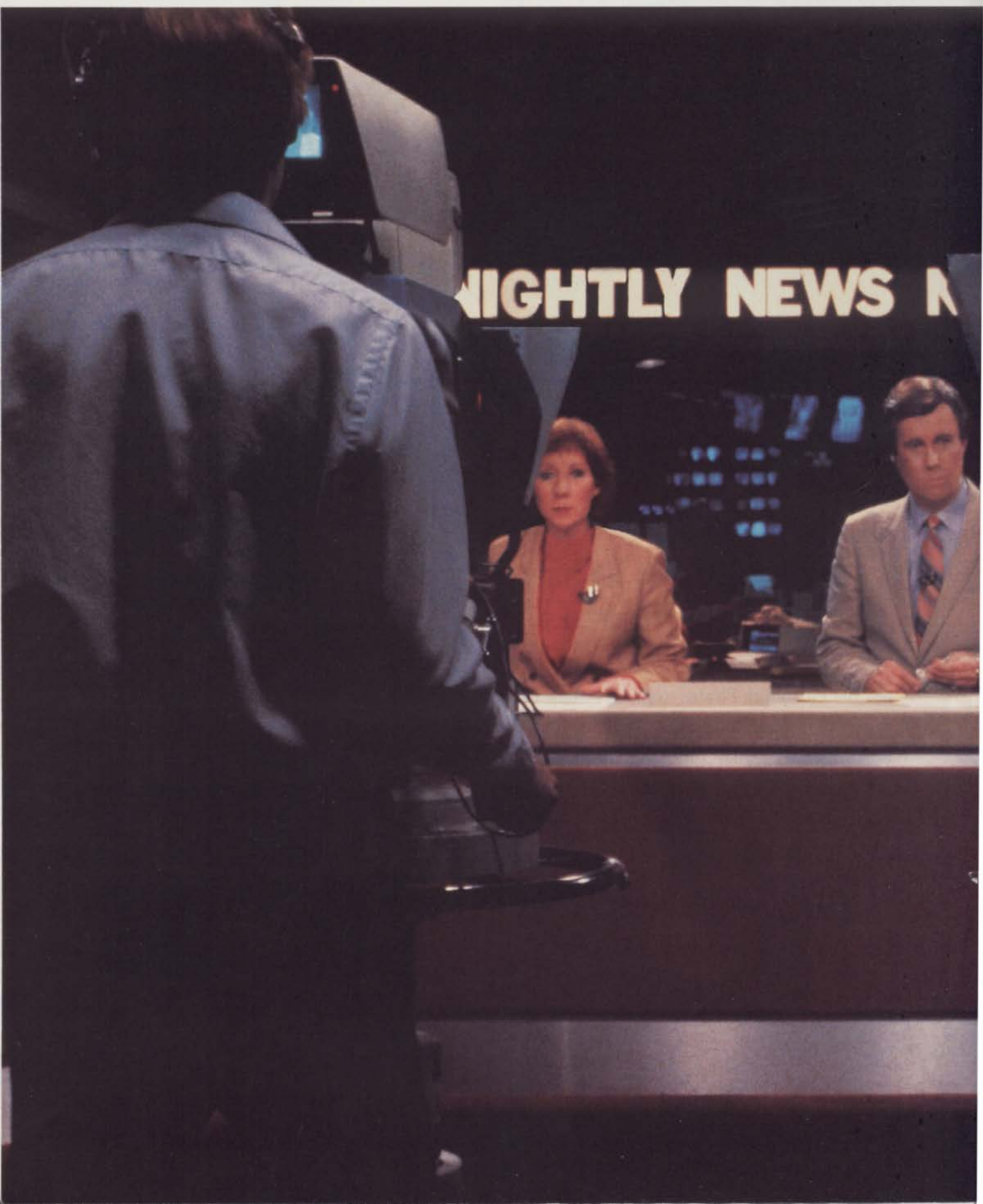
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Down And Out

In Seed Country

Low-yielding older fields and quirky weather in the Pacific Northwest added up to a less-than-expected grass seed harvest. With little carryover from last year, strong fall demand could create spring shortages.

By Paul Schrimpf

NEW YORK Yankee great Yogi Berra is credited with uttering the immortal phrase, "It ain't over 'til it's over." That just about sums up the 1995 seed harvest for many regions of the Pacific Northwest.

Every year without fail, Mother Nature puts a new twist on the harvest of grass seed, and this year was no exception. The winter was acceptable but not ideal, bringing mild temperatures and ample rains to much of the region. But just before and during harvest time, conditions ranged from heavy rain to scorching heat and dry wind, causing the harvest of many of the species to fall short of expectations.

"Early in the season, the crop was looking normal," said Don Herb, manager of Barenbrug USA, Tangent, Ore. "Then we had rains, followed by heat and wind, then more rain — it looks like all species, especially tall fescues and bluegrasses, will be down on production. The overall supply of turfgrass seed looks to be off by about 75 to 100 million pounds from last year."

Dennis Combs, president of Dennis Combs Agriculture Consultants, a seed brokerage in Lake Oswego, Ore., said his figures show a 14 percent decrease in the overall harvest, from 700 million pounds last year to about 600 million this year.

The high temperatures and windy conditions hindered pollination and reduced the number of viable seed heads in some species. The rains which followed the heat caused some shattering to occur as well. Shattering is the separation of the seed from the plant prematurely due to heat or heavy rain. When this happens, the seed

falls off the grass plant and is lost. Beside the weather, though, field conditions and low carryover from the 1994 harvest are heavily impacting the seed supply pipeline.

"Looking back on the harvest, I feel that even though the harvest weather caused us some tense days, it was not the major cause of the reduced production levels," said Ronnie Stapp, senior vice president of seed operations with Pennington Seed, Inc., headquartered in Madison, Ga. "Older (grass plant) stands and lower carryovers are more significant factors in the reduced supplies."

And there really isn't anywhere else to turn for seed, either. Besides low carryover, Europe, Australia and New Zealand are not seeing good yields by all accounts.

"Imported seed has not been an issue this past year, as Europe has turned into a net importer of seed from the U.S.," said Steve Tubbs, president of Turf Merchants Inc., Tangent, Ore.

STRAIGHT ECONOMICS. Of course, economic forces would dictate that low supply and high demand will bring prices on many species up, and many in the industry agree that seed will cost more this fall. Turf-type tall fescues, in particular, are estimated at costing up to 35 percent more due to a reduced number of acres and less than expected harvest. Tall fescues were overproduced for several years, which lowered the price and caused many farmers to switch crops.

"The acreage on tall fescues is down, and the yields are mixed," said Mike Robinson, president of Seed Research of Oregon, Corvallis, Ore., echoing the comments of most seed producers. "The average yield is off 20 percent, and there's little carryover — supplies will probably be tight this spring."

The most critical crop is turf-type tall fescues," said Stapp. "Some new acreage was planted in Oregon in the spring of 1995, which will begin producing seed in 1996. But it now appears that the production level of old fields is decreasing much faster than expected, so we may have a production acreage shortfall for the next two years or so."

Art Wick, vice president of research and development with LESCO Inc., Avon Lake, Ohio, said this is especially true with sod-quality tall fescue. "Due to an oversupply in 1990-92, many fields were plowed, the market prices plunged and, with that, grower prices also plunged. Until grower prices get back to a reasonable level, the acres needed to produce sod-quality seed will be scarce."

Bluegrasses also were reported in short supply, especially elite



varieties. Gayle Jacklin, assistant vice president of marketing with Jacklin Seed Co., Post Falls, Idaho, said she expects prices on proprietary bluegrasses to be up 10 percent to 15 percent over 1994.

"Bluegrass yields are spotty—it depends on where you are," said John Zajac, president of Zajac Performance Seeds, North Haledon, N.J. "Some were bad, some were okay. The varieties harvested later seemed to do well."

In eastern Oregon, Washington and northern Idaho, weather caused some damage to the proprietary bluegrass crop, according to Robinson. "Hot weather, high winds and a major hailstorm at harvest time caused some shattering—yields are off about 20 percent," he said. "Common bluegrasses are down, but it's unknown as to how much. The prices have gone up 20 percent in the last 30 days."

Combs concurred, saying his figures show a reduced harvest in bluegrass and 20 percent higher prices in the marketplace than 1994.

Despite yields of perennial rye-

grasses that are off between 10 percent and 15 percent according to most reports, the species continues to be the golden child for many of the seed companies.

Acreage is up, prices are steady and it has become the choice of many southern golf courses for overseeding in the winter.

"It's a firm market right now, and acreage is up quite a bit," Robinson concluded. "If demand is the same this year as last year, supplies should be fine. If fall sales are excellent, though, we could see higher prices and some shortages."

BARGAINING GROUP. Prices of ryes may also be affected by the formation of a new organization of farmers called the Perennial Ryegrass Bargaining Association. This group is trying to raise the market price seed companies are paying for this species, and has caught the attention of the industry, according to Tom Stanley, marketing manager with Turf Seed, Inc., Hubbard, Ore.

"About six to eight major seed companies are supporting the

group," Stanley said. "The growers are just tired of the seed companies beating them up on price."

Robinson said the growers account for only about 30 percent of all the perennial ryegrass in the market, but Stanley pointed out that the seed grown by these farmers is of higher quality, and are therefore commanding greater respect.

"They have enough of the market to be effective," he said, noting that seed growers are getting 3 to 5 cents more per pound.

Fine fescues are down in production from 10 percent to 15 percent because acreage has been cut back and aging fields have continued to lose viability. However, discussion about the market for this species evokes yawns from most seed companies.

"Nobody really cares," said Stanley. "Prices have been depressed, and the proprietary people have lost their business to the Canadian creeping red fescue market. They have cut production back, but it will be a while until the Canadian crop gets back in line with demand."

Estimated harvest of turf seed this year is 600 million pounds, 14 percent less than 1994. Credit: Turf Seed Inc., Larry Kassel.

Other companies reported a firming of the Canadian creeper market which, with lower fine fescue yields, could help bring prices up a bit. However, Wick explained that the domestic fine fescue crop is facing another challenge.

"Stem rust started affecting yields in 1993 and has become an ever-increasing production challenge," he said. "Increased use of fungicide applications appears to be the only solution, thus increasing production costs. This may widen the price gap between the commodity 'creeper' prices from Canadian production and the proprietary varieties whose production is still predominately in western Oregon."

Listed below are seed yield reports from various producers. This is not meant to be an all-inclusive list, but is a representation of the 1995 harvest:

Advanta Seed West, Albany, Ore. The overall crop looks average to slightly less than 1994, ac-

cording to Scott Harer, sales and marketing representative. "Adverse conditions with the bluegrass crop in Washington reduced yields, so we should see higher prices."

Fine fescue supplies are coming back to earth, with reduced acreage and aging production fields. "There's a good chance that fescue prices will stay at their current level. Turf-type tall fescues had an increase in acreage, but light yields. If the Kentucky 31 crop is anything like it was last year, prices should increase," he noted.

Harer said that Advanta expects good to excellent availability on all varieties and stable pricing.

Barenbrug USA, Tagent, Ore. Shortfalls in yields should increase the price structure across the board, according to Herb. Bluegrasses have increased about 30 percent so far, and could go up another 20 percent before the price peaks out, he said. Annual ryegrass prices are firming, with high demand and a lower than expected yield. Both tall and fine fescues are also expected to rise in price. Perennial ryegrass is underpriced and an excellent buy.



Overseas markets are not adding to the seed pipeline here, as weather problems have hampered yields in world markets in Europe, New Zealand and Australia. The United States will be shipping seed to these areas, causing further strain on the domestic supply.

Herb said that Barenbrug's supplies on tall fescue and Kentucky bluegrass will be adequate to short, while the perennial ryes are virtually sold out.

Lofts Seed, Bound Brook, N.J. A dry fall and weather problems during harvest impacted the overall harvest picture, which is down, down and down again. Tall fescue prices are expected higher with low

Europe, Australia and New Zealand will be net importers of seed, as yields are less than expected. Credit: Jacklin Seed.

quantities and no carryover, and perennial ryegrass also came in below average. Bluegrass harvests were spotty, with results varying depending on the region.

Lofts will offer new bluegrasses this fall that rated highly on National Turf Evaluation Trials, a new tall fescue and a *poa trivialis*.

Jacklin Seed Co., Post Falls, Idaho. The crop in eastern Washington and northern Idaho looks positive, according to Gayle Jacklin. An average to slightly above average harvest is expected, with the same number of yielding acres as 1994.

High quality sod seed on elite varieties may be short, Jacklin predicted, and prices on proprietary bluegrasses are up approximately 10 percent to 15 percent over last year's figures.

She also noted that limited carryover has had customers pushing for early shipments of seed, but the crop schedule is right on time. Across the border, Jacklin said an anticipated one million-plus pound crop of bluegrass might affect the market, but not until the spring.

International Seed, Halsey, Ore. Craig Edminster, director of research, said all varieties look to be off this year, including 20 percent to 25 percent for turf-type tall fescues. "The Willamette Valley production of tall fescue acreage is up in 1995 from 1994, but will represent less than 90 million pounds. The turf-type tall fescue market will be in cultivars adapted to specific regions of the U. S. vs. increased utilization across the country."

International Seed will be introducing six new varieties this fall, including two bluegrasses, a tall fescue, a perennial ryegrass and a seeded bermudagrass.

Pennington Seed, Madison, Ga. Record-breaking consumption for annual ryegrass and low carryover brought prices to near

(continued on page 52)



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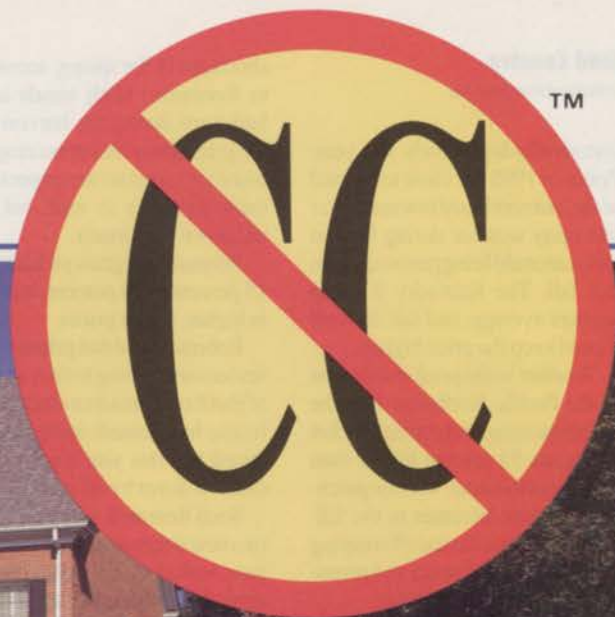
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Seed Country

(continued from page 50)

historically-high levels last year. Prices in 1995 are close to normal so far, but continued low carryover and rainy weather during harvest this year could bring prices up again this fall. The Kentucky 31 crop appears average, and fall demand should keep the price higher.

Weather in the production areas of the Pacific Northwest hurt the bluegrass crop, and current market prices are 35 percent higher than last year at this time, with the potential for more increases in the fall. This may force the use of creeping red fescues, tall fescues and perennial ryegrasses in its place.

He reported that low carryover and high demand have kicked up the price on perennial ryegrass 30 percent over last year, while turf-type tall fescues are up one-third, due to a reduction in acreage.

Seed Research of Oregon, Corvallis, Ore. Turf-type tall fescues look to be off about 20 percent in yield, which is resulting in substantially higher prices this fall and

shortages in the spring, according to Robinson. High winds and a hailstorm during the harvest hurt the proprietary bluegrass crop and common varieties are expected to come in lower as well, but it is unknown how much.

Perennial ryegrass yields are off 15 percent to 20 percent, resulting in higher, firmer prices.

Robinson said that prices on fine fescues are starting to firm as years of glut from Canadian creeping red fescue have eased, acres have reduced and this year's crop yields came in down by 20 percent.

Seed Research will be offering two new warm-season grasses this year, including a good quantity of seeded bermudagrass said to have excellent heat tolerance, and a seeded zoysiagrass in limited quantity this fall.

Turf Merchants Inc., Tangent, Ore. Elite proprietary bluegrass yields continue to be strong, but still cannot meet demand, according to Tubbs. After years of oversupply, underproduced and low-yielding turf-type tall fescues could increase prices 20 percent to 30 percent over

last year, and may be sold out as early as spring.

Tubbs also noted that growing demand for fine-textured perennial ryegrass is offsetting the supply being produced, which has doubled since 1991. Little carryover from a below average crop last year should push prices higher.

Poor yielding fine fescues in Oregon, along with the continued onslaught of Canadian creeping red fescue production, will keep prices very low on this product.

Turf-Seed Inc., Hubbard, Ore. Turf-type tall fescues and bluegrass harvests will be about 15 percent below average, while perennial rye results are middle of the road, said Stanley. Tall fescues were hurt by heat during pollination, while older fields failed to produce as expected. He said the lack of overseas competition has been positive for domestic producers.

"The U.S. had been a dumping ground for Europe, Australia and New Zealand, so it's nice to see that turned around."

Stanley reported tight supplies on new varieties of tall and creeping

red fescues available this fall.

Zajac Performance Seeds, North Haledon, N.J. Tall fescues did poorer than anticipated, especially on the top-ranking varieties, and little carryover from last year is available. Prices will be firm.

Perennial ryegrasses fared somewhat better, Zajac said, but high demand this fall will create shortages in the spring. Mediocre yields in fine fescues and bluegrasses could create similar situations for these species as well, although bluegrasses harvested later in the season did better and should improve the overall availability of the species.

Zajac said that his four tall fescue and four perennial ryegrass offerings will be sold out by spring, while adequate supplies of fine fescues and bluegrasses should be available through next spring. He warned: "Some companies operate under the 'just in time' theory may find themselves without seed unless they order early."

The author is Managing Editor for Lawn & Landscape Maintenance magazine.



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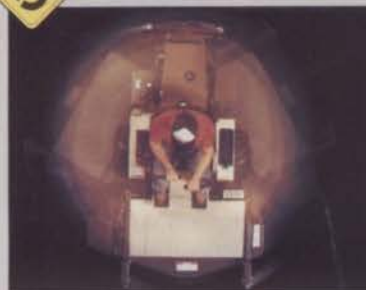
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USE READER SERVICE #36

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Big Trucks Help Make Big Bucks

From standbys to customized vehicles, manufacturers and the truck aftermarket service contractors' many needs.

By Bob Gitlin

THE CHOICE of the kind of truck to use for a lawn or landscape contracting business is critical and contractors have found a variety of standard and customized trucks to suit their very individual needs.

David Frank Landscape Contractors Inc., Germantown, Wis., dispatches 47 crews daily in five different divisions: design/build, maintenance, irrigation, interior-scape and snow. The company runs a body shop and painting operation in three shifts, five days a week, in the slower winter off-season.

This experience has given him a perspective that appreciates the basics. "You have to know what you want," he said. "We use trucks for all our needs. We start with the meat and potatoes—the basic models—then we customize each division's vehicles."

That customization can be on the fly. The same truck that hauls a crew and its mowers in August could sport a snowplow in February. Standard customizations at Frank Landscape are tool racks, removable sides and tie-down attachments.

Big trucks are a rough-duty need in the big lawn and landscape maintenance market and in allied fields. And a large part of having a successful truck fleet is following technology and getting good deals from dealers, manufacturers and custom shops. Zealous maintenance is another element needed for success.

CABS CARRY CREWS. "Most of our trucks have crew cabs," said



Big trucks can handle a wide variety of year-round landscape maintenance needs. Credit:

Mark Arrimour, owner of Pennink Arrimour Inc., Huntingdon Valley, Pa. Managers of the company prefer front- and back-seat models that take men off the truck bed where they can get jounced around.

"It's a standard design. We buy a dump stake body or regular stake body truck with a crew cab," he added. "The maintenance department uses them to haul trailers. We can put seven people in the cab."

The trucks average \$28,000 to \$30,000 in cost, he said. "We have

a few pickups that the supervisors use. We have some older models, also with crew cabs and stake bodies. These are strictly maintenance vehicles that pull trailers or have mowers in the back. Other crews use bigger trucks."

The company has five full-time mechanics. "Every truck comes in every 2,500 miles for an oil change, a brake check and other routine maintenance checks."

Arrimour noted that his main problems with trucks are automatic

transmissions and braking systems that slip after 50,000 miles, caused all the pulled weight.

The company has spray trucks that are larger and run on diesel, rather than gas engines. Also, their gross vehicle weight (GVW) is higher, at 30,000.

"The maintenance division will use the large cab models. Our installation division uses 7-man crew cab dump trucks at 34,000 to 36,000 GVW. We transport and dump soil,

mulch, anything," Arrimour explained.

His advice is that it all comes down to preventive—and frequent—maintenance.

Big trucks used in the industry have life spans ranging from a bare minimum of 125,000 all the way up to 300,000 miles of use.

"Our trucks occasionally need a transmission or engine. But regular maintenance is the key. Of course, we're fortunate enough to be able to afford a full-time shop," Arrimour explained.

Because the company relies on Ford trucks, the

shop is a virtual truck factory. "We do our own warranty work. Ford has it set up as a private warranty. We don't have to take trucks to dealers; we do it all in house. We have more than 50 trucks, so they were accommodating. We are a virtual fleet dealership. We fix it and submit directly to Ford for the warranty claim," he said.

Have manufacturers engineered new innovations of note for lawn and landscape contractors the last

(continued on page 56)

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USE READER SERVICE #50

Big Trucks

(continued from page 54)

10 years? "No." He laughed. "They haven't changed a whole lot. They've all got their problems. They don't seem to jump on them too quickly."

SPRAY RIGS. As president of Spring-Green Corp., Plainfield, Ill., Tom Hofer works for a company consisting of 85 franchises. And he is picky about both image and efficiency.

"We operate three company-owned operations ourselves," he said. "Our franchises still run old liquid tanker trucks, but we are transitioning

Trucks with large cabs can transport an entire crew and its equipment with ease. Credit: Truck Division, Ford Motor Co.

into new pickups and vans." He'll do liquid applications with those vehicles.

"The tank will be mounted in the pickup or van, which has its own pumping system," Hofer said. "We think a newer look is better. Cost is another issue. It costs more to build those big tankers than to buy vans or pickups. I know other companies are upgrading their fleets, too."

Spring-Green buys the parts, assembles them and resells the completed unit to its franchisees.

"We try to buy as standard a vehicle as we



can," he said, "with as little uniqueness as possible." Spring-Green trucks usually last at least 15 years, he said, noting that utility vans often wear out earlier.

Edwin McGuire, president of The Lawn Company in South Dennis, Mass., has all the concerns of another stalwart in the chemical lawn service business. He's partial to 1-ton trucks.

"The industry is getting away from the 1,200-gallon tank trucks ChemLawn originally started. We never used those. We've always used the 1-ton truck. They're flatbeds. We put on two or three tanks. We have multiple tanks, so we can carry different products at the same time and have greater combinations."

This versatility boosts his ability to implement the integrated pest management approach. "We also carry spreaders, dry materials and backpack sprayers."

McGuire buys the cab, chassis, bed, tanks, pumps, reels, regulators and hoses, and builds the final truck according to specific requirements. "And we build them all alike. It saves money, and we have the truck we want. We use good people in the winter offseason for this assembly work." He also uses the winter downtime to do maintenance on stricken vehicles.

"These people are good at installing plumbing systems and putting tanks on the trucks." The work is another part of the company's routine. "My guys are all experienced. It's routine. We've been doing it for 15 years," he added.

He eschews pickup trucks for his 60-unit fleet. "We've tried using pickup trucks and we have eight or 10, for service work. But as far as the daily production work, we need to carry three tanks, the reels, maybe three-quarters of a ton of dry material and a spreader. We have the trucks as uniform as possible and everything is wired the same. Everything looks the same." This way, one person from one branch to another, is using the same brakes, compressor, etc.

It cost McGuire \$28,000 to build each 1-ton flat-bed unit.

PRACTICAL MAINTENANCE. David Morgan, maintenance supervisor at Lawn Master Inc., Pensacola, Fla., likes Ford trucks. His company applies materials from the backs of the trucks.

"We have a couple of trucks with 300-gallon tanks on the back, with a pump and a motor. We fill it up in the mornings with liquid fertilizers and go to our customers' homes and pull the hose out to spray the lawn with liquid fertilizers and nutrients," Morgan said.

(continued on page 60)

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TopKick

THE STRENGTH OF EXPERIENCE

Big Trucks

(continued from page 56)

The company does its own maintenance with a mechanic well versed in tuneups, clutches, brakes and alternators. "If something comes up that requires a computer, we take it back to the dealer," he explained. "But we do all of our own work on our little pumps and motors. We overhaul them and run them as long as we can, then we take them to the machine shop to get sleeved."

Lawn Master uses a stringent maintenance sheet for organization.

"We have the driver check maintenance every month. The driver checks the air in his tires and his oil, turns indicators and the main and backup lights. He carries everything in safety equipment, including a fire extinguisher has got to work. If he should have a spill, he's got to have some absorbent."

At weekly meetings, the team goes over signs of mechanical problems.

"We're always talking about truck safety and driver safety here," Morgan said.

Chemical lawn applications require practical truck designs that accommodate different materials.

Like McGuire, Morgan is a customer of Graham Lawn Equipment, Atlanta, Ga., a custom supplier and a venerable fixture to the industry. But while McGuire has the parts shipped, Morgan has Graham put the whole shebang together and drive it to his door six weeks later.

"It's great," Morgan said. "The supplier gets the tank, the motor and the pumps. He puts together a perfect little used truck for our specific needs."

FLATBED OPTION. Mike Summers' Gradco Inc., Birmingham, Ala., began as a grading contractor and later added lawn services, which have blossomed. He now uses 26 trucks and employs 107 people.

"We have six pickups we call

support vehicles for our foremen. Our biggest trucks are two 30,000 GVW flatbed dump trucks. We usually run flatbed dump trucks. We're trying to get under 26,000 GVW.

"I have a problem finding qualified drivers who know something about landscaping," he noted. "We pay drivers \$8 to 10 per hour. They can work for a cement company at

\$12.50 to \$14 with benefits that I can't offer. At under 26,000 GVW, I don't need commercial drivers' license drivers. I get around this."

Most of the heavily traveling fleet is diesel, except for one gas burner. "Diesel takes more abuse, it's cheaper to operate, and you get longer life," Summers opined. "We run our trucks an average of six years before we trade them in. Us-



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ally, they've got a quarter of a million miles on them."

While the company runs flatbed trucks to haul landscape materials, tree overhangs more than three to five feet from the truck are illegal in Birmingham. This means using larger trucks to avoid large overhangs. "We need big bed trucks. Our dump trucks allow us to haul more, haul those trees legally and haul more volume," Summers explained.

Engineering changes he'd like to see include more crew cabs. "That's the way the industry is going. We're getting away from 2-door and into 4-door trucks, because of OSHA." The Occupational Safety and Health Administration is lighting a fire under truck operators to get men off the back and into the cab, wearing seatbelts.

"It's already started in Atlanta and it's coming this way," Summers said of the tightening federal scrutiny. Maintenance is performed

every 30 days at Gradco by full-time mechanics.

MANUFACTURING ANGLE. Dewey Holland, F Series marketing plans manager at Ford Motor's Truck Division, believes lawn and landscape maintenance people are a prime example of a rough-use sector. Those buyers would be after heavier duty models, at least over 8,500 GVW.

"A lot of them use 4X4s, primarily because the trucks do double

duty in winter," said Holland. "Traditionally, if they're going to be bringing the mowers around, they'll use a trailer. Often they use the trailer so much they need the higher GVW trucks in many applications."

Standard trucks accommodate smaller tools in bed compartments. "A low ramp trailer lets you drive up and down with your tractors and mowers. Then you put shovels and rakes and other implements into the back," Holland explained.

Truck manufacturers sell a sig-

nificant number of chassis cab vehicles to the lawn industry. These models are the basic pickup truck without a box on the back.

An industry standard governs straight-rail chassis cabs, Holland said. Aftermarket converters either use a large flatbed with a high-cube box if the user is concerned about security, or a 500-gallon tank.

"They're moving up in GVW and starting to play around in the medium truck market," he said of lawn service customers. "Because

500 gallons may be low; maybe they want 1,000 gallons. That's 8,000 pounds of fluid."

Customizers in the downstream aftermarket will buy a frame such as the chassis cab, and then the engine, Holland added. "Then they put on their own components. They put their flatbed on and they put an air compressor on the back. They do a power takeoff of whatever type

(continued on page 64)



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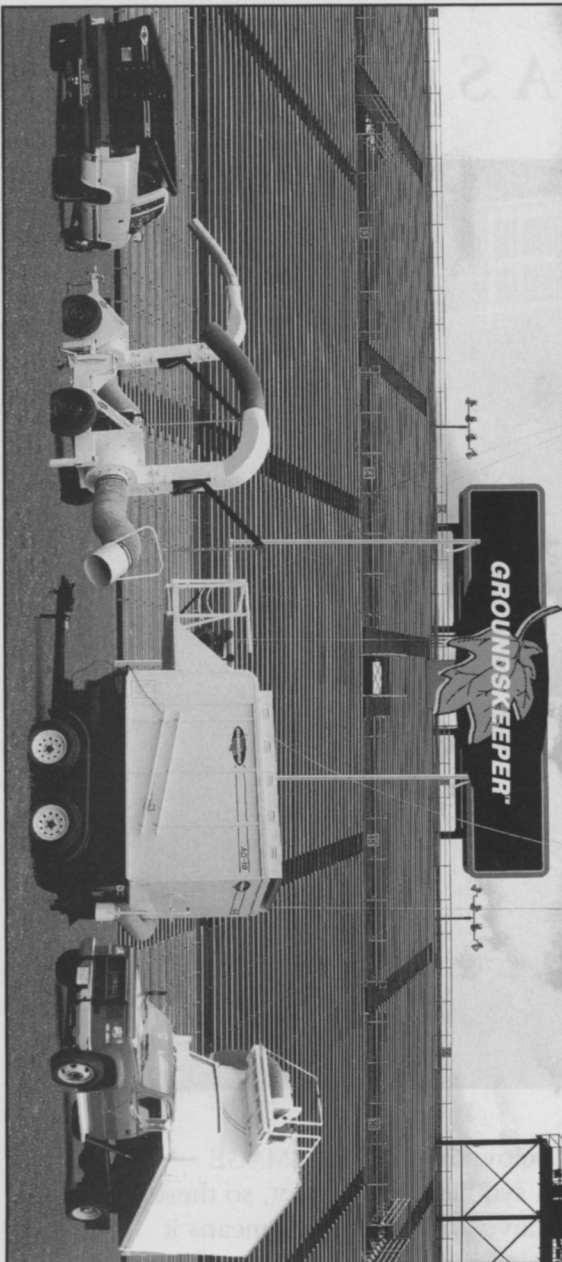
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The Groundskeeper line (from left): Dump "E" hydraulic dump body; AM-23 & AM-30 "low-behind" units; trailer-mounted AG-18; flatbed-mounted FRP



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Big Trucks

(continued from page 61)

they want. We give them the PTO off the transfer case, transmission, or front-end drive. Some put cherry pickers or lifts on the beds."

Lawn service buyers tend to underestimate GVW and the need for diesel, he said.

"Gasoline's cheaper, for sure," Holland pointed out. "But diesel will get you 80,000 more miles, probably, and pay for itself in fuel economy. Also, if you're going to do extensive idling, a diesel can't be beat. It won't overheat. It'll idle forever."

Customers using PTO units for sprayers or generators have followed a trend towards diesel. "They can just step up the idle and let it go 10 to 12 hours a day, with very little fuel costs," he said.

CUSTOM VERSIONS. Max Graham of Graham Lawn Equipment Inc., Douglasville, Ga., got into lawn care in 1972. He worked for ChemLawn when it had a mere 30 people. Now he's a premier aftermarket agent for spray rigs.

After going from route man to R&D at ChemLawn, he went into business for himself, seeing a need for people in vehicles in that industry. He ran a lawn service business because he wasn't sure the other business would take off.

Graham dropped out of the lawn service business in 1978 to concentrate on his growing aftermarket operation, taking with him knowledge of a lawn service manager's needs. He may reinstitute his lawn business which, while diversifying his roughly \$2 million annual operation, would also provide convenient testing for his equipment.

"Nobody did this kind of custom build when I got in," he said. "I do spray equipment mainly. It doesn't

matter if it's a 1,200- or 1,500-gallon unit, we find out what the customer wants."

Often the customer will have the manufacturer ship the truck to Graham for his aftermarket work.

Most of the trucks Graham has built in the past have been in the 1-ton range, he said. "We have trucks that go up to the larger sizes and we have ones that go down to the smaller sizes. We don't try to determine what the market wants or have an assembly line product."

The customer tells Graham what kind of spraying will be done and how much volume is expected.

He explained the process: "We

The Occupational Safety and Health Administration is lighting a fire under truck operators to get men off the back and into the cab, wearing seatbelts.

try to get as much of that information as we can. Then we can write up a specification that will cover his needs as best we can. We'll give a price quote based on the specifications. Sometimes, the contractor will say he needs to scale back."

No matter how vital the right truck can be to a business, it's still a matter of economics and it's still a balancing act. "What somebody wants may not be what he can afford, or what he's willing to pay," Graham noted.

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

Many contractors start with a flatbed truck and add components as needed. Credit: Ford Motor



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Basics of Micronutrients (Part 1)

Iron Builds a Healthy Foundation

Iron is the most common micronutrient, yet soil conditions may limit its availability to plants. Adequate levels ensure green, lush turf and ornamental plants.

By C. Neal Howell



Roses (above) and gardenias (below) both show the characteristic leaf chlorosis (yellowing) associated with an iron deficiency. The problem can be corrected by managing soil compaction, moisture levels, pH levels and other soil materials keep iron from being available to growing plants.

MICRONUTRIENTS — are they really necessary or do we need them like a goat needs a trombone? Do you suspect that iron, manganese, zinc and all the other elements are merely just another load of fertilizer? Rest easy.

If you've been using micronutrients, you haven't been wasting your hard-earned cash.

To date, micronutrients have not had the kind of research done on N-P-K fertilizers. While some outstanding research has been done on iron, little attention has been paid to the other micronutrients. The current thought seems to be that micronutrients are necessary, but not fully understood.

To help lawn and landscape contractors bridge that gap, this three-part series will explain the why, how and when of micronutrient use. The first installment will discuss the use of iron on turf and ornamentals. The second will consider manganese and zinc and the third will review boron, copper and molybdenum.

MICRONUTRIENTS' ROLE. Micronutrients are among the 16 essential elements required for plant growth and reproduction. These elements include: carbon, hydrogen, oxygen (which are free elements) and nitrogen, phosphorus, potash (the primary elements).

Secondary nutrients include calcium, sulfur and magnesium, plus the micronutrients—iron, manganese, zinc, boron, molybdenum and copper.

While the major and secondary nutrients provide the basic building blocks for cell reproduction,

water transportation and root development, the micronutrients provide for the synthesis of chlorophyll and complete other major plant functions.

There has long been speculation that chlorine is also essential to plant growth, but no one has been able to demonstrate its essential nature outside of the laboratory. Most scientists agree that the chlorine from muriate of potash (potassium chloride), chlorine contamination from the air or the chlorine content of treated drinking water can supply this element in amounts great enough to satisfy most plants, so let's avoid that debate.

Scientists may have proved that plants need micronutrients to grow, but how do you know if your plants and turf need applications of micro? You can't ask a plant to stick out its tongue and say "A-H-H-H."

SMART DIAGNOSIS. Make yourself the expert in case a customer thinks the turfgrass is "looking a little peaked" or, heaven forbid, if a neighbor's yard is greener than the one under your care. Plants will give visual clues to their needs but you must know the clues and know what the plant is trying to tell you.

Since micronutrients cannot be readily translocated (or shifted from leaf to leaf), plants will tend to demonstrate a lack of the element through leaf chlorosis (yellowing) or unnatural growth patterns. These symptoms generally appear on the areas of new growth.

Speaking of rules, there is only one rule in plant nutrition. This rule is absolute; it's right 100 percent of

(continued on page 68)

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With the development of TURFGO® FeATURE™ by "Ironman" Neal Howell, turf managers have a better way to build the deep green turf they dream of. A single application of FeATURE™ normally results in notable green-up in 12-48 hours.

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FeATURE™ can also lower the pH of alkaline spray water, thus increasing the effectiveness of pesticide applications.



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Micronutrients

(continued from page 66)

the time. The rule is: "There are no absolute rules in plant nutrition."

Remember it. Don't ever say, "I'm 100 percent positive that this is the problem." If you are wrong, you may lose a very large chunk of business if your cure for that problem doesn't work.

Chances are, though, if you see a plant that looks like the one in the photo below, you can successfully diagnose the problem as a micronutrient deficiency.

IRON IS BASIC. Iron is essential for the synthesis of chlorophyll in plants, but it is not a part of the chlorophyll molecule. Iron also activates several systems in the plant such as photosynthesis, respiration and nitrogen utilization.

The lack of iron in soils is not generally a great problem since it comprises about five percent of the earth's crust. In fact, the micronutrient iron is the most abundant element in the soil.

The problem is that iron can be

Micronutrients are not mobile and are usually found on the new growth areas of turf and ornamental plants.

rendered unavailable to plants due to a number of factors, which are listed below:

1. pH levels. Iron is least available at a soil pH of 7.4 and above. Iron deficiency may also occur in acid soils that are too low in total iron.

One of the chief reasons why iron is unavailable for plant use is adverse soil pH. For example, with iron, each unit increase in the pH from four upwards causes a 1,000-fold decrease in the availability of iron. From a soil pH of 5 to 6, another 1,000-fold decrease occurs. From 7 to 8, another.

In many cases, the prime culprit in turf and ornamental problems has been an out-of-balance pH. Most times, ornamentals are easier to read than turfgrasses, due to the

size of the leaves involved and the plant's growing habits.

A major problem with ornamentals is that they are often planted as foundation plantings around the perimeter of buildings. Those buildings may have concrete foundations which, as they weather, produce free calcium which raises the soil pH and effectively blocks the uptake of soil-supplied iron.

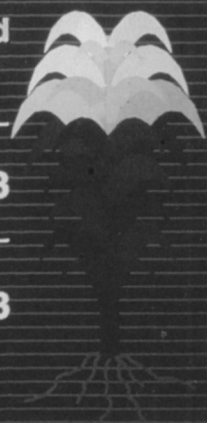
The best way to diagnose these

Affected Leaves

Micronutrients or Trace Elements Are Not Mobile and Deficiency Symptoms Are Generally Found on New Growth or Upper 1/3 of Plant.

1/3

1/3



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with a pH imbalance. Water used for irrigation that also contains bicarbonates is often a problem.

Plants in highly-limed soils can exhibit iron chlorosis, since calcium seems to have an antagonistic reaction to iron.

3. Excess amounts of other metallic ions. The uptake of iron is often blocked in areas where soils contain excessive amounts of cobalt, copper, zinc or manganese.

4. Moisture extremes. Poorly drained soils are very prone to poor iron availability. Plants suffering from drought cannot fully use iron.

5. Compaction. Lack of oxygen to the root zone of plants often produces iron chlorosis.

6. High phosphate levels. Phosphorus has an antagonistic reaction with iron and can block its availability in areas where high-phosphate fertilizers have been used for extended periods of time. Iron chlorosis can be very prevalent in these areas.

7. High nitrogen levels. High nitrogen levels can produce stress in plants where soil is low in iron, resulting in chlorosis.

8. Lack of zinc. In many western and midwestern areas, low zinc levels can prevent maximum iron utilization.

9. Lack of manganese. Utilization of iron has been improved in many areas, particularly in Florida, by adding manganese to the soil.

10. Areas with exposed subsoils. In many cases, leveling or contouring soils strips away the naturally occurring iron, leading to plant chlorosis.

11. Low potassium levels. Low potassium levels can hinder iron movement within plants.

LOOK FOR DEFICIENCY. What are the symptoms of iron deficiency? The first is a general lack of green color in the plant. Often, veins in the plant appear to be green while the areas between the veins fade into a yellow color. This deficiency is referred to as interveinal chlorosis.

In severe cases, the entire leaf can turn yellow or almost white, due to a lack of chlorophyll. Again, this chlorosis usually occurs on new growth in plants.

Remember, chlorosis may ap-

pear on lateral, as well as vertical plant growth.

The second major symptom of iron deficiency is that the plant may appear to be stunted and often does not have as strong a root system as nonaffected plants.

Iron deficiencies will generally occur in small patches scattered throughout landscape areas. Only in the most severe cases will large areas be affected and, even then, the chlorosis will appear worse in some areas than others.

IRONING YOUR PLANTS. If you have plants that are exhibiting iron chlorosis or you don't think the turf is green enough, what should you do?

Try ironing your plants.

The following are national manufacturers and distributors of iron micronutrients.

PBI Gordon's David Austin, manager of field research and development, feels that liquid iron products play an important role in plant nutrition.

"Our liquid iron, Ferromec AC, has proven in the correction of iron

chlorosis throughout the United States. The fact that it can be tank mixed with amine herbicides makes it easy to apply with other products, thus saving the cost of a separate application," he explained.

"For applications to high pH soils," said Jimmy Johnson, marketing manager for Ciba Geigy's turf and ornamental division, "there is Sprint 138. This product uses an iron-specific chelate, EDDHA, which works well on soils with pHs of 8.0 and higher. We've changed the label of our other iron product, Sprint 330, to make it more user friendly for turf and ornamental applicators.

"Instructions for spoon feeding or frequent sprayer application make it easy to use and the new 50-pound drum packaging makes our products economical," he added.

Another major supplier of iron products to the turf and ornamental field is United Horticultural Supply. Terry Boehm, business manager, explained: "Our FeATURE micronutrient line is the new generation of chelated iron products. It supplies sulfur, magnesium and man-

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ganese, as well as iron. Our customers feel that it corrects micronutrient deficiencies for both turf and ornamentals. Since it is amine-compatible, tank mixing with other fertilizers and pesticides is a common practice."

Roots-RGB Labs agronomist Bryan Smithling said that its proprietary iron product, Iron Roots, "features a patented phosphate citrate iron chelate which provides a stable tank mix pH of 6.0 to 7. This enhances the mixing of iron with herbicides, fungicides and fertilizers without problems sometimes associated with other products. It is easily absorbed through the roots as well as through the foliage, which helps maintain a dark green color without using excessive amounts of nitrogen."

LESCO Inc. offers a line of micronutrients containing iron and manganese for turf and ornamentals. Its Chelated Iron Plus product is also amine-compatible.

As with any products, there are tradeoffs with costs, performance and compatibilities. There is no iron product appropriate for all ap-

plications. There are some products that perform well at moderate cost, but none that perform best at lowest cost. The old axiom of "There's no such thing as a free lunch" pretty much says it all.

NOT JUST CORRECTION. Even turf and ornamentals which have not been diagnosed with deficiencies can benefit from iron applica-

areas not diagnosed as deficient.

Dark green color is the key. Whether your turf is chlorotic or your customer just wants extra green, iron can help achieve results without the growth associated with high nitrogen regimes. University research has also shown applications of iron have helped to reduce the incidence of summer diseases and increase root growth.

Iron applications work best in early fall to help strengthen the plant for winter.

Research has shown that late fall iron applications can aid in preventing winter kill and can extend color far beyond usual dormancy. Fall applications can also promote earlier spring green up and reduce nitrogen rates.

Spring applications of iron may be tank mixed with fertilizers and pesticides to enhance spring and early summer color. Iron applications at any time can allow reduction of nitrogen rates without a loss of color or promoting high growth rates. Early summer applications can reduce the incidence of disease as well as summer dormancy.

Iron definitely has a place in your fertilizer program. With a minimum of expense, it can provide maximum green while helping you increase the number and quality of your services.

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

Dark green color is the key. Whether your turf is chlorotic or your customer just wants extra green, iron can help achieve results without the growth associated with high nitrogen regimes.

tions. While researchers in more than half of the states have reported evidence of iron chlorosis in turf and ornamentals, there seems to be excellent color response even in

Iron can satisfy a customer requesting a callback because the rapid color response provides a significant indication that something has been accomplished.

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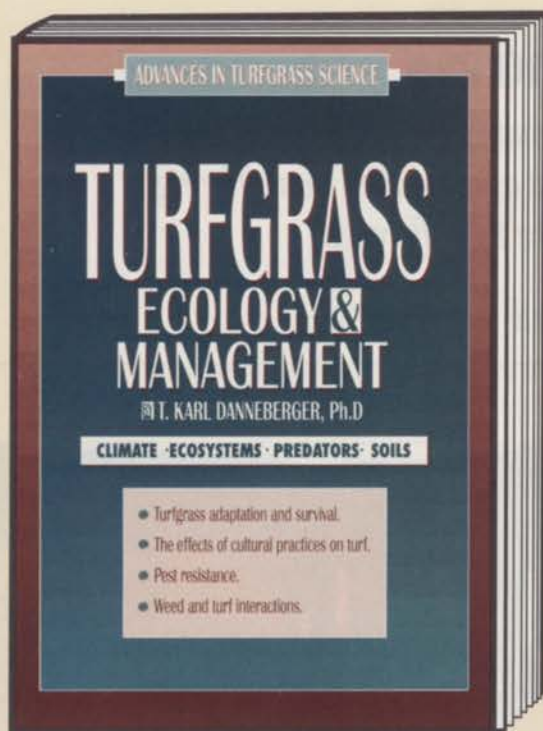
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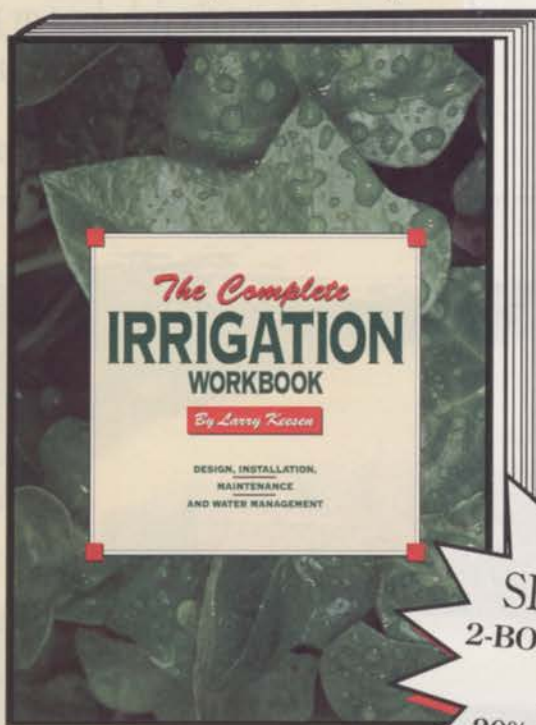
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Taking the Bite Out Of Snow Removal

When the busy snow season hits, no contractor seems to have enough equipment to get the job done as fast as customers want. The right tools and good communication make the difference.

By Barbara G. Howell



Snow removal services can be an important factor in establishing a successful year-round contracting business. Credit: Grasshopper

IT'S COLD, TIRING work. It's a high stress time for crew and managers alike. It asks the most of equipment under the most trying circumstances.

Many contractors shiver at the thought of snow removal work, but it can be managed well with the right equipment. Five types of snow removal equipment seem to be required to make operations move at their peak: a plow attached to a skid loader, a pickup or dump truck; a snow blower; several shovels; a spreader for deicers; and communication equipment.

To push snow from large areas like parking lots in shopping centers, office parks and apartment complexes, contractors choose

snow plows on the front of their pickup or dump trucks. Although a few dedicate trucks specifically for snow removal, most contractors, like Mike Rorie, president of Groundmasters, Cincinnati, Ohio, believe in making use of equipment year-round.

"We buy trucks to serve our needs 52 weeks of the year. Our 1-1/2 ton dump trucks work during the season, fit 9-foot snow plows and can carry five tons of salt. They can apply salt simultaneously or do the two jobs separately," he said.

John Allin, owner of Allin Companies, Erie, Pa., has some trucks he uses just in the winter. With up to 230 inches of snow each year in Erie, Allin explained that removal is big business for him. He "gets

SNOW EQUIPMENT ROUNDUP

Toro™ single-stage snow throwers offer from 1,000 to 1,700 pounds per minute capacities, clearing widths to 20 inches and throws to 30 feet. Two-stage intermediate models clear up to 1,500 pounds per minute with a clearing width up to 24 inches and throws from 25 to 30 feet. Power Shift™ snow throwers allow wheels to be shifted from back to front, doubling front weight to handle up to 2,300 pounds per minute.

Circle 1 on reader service card

Walker mowers have a variety of snow removal attachments such as a 42-inch two-stage snow blower, a 47-inch rotary broom and a 46-inch dozer blade. A new operator soft-cab features a hinged door, glass windshield, electric windshield wiper and headlights. All attachments install quickly after removing mower deck using two hitch pins and a sliding driveshaft connection.

Circle 2 on reader service card

John Deere large-frame snow blowers in 8- or 10-hp sizes clear as much as 32 inches in width. Both have spiral augers with serrated cutting edges and differential locks for better traction. Rigid, embossed side panels prevent flex when plowing through hard drifts. The 230-degree rotation discharge chute directs snow in any direction up to 35 feet.

Circle 3 on reader service card

Swenson Spreaders™ for pickup and dump trucks measure as much as 8 to 17 feet long and can hold between 1.8 and 3 cubic yards of material. Features include adjustable speed and feed gates, electric start operated from inside the cab, adjustable spread width and electric throttles.

Circle 4 on reader service card

Melt Man® Plus ice melter from **Lange-Stegmann** is said to melt ice at temperatures below 0 degrees F, does not contain salt and leaves no chalky or oily residue on landscapes.

Circle 5 on reader service card

Cub Cadet's six snow thrower models range from 3 to 10 horsepower. The single-stage model features a 2-cycle engine and rubber-edged auger to clear a 21-inch path. Two-stage units have 4-cycle engines and steel-serrated edge augers to break through ice. Other models feature push-button electric start and a halogen headlight. The wheel-propelled 10-hp model clears a 30-inch path.

Circle 6 on reader service card

Kubota's front snow plow blades are available to attach to the front of Kubota B and L series 10- to 40-hp lawn and garden tractors to handle a variety of snow and drifting conditions.

Circle 7 on reader service card

Two snow blowers from **Jacobsen** work with the Turfcut® and HR-5111™ rotary mowers. Turfcut snow blower handles 120 tons per hour with a 52-inch width. A 62-inch wide snow blower with hydraulic drive is available for the HR-5111. Both use a quick hitch system for fast and productive conversion.

Circle 8 on reader service card

a lot of life" out of the snow trucks and that's an advantage with their heavy use.

"You can get 10 years out of a truck and plow if you take care of them and use them right. Of course, since you spend as much time in

reverse as in forward gears, it's hard on the transmissions. Expect two or three years between transmission changes," Allin observed.

BRAND LOYALTIES. Allin swears by Boss snow plows for his trucks.

Flexible bristles of **Sweepster's** Power Sweepers bend over raised areas and reach down to remove light snow as well as heavy slush or melted snow before it freezes. They mount to all popular commercial turf mowers and utility vehicles. Model C™ is powered from the mower's front PTO and the sectional brush mounts to the mower arms.

Circle 9 on reader service card

The **Steiner** SB348 snow blower has 190-degree chute rotation with fingertip controls and a 14-inch diameter auger feed. Two-stage blower offers a front-mount quick hitch system and adjustable skid shoes.

Circle 10 on reader service card

Excel's 60-inch V-blade and 54-inch snow thrower make the Hustler mowers multiseasonal. Blades can be hydraulically angled to clear sidewalks as fast as the ground speed will allow. Front-mounted snow thrower has an adjustable spout and clears snow to two feet deep.

Circle 11 on reader service card

Snapper's 3-hp single-stage snow thrower has a steel housing to cut through banks created by snow plows. The 30-inch, 10-hp blower offers single lever control, electric start and headlights for night use.

Circle 12 on reader service card

Hiniker's snow plows measure up to 8 feet to fit full-sized pickup trucks. Quick-hitch mounting system speeds equipment changes and is said to reduce wear on the mountings.

Circle 13 on reader service card

Welded steel construction of **Grasshopper's** snow thrower provides heavy duty wear and no-clog operation in deep snow. Operator controls the discharge spout to throw snow up to 20 feet away. Design features include a high-speed auger, PTO drive and built-in scraper blade.

Circle 14 on reader service card

Grotech's Model TGS 100 tailgate spreader has a swing-away design that lets users remove one hinge pin, swing out the spreader and use the tailgate. Adjustable rails fit most pickup truck widths and low-profile hopper gives rear window visibility. Features include a thermoplastic hopper with stainless steel throat liner and in-cab speed control.

Circle 15 on reader service card

Model SB7038 38-inch snow blower and 54-inch front sweeper attach to **American Honda Power Equipment's** commercial mid-size mower power units. They are built for heavy duty use in wide open and confined landscape and sidewalk areas.

Circle 16 on reader service card

The UniMount® plow from **Western** is designed for quick and easy removal after plowing. The system uses four pins and two electrical plugs to attach or remove the plow from pickups and other maintenance vehicles. Commercial plows use a shock absorber on the blade for smoother operation and longer wear.

Circle 17 on reader service card

He maintains they are built for heavy snows. The key element for Allin is the switching assembly inside the cab. He likes rocker switches instead of toggle or T-bars because rockers can be operated with the left hand, leaving the

driver's right hand free to shift.

The brand of snow plow is a matter of individual and, often geographic, loyalties. Some contractors swear by Western plows; some use Myers. In the Northeast, many contractors use nothing but Fisher plows.

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USE READER SERVICE #83

Several mower manufacturers make snow removal attachments that speed the work and keep crew members protected. Credit: Walker

A major factor is not so much the quality of the plows themselves, but the quality and service from the individual dealer in a region. Most contractors also agree they keep the same kind of plows for interchanging parts.

The availability of parts, as well as the ease with which equipment can be repaired, is a key for all snow removal contractors. While some fabricate blades for trucks or skid loaders, many contractors fabricate parts in their shops late at night when dealers are not open. When a piece of equipment breaks down, the working "window" doesn't change.

The window is the time contractors have between the snow "trigger point" — when the snow depth reaches an appropriate depth to require removal — and the morning rush hour. Often, the window of eight hours for a snow that begins at midnight is compressed if a snow begins at 3 or 5 a.m.

The window can never be long enough — customer expectations don't change, just the time to accomplish them.

Peter Hyland of Hyland Brothers Lawn Care in Fort Collins, Colo., said that is how his company determines its snow equipment needs.

"You have to have something sitting in the shop not being used in each snowfall," Hyland



explained. "You don't want it all out in any given snow. In case something breaks down, you've got to have a backup, something you can bring out and make do with to get the job done."

In addition to blades on trucks, many contractors also use angled or V-blades to move snow off sidewalks and paths. Sometimes these blades are attached to skid loaders. Others use snow blades attached to mowing equipment.

Whether they plow with blades on pickup trucks, dumps, loaders or front-end loaders, contractors are often asked to remove the snow from parking lots. This practice varies according to region and design, as does the trigger point for snow plowing. Some contractors rent land to dump plowed snow; others find that lots in their areas are designed with a few extra spaces left over to put the piles of pushed snow.

LIQUID SALT DOES DOUBLE-DUTY

SALT. WHAT A HASSLE. It's costly, messy and often ineffective at low temperatures. But you have no choice, right? Maybe you do.

John Allin of Allin Companies in Erie, Pa., has used his unique situation to help solve his salt problems. He spreads liquid salt.

Erie is near the birthplace of the American oil industry. Because of its proximity to so many oil wells, Allin discovered an inexpensive and more effective salt product.

Actually, the "liquid salt" he uses is available in three ways: one is as a by-product of a process called "fracing." Salt water is pushed into the oil and natural gas wells to clean them out and the by-product, a salt brine, can be recovered and reused. Liquid salt is also available from salt wells like those which now pump Allin's liquid calcium chloride and as a manufactured product.

Whatever the source, the liquid salt has several advantages.

Using normal methods, salt crystals are spread over ice on roads and sidewalks. Traffic cracks the crystals and causes the salt to combine with water to melt the ice. Using liquid calcium chloride eliminates the need for traffic to crack the crystals, thus making the melting process faster. Because the calcium chloride is applied with water in a brine, no additional water is necessary to initiate the melting. This allows the liquid salt to be effective at low temperatures, whereas granular salt only works to about 20 degrees Fahrenheit.

Allin also said the liquid salt is less expensive than granular to buy and spread. His company uses a gravity-feed poly tank on a flatbed truck to spread the liquid. He subcontracts any places that require granular salt applications.

The liquid calcium chloride also eliminates much of the mess and cleanup required by granular salt applications. Office buildings and apartment complexes are appreciative because there is nothing tracked in to cleanup. Allin noted he doesn't have messy equipment cleanup required, since corrosion is not a problem with the poly tank and lines.

Actually, there is a fourth source for the liquid salt brine. Allin said he talked to the owner of one lawn company who was spending a fortune diking and cleaning up his granular salt pile.

"The salt water created as the pile got wet was being contained. He was paying \$100,000 a year to have the brine hauled away as a hazardous waste. Now he's using the liquid salt and saving two ways."

In any case, the key issue now is liability. Business and building owners are increasingly concerned about visitors falling and suing. A shopping center may have a quicker trigger point than a business park. A medical center where patients come in with casts or crutches may require 24-hour attention. Getting rid of the snow is not the only issue — it is also important to make sure the pavement is not hazardous.

SPREADING AND BLOWING. After snow is plowed, many contractors must deice the pavement. Most accomplish this task by using deicing compounds like crystallized salt or snow melt. A few contractors use liquid salt (see sidebar).

Again, depending on the size of the area, the equipment varies. Hydraulic spreaders hide under the tailgate or attach to the front or back ends of trucks. They are operated from inside the cab and dump compounds according to ground speed and preset rates.

Salting sometimes occurs at the same time as plowing; sometimes it's done later. Often, salt is put down instead of plowing in high-liability areas when there's not enough snow on the ground to plow, but visitors could still slip and fall.

Key considerations for choosing a spreader, according to Hyland, are reliability, standard parts and ease of repair.

Likewise, onsidewalks and common areas, smaller, push-type spreaders like those used for residential lawn fertilizer applications are used to salt.

Those smaller areas are also prime candidates for snow blowers. The blowers are most popular in lighter, more shallow snow falls, although manufacturers claim they can actually do deeper snowfalls with greater efficiency than plowing or shoveling. Snow blowers are also handy if snow must be moved off confined areas instead of just being pushed to the side.

Walk-behind, two-stage blowers with 8, 10 or higher horsepower seem to be the most popular, although some contractors even use backpack blowers to remove light snowfalls.

Brooms or sweepers attached to tractors which run mowing decks during spring and summer are also popular. Rotary power sweeping equipment used to clean up debris in spring or fall can be brought back out in the winter to clean snow.

According to Chris Hawker with Sweepster in Dexter, Mich., power sweepers may actually work better than plowing for "anything but three-foot snows." She suggested the polypro-

pylene bristles on rotary powered sweepers can bend over high spots in pavement and reach down in between paving stones.

OLD-FASHIONED WORK. "We have 763 hand shovels," said Peter Hyland. "They are faster than any other piece of snow removal equipment in a 4-inch snow."

Contractors unanimously agree that there are still many places and many times when the best and fastest piece of snow removal equipment is a person with a shovel. Properties are often not designed with maintenance in mind and, sometimes, the only option is shoveling.

Labor, of course, is a problem. Contractors can have difficulty finding a reliable work force during the warm, growing seasons. The problem is compounded when the weather is cold, the hours are late and time is critical.

Most companies use snow removal as a way to keep a 12-month work force. People work in the shop when they're not cleaning snow. But, getting the extra help at a critical time can be a real management dilemma.

To help buttress their workforces, some contractors use subcontractors. Most subcontractors have utility vehicles or pickup trucks with snow plows, but often, subcontractors are used to handle complete jobs in more remote areas and jobs when equipment of any kind — spreading, plowing or shoveling — is running short.

COMMUNICATION IS KEY. The most important pieces of equipment that contractors can own during snow season are communication devices. Whether it's CBs, 2-way radios or cellular telephones, contractors have to stay in touch with their crews to get the jobs done right. One company has a roving truck equipped with a 2-way radio to help out crews with problems.

The least expensive, but most range-limited communication equipment is a CB radio. A two-way radio offers wider range with a reasonable cost. Cellular phones, used by many company owners, are good but more expensive ways to keep managers involved in problem solving.

Whatever type of communication equipment you choose, use something, contractors maintain. Customer dissatisfaction is sure to follow if there is no way to find out where the crews are behind in their work or where removal equipment has broken down.

NO-WIN SITUATION. "Buy whatever snow removal equipment you can afford," advised Bob Winter, president of Oak Brook Maintenance, Naperville, Ill., "You'll never have enough. Snow removal is just a necessary evil."

Contractors advise purchasing snow removal equipment to meet slightly more than peak demand. The mix of equipment, according to Dale Stell, Lakeview

Walk-behind or powered sweepers can remove light snow or heavy slush along walkways and parking areas. Credit: Sweepster



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USE READER SERVICE #84

Lawn and Landscape in Canandaigua, NY., should be determined by the type of properties a company maintains.

"You're not going to pay for a piece of equipment in the first year," Stell said. "You need to be able to use it during the regular season if possible. Figure \$12,000 to \$16,000 of plowing per piece of equipment per year to make it pay for itself."

While companies initiate snow removal services as a way to employ people year-round and to increase off-season revenues, few contractors had many good words to say about the business. Most agreed with Winter; it's a necessary evil.

Rorie looks at the \$400,000 to \$500,000 his company garners on snow removal as "event-driven windfalls" that "affect the bottom line quite nicely." He advised only doing snow removal services for regular season customers.

"There's no point in providing an event-driven service for anyone who is not part of a regular service," he noted, "but, on the other hand, you can't hold a maintenance contract without doing snow removal."



In the 1980s, Groundmasters initiated a retainer service for its customers. The retainer allows the company to charge a specified amount per year on maintenance contracts to assure specified income. If actual time exceeds the retainer, the customer pays additional fees. Rorie said the retainer usually covers about 25 to 50 percent of a customer's snow removal costs.

"I would encourage contractors to get their money up front if they can," Rorie warned. "Otherwise, it's all up-front costs with anticipation of revenue."

He has two specific pieces of advice for contractors: "Do the work for your own customers, not others. Second, know what your costs are. Consider everything and price accordingly. Look at the cost of equip-

Snow removal is viewed as a good way to employ people year-round, but most hate the hours and pressure. Credit: Jacobsen

ment and operations. You can never have enough equipment."

Rorie, along with Allin and Charles Glossop of Artega Natural Green, Eden Prairie, Minn., will talk snow removal at the Green Industry Expo in Fort Worth, Texas, this November. It is a repeat of last year's panel which was reportedly one of the most popular at the show.

Popular is a relative word. Many contractors are interested in the topic, but most hate the hours and the pressure and the weather. They also say it's a difficult business.

"As far as I know," said Hyland, "we've never gotten a complimentary letter on our snow removal. We're more apt to get criticism or complaints that they wanted it done a little faster or more often."

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

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Go With The (Cash) Flow

A healthy cash flow assures the business will stay afloat and keeps you on the best of terms with your creditors.

By Kevin Tanzillo

Landscape and lawn service contractors don't go out of business because they don't make a profit. They go under because they don't pay their bills.

The key to keeping the business going is cash flow — making sure that there is enough money on hand to cover current expenses and avoid that humbling visit to your local banker. Having cash as you need it is a circus-style balancing act, without the safety net.

"Companies like to chase sales, but if you run out of cash you're out of business," warned Tom Nowell, president of Davis Landscape of North Carolina Inc., in Raleigh.

"We have learned that there is a big difference between cash flow and monthly billings. You have to be sensitive to both. You also have to be sensitive to the costs. If your cash flow isn't enough to cover costs, you'll have to dip into capital."

THE COST OF CASH FLOW. "The biggest hurdle is to understand financial management," observed Frank Ross, financial consultant with Ross-Payne and Associates, Barrington, Ill., and author of extensive white papers on business financing and green industry pricing.

"Most contractors start out knowing the trade from a technical standpoint. They can provide the service and understand how to make

a sale, but when it comes to managing money, they don't have a clue. No one taught them.

"If they worked for someone else before they went out on their own, they probably weren't involved with the financing of that business. That leaves a huge knowledge void, which is filled by the hard knocks of business. That is why the business fatality rate in the industry is as high as it is," Ross commented.

Most contractors look at cash flow the wrong way, contended George Koziarz, a corporate financial planning consultant in Glenview, Ill. "The average contractor looks at it tactically, when it is really strategic. They lack a cash flow strategy, so instead of being proactive they are reactive."

A healthy and smooth cash flow can keep the professional lawn or landscape contracting business on a sound basis.



His advice is to perform slightly below your full capacity, at slightly higher than your full margin. Customers will be happier and employees more effective if you don't try to blaze at 100 percent capacity, he explained. Also, by operating slightly above your margin, "you have some room to play on the other guy's money."

UNDERESTIMATED VALUE. More often than not, a company is undercapitalized, work is underpriced and assets are underused, Koziarz said. At any one time, there should be a cash reserve in place to cover the typical collection period, anywhere from 30 to 45 days. That means enough cash to cover payroll, taxes and debt services for the collection period.

To build up that cash reserve, he said, "Move prices in an opportunistic fashion to get every dollar you can in the marketplace. Mitigate expenses where it is practical without affecting your product and rearrange your overhead. Get lean and mean. Cash flow comes from profit, additional debt or additional equity. My preference is to use profit," he added.

CASH UP FRONT. For The Lawn Co. in South Dennis, Mass., a springtime prepay discount "is probably the key to our cash flow," said President Ed McGuire. The 16-year-old firm focuses on the residential market for lawn fertilization, pest control and aeration.

"With the discount, probably 20 to 25 percent of customers prepay," he explained, which gives his company a nice accumulation of cash to start the season.

McGuire's cash flow formula is simple: "We don't spend any more money than we take in." His company is "very conscious about budgets. We have monthly financial statements and we work with the statements to make sure we stay on budget in both sales and expenses."

"Also, I think the key is to hold onto cash when you get to the end of the year—as much as you can to get through the winter. When you are flush at the end of the season, the idea is to save it, not spend it."

The Lawn Co. bills customers after each treatment, and may not collect before the next treatment, but does send monthly statements. With new customers, there is more of an effort to get paid right after a treatment, but with established customers, McGuire said, "we may do two or three before getting paid."

The company retains all 60 of its employees during the lean winter months and keeps them occupied working on equipment and training, updating programs and calling customers to set up the work for the coming season. That's where that extra cash comes in handy, McGuire noted. "We want to keep good people, and if we lay them off we would be taking a risk."

Ross would love to stamp out 12-month contracts with equal billings. But if they have to be used, he advised, get as much of a deposit as possible.

"If I work on a 12-month contract, my customers manage my cash flow. Invariably what happens is during the springtime, you have labor intensity. All these things are rolled up in that annual contract, which means that the undercapitalized contractor is underwriting his client, giving his client credit when he can least afford it."

"I know we aren't going to be able to change the industry, but ideally, you would like all your contracts on a pay-as-you-go basis. Since that is not going to happen, do the next best thing. If you have a 12-month contract, get a deposit equal to the twelfth month up front, then bill on the first of the month for that month's service. Make sure no receivable goes beyond 30 days. You then create 45 days' use of cash on that contract at the front, when you most need it."

Ross pointed out that this concept works well with certain commercial accounts. "When you are dealing with property managers, this concept makes sense because they do the same thing. They take a tenant's two-month deposit, and then everything else is spread equally. You are just capitalizing on a culture already accepted in the industry."

EQUAL INCREMENTS. Contractor Robert Pyeatt, on the other hand, likes equal billings. He has been general manager at Adsit Landscape & Design Firm in Memphis, Tenn., since last November, but spent 10 years as a commercial loan officer with a Memphis bank. He definitely understands what's involved in turning to the bank to smooth out cash flow.

"Our commercial maintenance contracts, which are about 75 percent of our business, are on monthly flat-rate

CASH FLOW TIPS FROM THE EXPERTS

- If you are just starting out, you need a banking partner. Make sure that you have a business plan and that you present it to a bank.
- Your business plan should be a budget of operations and a monthly cash flow projection that outlines the need not only for capital, but for working cash.
- Make an effort to understand financial management and the cycle of revenue and expenses. "If labor is going to be paid every seven days, we have to make sure we have the cash to pay it," said Frank Ross, financial consultant with Ross-Payne and Associates, Barrington, Ill. "Either we pay it with money borrowed from the bank or with money from clients."
- Establish credit and collection policies and incorporate them into your contractual documents. Even if you have an agreement rather than a formal contract, make sure the credit and collection element are explained clearly in whatever document goes to a customer.
- Capitalize properly. George Koziarz, corporate financial planning consultant in Glenview, Ill., said: "Find out what it really takes to do business and where that money comes from. Don't start an undercapitalized business and hurt a lot of people who want to help you."



Seasonal variations in the landscape industry make it hard to maintain even cash flow.

payments," Pyeatt explained. "That is great in the slow months when you are not as busy. But it is tough in the summertime since we have to pay for a lot of materials and we are carrying the maximum employee load. That is when we have to use outside financing."

Because his company struggles to find good workers, Pyeatt said he doesn't want to take a chance on losing them by laying them off in the winter.

"We try to keep them through the year, and for that, the level monthly billing really helps. The main problem I anticipated coming into this business was sales, but the bigger problem is labor. The sales are there if you can get the people to do the work."

Collections aren't a problem for Adsit Landscape & Design, and for that Pyeatt is thankful. "We are fortunate in that we have almost no bad debts. It is because of the people with which we do business. This is a 20-year-old company and we have been doing business with the same people for a long time. Our focus is on upscale suburban customers and we make sure they are happy."

He said customers are asked to pay within 10 days, and virtually all pay within 30 days. The company does get at least a 25 percent down payment on landscape work that is not part of a long-term maintenance contract.

Pyeatt noted that he tries to control costs, and thereby improve cash flow, by eliminating overtime. "We work four 10-hour days, and if the employees get all the work done, they don't work Friday. This spring we had some overtime, but only because we didn't have enough people to do all the work."

His advice is to be careful you don't underbid jobs and make sure you closely monitor work hours throughout the year so you know the costs of a particular account. He also advised a written contract spelling out the terms of payment. It eliminates the misinterpretation that might result when agreements are oral and sealed with a handshake.

CAREFUL BALANCE. "In these days of tight margins, you have to manage your cash flow. It's critical," added Nowell. His 15-year-old company does com-

mercial landscape installations and management, and the two sides of the business "each have their own challenges and cash flow needs."

Cash flow is good on the management side, Nowell said, "but it has to be, because it is so labor intensive. We pay employees every week, so we have to rely on those collections to do well."

With most accounts, payments are received in less than 30 days, with a few accounts stretching to 45 days. The company controller politely calls on first-time customers to make sure the invoice was received and that there are no questions about it.

"One thing that helps a lot is that we try to give customers a pencil version of the bill on the 20th if it is due the 25th. Then we ask if the bill looks OK. We want to know as soon as possible if there are any problems, and we find this eliminates 99 percent of our problems."

Nowell said the company invoices on an annuity (equal monthly billing) and a non-annuity basis. "We try to encourage more of the non-annuity billing, moving toward a services-rendered basis. There are two or three times of the year when we really incur costs. If we bill an account on an annuity basis, we can get creamed on cash flow."

His commercial customers are used to equal monthly payments, and some customers' accounting systems are rigid, but he contended that there are property management companies willing to be flexible if they're educated.

"We pay attention to our job costing," Nowell added. "If it is supposed to take 1,000 man-hours, we want to make sure of our costs. If our costs are going over the line, then our margin will be less."

Davis Landscape is fortunate because its off-season coincides with a time when much of its ethnic workforce wants to travel home for the holidays (the company peaks at 60 employees and carries about 25 during the winter).

"We have never laid one person off in this market. It has just worked out, or we have shifted resources," Nowell recalled. "When billings are down, we don't need the cash." About the only off-season work the company does is pine straw mulching.

SEASONAL CYCLE. Seasonal needs will always affect the industry, Koziarz conceded, and there are times you can't avoid going to the bank. But, "if you are properly managed and have a viable business, there are times to use debt and times to stay away from it. Debt is a necessary fact. The important thing is to understand when to go in and out of debt. You want to use the money when others don't need it and avoid it when everyone else wants it."

He said that contractors should understand what borrowed money costs and "not let the banker be

(continued on page 94)

Irrigation News

IA Travels Down Under to Train Instructors

THE IRRIGATION Association's Certified Landscape Irrigation Auditor program was recently introduced to Australia. IA educational director Tim Wilson made the trip to train instructors to teach courses in the evaluation of residential and commercial irrigation systems.

Recently updated California Landscape Irrigation Association training procedures, manuals and software were used to convert information into metric measurements for international use. The course includes new audit procedures for landscape sprinklers, drip, microspray and bubbler evaluation, as well as efficient scheduling techniques.

Weather-matic To Offer Business Publications

Two new business publications from Weather-matic, Dallas, Texas, will be available from distributors this fall. The first is titled *21 Secrets for Irrigation Contractors*, by Robin Tulleners, a consultant to the California irrigation industry for 17 years. The second book, *A Pathway to Profits*, by L.

Michael Mason and Brodie Bruner, covers business plans, financial planning and making estimates.

States Show Interest In Contractor Program

As states consider their options for implementing licensing programs, many are reviewing the IA's Certified Irrigation Contractor program as a possible standard. Illinois is the most recent addition to the list of states committed to begin using the program.

The CIC program, which will be offered at the 16th annual International Irrigation Exposition in Phoenix, covers fundamentals in pipe sizing, head spacing, plant-soil-water relationships, electric principles, contractor and financial management, license laws, safety and tax and lien laws.

China To Review Low-Volume Irrigation

After months of negotiations, China is allowing the Irrigation Association and the U.S. Bureau of Reclamation to develop three low-volume irrigation plots for the development of apples, peaches and peanuts.

The irrigation industry will provide all the materials needed for half of each 50-acre plot, including designs and material lists. The systems are expected to reduce the annual water applications as much as 70 percent, while increasing yield in the range of 40 percent.

Self-Study Programs Teach Irrigation

A series of five videotapes and a comprehensive workbook make up the Video Campus Product Training self-study series from Rain Bird, Azusa, Calif. The program, which explores irrigation system operation and design fundamentals, gives users a review of terminology and practical theory.

Individual modules detail controllers, valves, low-volume systems, rotors and sprayheads. Wendy Rokochy, program manager, explained that the system will give help newcomers understand the basics of irrigation.

"It also serves as a valuable resource for contractors, landscape architects, irrigation system installers and maintenance personnel," she added. ■

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People

SCOTT SMITH was named enhancement manager and landscape architect with Bozuto Landscaping Co., with responsibilities for landscape design and enhancement projects for property owners and managers.

The Scotts Co. appointed **Michael Kelty** senior vice president of the Professional Business Group. He will oversee the group's growth and development.

P.C. Skidgel joined the management staff of Greenscape Pump Services as service operations manager, with 18 years experience in the field. In addition, **Steve Joice** was added as a field service technician for the central and south Texas region.

George Hackney was appointed general manager of operations for NORAM. He will oversee engineering, production, quality control, purchasing, human resources and day-to-day operations.

Grotech added **Tim O'Neill** to its sales and marketing team. He will work directly with new distributors and dealers across the United States.

Cannon Landscape Management promoted **Daria Racine** to vice president of business development for the Landscape Maintenance Division. The company also added **Daniel**



Kelty



Alder

Tamminga as vice president for business development for its Landscape Installation Division.

Derek Smith joined Chapel Valley Landscape Co. as a branch manager for the Virginia Commercial Landscape Branch of the firm. He has more than 20 years experience in the landscape contracting field.

Jan Alder is the new manager of advertising and sales promotion at Snapper. She brings 15 years of experience in advertising and marketing to the position.

James Drexinger, formerly vice president of residential marketing with Nibco, has been promoted to acting vice president and general manager of the division. He will

serve until an organizational study in the company is completed later this year.

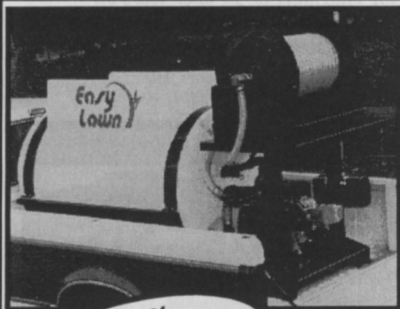
Simplicity Manufacturing appointed **Richard Marcellus** to North American sales director. He will oversee the company's sales force, business development, repair parts sales function and distribution of products. Other appointments at Simplicity include: **Thomas Fruechtel** to executive vice president, marketing; **David Marsh** to corporate communications director; **Harold Redman** to product marketing manager; and **Karen Wyler** to advertising and sales promotion manager.

Bill Coyle joined James Hardie Irrigation as district sales manager for the northwest territory. He will provide distributors with sales support and training. In related news at Hardie, **Kevin Nicusanti** was appointed manager of global marketing and planning. He will oversee market research, global brand and segment strategies, market campaigns, product introductions and special events.

JJI Lighting Group named **Ian Robert Ibbitson** as vice president, general manager of its Architectural Landscape Lighting subsidiary.

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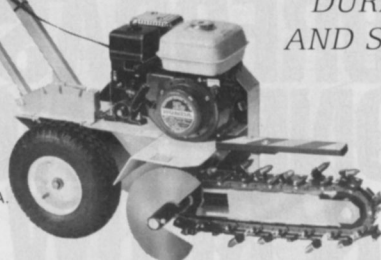
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USE READER SERVICE #13

LAWN & LANDSCAPE MAINTENANCE • SEPTEMBER 1995

USE READER SERVICE #57

Products

NEW JOB CONTROL module on Lbase green industry package from **INCLUDE Software** automatically updates items from an estimate when a bid is imported from accounting. It generates job cost reports that show the percentage of materials used and remaining on a job's budget. Budgeted and nonbudgeted items can be assigned to purchase orders and transferred into accounts payable for reconciliation.
Circle 126 on reader service card

The Groundmaster 3000 rotary riding mower from **Toro** combines a 33-hp gas or diesel engine with quieter performance, improved hillside stability and fast



attachment connection with few tools. Stability results from a larger wheel base, lower center of gravity and larger tires. Options include an enhanced 84-inch deck with hydraulic counterbalance, soft-ride castor wheels and an adjustable deck design for extreme turf contours. Two-wheel drive diesel is available in October; gas in January and four-wheel drive diesel in the spring.
Circle 127 on reader service card

PRODUCT SPOTLIGHT

WEBSTER'S new TC-300-2 Deep Root Feeding System makes feeding dry fertilizer and nutrients to trees and shrubs safe and economical. The unit is designed to drill and fill holes with custom-blended fertilizer and nutrients at a uniform, 15-inch depth between the trunk and the drip line of the tree at a rate of four holes per minute. Fertilizer can be substituted with vermiculite or pea gravel to relieve soil compaction.

The self-contained, 2-wheel unit fits in a van or pickup truck, and features a 2-hp gas engine, heavy gauge steel drill platform, heavy duty transmission, preset measuring chamber and a 1 1/2-inch diameter auger.

Circle 125 on reader service card



The Vigilante Trash Vacuum Cleaner from **Railquip** uses accelerated air flow to clear litter such as glass, plastic, cans and other refuse. The litter is compacted from 70 percent to 20 percent total air content, and is unloaded into a polyethylene bag. It can be used by one operator and can be mounted on trailers or pickup trucks.

Circle 128 on reader service card

(continued on page 84)

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USE READER SERVICE #37

Products

(continued from page 82)

The quiet **Stihl** 023L chain saw produces just 92 dBA to the operator's ear, using a modified muffler, air filter cover, rubber grommet on



the cylinder cooling fins and a slim saw chain. The unit weighs 10.1 pounds and has a 2.45-cubic-inch engine.

Circle 129 on reader service card

The Red Line Level from **Pinpoint Laser Systems** is a portable pocket laser level for lawn and landscape professionals. It projects a red laser reference beam that allows one person to transfer points, set grades, establish elevations and perform layout tasks. A transit grade level is mounted in acrylic for visibility, and can be immediately adjusted for grade

setting. The laser produces a bulls-eye pattern accurate to 1/16-inch at 25 feet, and one man can set elevations and grades using a tripod. A plumb level is built into the unit, which can operate up to 16 hours on three AA batteries.

Circle 130 on reader service card

Husqvarna's line of professional trimmers offers low-vibration, high power and fuel efficiency. The line includes five 25-cc models, two 33-cc models and a 36-cc model. Each has an anti-vibration system that isolates handles and support parts from the engine and drive shaft with rubber dampers.

An angled handle allows users to work faster and more comfortably, and the engine consumes 15 to 20 percent less fuel than other trimmers in its class.

Other features are a 35-degree cutting angle, electronic ignition, and noise-reducing muffler.

Circle 131 on reader service card

Soundscaper™ all-weather speakers from **Waterworks Acoustics** are installed at ground



level to disappear into a landscape plan. Plastic enclosure is sealed against the elements and bollard mount option provides further flexibility. Speakers are designed to provide unobstructed sound throughout a landscape.

Circle 132 on reader service card

The BCS Bio 100 Chipper/Shredder from **BCS America** handles heavy duty jobs with an 8-hp Briggs & Stratton engine and large capacity shredder that accepts up to 1-inch thick brush leaves, small branches and other debris. The unit can chip



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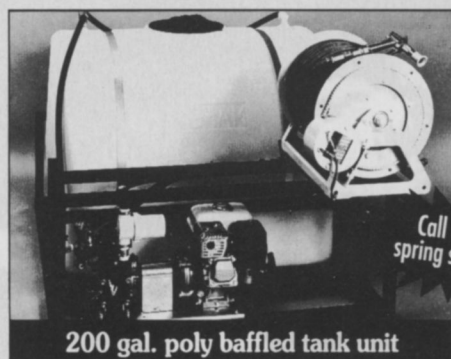


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limbs up to 3 inches in diameter, and the 28 reversible shredder flails and sturdy 37-pound flywheel add durability and chipping speed. The ergonomically designed unit features wheelbarrow-type handles for easy transport. Variable screen sizes are available.

Circle 133 on reader service card

Scimitar CS insecticide from **Zeneca Professional Products** is registered for use by lawn care professionals in the control of turf insect pests. Unlike traditional suspension concentrate products that contain particles of the active ingredient throughout the suspension, Scimitar CS encases its active ingredient in tiny, polymer capsules that are dispersed in a thin, water-based suspension. The product controls a range of pests, including chinch bugs, mole crickets, sod webworms, bluegrass billbugs, cutworms, mites and aphids.

Circle 134 on reader service card

Gravely International's ProChip 495 chipper is available with a 81- or 102-hp Perkins diesel engine and will chip limbs and brush up to 14 inches in diameter. It comes equipped with an electronic automatic feed, which speeds up or slows down

wood feeding into the rollers and maintains engine speed at maximum torque for best performance. Other features include a 20-gallon fuel tank; lockable battery, engine and



tool boxes; electric surge brakes; and comprehensive gauges.

Circle 135 on reader service card

Intermatic's Malibu series of low-voltage, low-profile lighting fixtures provide a variety of outdoor landscape applications for the professional contractor. The Well Light is designed to be buried and casts light upward to create special effects. The Tier Light has contemporary styling and a 4-inch diameter shade that directs light downward, eliminating glare. The Flare Light accents gardens, driveways, sidewalks and decks and

includes a wide shade and base with a translucent, flared lens that looks good both day and night. All three are constructed of high-impact, noncorrosive polymer.

Circle 136 on reader service card

The CS-3400 chain saw from **Echo** is a top-handled unit featuring a 33.4-cc, double-ring piston engine. The unit also comes standard with a 14-inch bar, and is easy to handle at only 7.3 pounds.

Circle 137 on reader service card

Safety garments from **SIP Protection** provide comfortable and rugged attire that guard against chain saw injuries. The garments are made of cut-resistant material layers that



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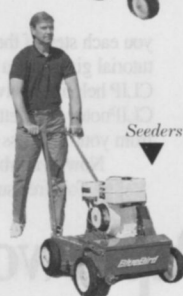
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USE READER SERVICE #54

USE READER SERVICE #51

block the pinion and stop the cutter when caught in the saw. The blocking action takes less than 14/100th of a second on a chain saw operating at a speed of 8,500 rpm. The garments are lightweight and ventilated.

Circle 138 on reader service card

Model 928D zero-radius riding mower from **Grasshopper** relies on a 28-hp, liquid-cooled diesel engine and dual-path hydrostatic direct drive. Nine other engine sizes starting at 12.5-hp are available. Attachments include



mulching decks in 52-, 61- and 72-inch widths, snow throwers and rotary brooms. The two widest sizes convert to rear discharge, side discharge or vacuum collection using any company grasscatching system.

Circle 139 on reader service card

Skin Coat, manufactured by **Skin Coat North America**, is a blend of organic substances that combine with the proteins on the skin's surface to form a protective barrier against noxious substances. A small amount applied to exposed skin protects up to 24 hours, allows the skin to breathe and perspire and cleans up with regular soaps. It is said to be particularly effective against many pesticides and fertilizers.

Circle 140 on reader service card

The Bric-Edg paver restraint system from **Oly-Ola Sales** provides a versatile and easy-to-use system for installing brick pavers. They are installed either by placing a brick on top of the edging or placing the restraint along the outside edge of each paver. The edging is secured with nonbending steel anchoring stakes. It is flexible due to V-cuts that allow contractors to create free-flowing curves without cutting. It is constructed of hard vinyl, has no sharp edges and will not rust or kink.

Circle 141 on reader service card

The skid loader snow plow system from **Snow Wolf** offers solid link framing for full down pressure in either direction of travel. A tight blade curvature rolls snow easily, and substantial pins at all moving parts add dura-



bility. The unit comes standard with powder coat finish and a trip-cutting edge to protect operator and machine from obstacles. Full 32-degree angle both left and right is possible in three seconds or less, giving the operator quick response. System is available in 6- or 9-foot blade widths and fits all major brands of skid loaders.

Circle 142 on reader service card

The 70-248 portable radio from **Midland International** operates in a wideband frequency range of 406 to 470 MHz and features both four or two watts of RF power output. It offers up to 99 channels, including 48 that can be programmed for semiduplex operations. Other features include pushbutton up-down channel selectors, LCD channel display, two-color LED, monitor function, a battery-saver unit and pack.

Circle 143 on reader service card

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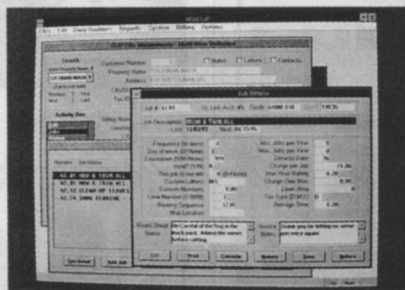
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Calendar

SEP. 21-JAN. 11 Arborists' and Tree Workers' Certification Preparation Course, Buena Park, Calif. Contact: Ted Stamen & Associates, 909/656-3431.

SEP. 24-27 Florida Turfgrass Association Conference & Show, Tampa. Contact: 800/882-6721.

SEP. 27 PLCAA Regional Workshop on Customer Service and Risk Communication, Columbia, S.C. Contact: PLCAA, 800/458-3466.

SEP. 28-29 Using Compost and Other Organic Products, Danvers, Mass. Contact: American Society for Horticultural Science, 703/836-4606.

SEP. 29 - OCT. 2 ALCA Interior Plantscape Conference & Trade Show, New Orleans, La. Contact: Associated Landscape Contractors of America, 800/395-2522.

OCT. 4-5 Southern California Turfgrass and Landscape Expo, Costa Mesa, Calif. Contact: 800/254-9675.

OCT. 7-9 Annual Meeting of the American

Society of Landscape Architects, Cleveland, Ohio. Contact: ASLA, 202/686-2752.

OCT. 11-13 Composting Council Sixth Annual Conference, Beltsville, Md. Contact: Composting Council, 703/739-2401.

OCT. 12-13 Southern Plant Conference, Raleigh, N.C., presented by the Southern Nurserymen's Association and the North Carolina Association of Nurserymen. Contact: SNA, 404/973-9026.

OCT. 12-13 Managing Snow and Ice Control Operations, Madison, Wis. Contact: 800/462-0876.

OCT. 19 Basic Landscape Maintenance, University of California, Davis, 916/757-8777.

OCT. 21 Women in Horticulture Conference 1995, Bellevue, Wash. Contact: Kim Hayes, Association for Women in Landscaping, 206/367-1836.

OCT. 25 Drip Irrigation Systems for the Professional Landscaper, University of California, Davis; 916/757-8777.

NOV. 7-10 Turf and Grounds Exposition, Rochester Riverside Convention Center, Rochester, N.Y. Contact: NYSTA, 800/873-TURF.

NOV. 12-15 International Irrigation Exposition, Phoenix. Contact: Irrigation Association, 703/573-3661.

NOV. 12-16 Green Industry Expo, Fort Worth, Texas. Co-sponsored by the Associated Landscape Contractors of America, the Professional Grounds Management Society and the Professional Lawn Care Association of America. Contact: GIE, 404/973-2019.

NOV. 16-18 Tree Care Industry Exposition '95, Indianapolis. Contact: National Arborist Association, 800/733-2622.

NOV. 27-29 North Central Turfgrass Exposition, St. Charles, Ill. Contact: Illinois Turfgrass Foundation, 312/201-0101.

Send meeting announcements at least 10 to 12 weeks in advance to LLM magazine, 4012 Bridge Ave., Cleveland, OH 44113. Telephone is 216/961-4130.

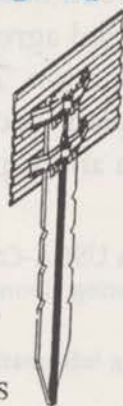
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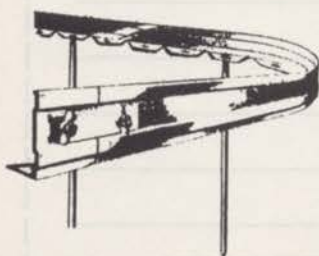


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Circle 150 on reader service card



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Circle 151 on reader service card



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Circle 152 on reader service card



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Circle 153 on reader service card



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Circle 154 on reader service card



LAWN & LANDSCAPE MAINTENANCE magazine is proud to introduce *T&O Service Tech*, the industry's first and only publication serving the needs of front-line turf and ornamental crew members in the professional landscape contractor market. Editorially, it covers topics such as proper mixing and handling of pesticides, safe equipment use, proper turf and ornamental installation, maintenance techniques, providing good customer contact and much more. It will help crew members acquire a deeper understanding of their job function and develop pride in the services they provide. *T&O Service Tech* is for any crew member involved in pesticide applications, lawn and landscape maintenance and landscape installation.

Circle 155 on reader service card

Classifieds

RATES

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Cash Flow

(continued from page 79)

come the most well-paid entity in the organization." He has seen companies who paid more in interest to banks than the owners took home in income.

Ross added that one big mistake contractors make is that they don't ask for money at the time they make the sale. "They don't want anything to stand between closing that deal, and they are afraid to talk about money. They don't explain credit terms or ask for a deposit."

The timing is critical, he pointed out. "The moment that sale is made is the only time the customer wants you more than you want him. Customers want to know what the method of payment is, so they can set up their affairs to meet it."

His advice: Get all the terms straight then. If the customer says he can't meet them and you can't negotiate a middle ground, accept that this situation won't work and bail out.

Ross also disdains discounting on bills. "Discounting is an expensive philosophy. If you see a discount of 2-10-net-30, that says, 'good customer, if you pay me in 10 days (20 days sooner), I will reduce your bill by two percent.' You are paying two percent to shorten the cash flow cycle by 20 days. If there are 18 such cycles in a year, times two percent, that is 36 percent and that's pretty expensive," he said.

"Anytime I see that, it is an early warning that someone lacks an established credit and collection policy.

"The guy who can't pay isn't going to

be moved by those terms. The only ones moved are the ones who would pay on time anyway."

THE CASH CRUNCH. Should you encounter a cash flow pinch, Koziarz said, it is crucial to communicate that to the people affected. "Don't hide from your banker or vendors and don't lie to your employees. Tell them you need more efficiency or something else to get by. You must work with these people to make it right. If you try to do it in isolation, you're dead."

Pyeatt agreed. "Keep your suppliers happy. Keep paying them within terms, so if you do hit a periodic crunch they will understand. People will work with you if you are up front with them and stay within their terms."

Ross said cash flow is similar across industries. There are seminars and workshops available through industry groups, and your financial advisers and accountant can help too.

The Associated Landscape Contractors of America has publications that deal specifically with financial issues for contractors and maintenance firms.

Debra Atkins, executive director, added that the organization's Operating Cost Study helps companies compare their numbers to others in the same range.

ALCA refers members to consultants or will put a member in touch with another outside of their competitive area to discuss the issue. "That networking has worked well," she added. ■

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

Advertisers Index

American Cyanamid	5,62,63
American Honda	31
Ameriquip	44
ASHS	89
Badger	91
Bandit	30
Blue Bird	87
E.F. Burlingham	75
C & S Turf Care Equipment	80
California Integrated Waste Management	65*
Carlson Industries	81
Central Parts Warehouse	68
Chevy Truck	96
Ciba	34*,35*
Compuscapex	61
Creative Curb Marketing	90
Customized Business Software	70
Daniels Pull Plow	87
Deere & Co.	14,15
Design Imaging Group	82
Dixie Chopper	91
Dow Chemical	50
DowElanco	19,21,23,25*
Easy Lawn	81
Echo, Inc.	17

Emerald Green	24
Encore Mfg.	60
Environmental Protection Developers	52
Fabricscape	91
Ferris Industries	43
Finn Corp.	13
FMC	95
Georgia Turfgrass	82
GIE Show	71
Glennmac	33
GMCTrucks	58,59
Grasshopper	53
Greenline Distribution	70
Grotech	68
Highway Equipment Co.	64
Hunter	45
IA Show	9
ICD	91
Jones Mfg. Co.	80
Lester Building System	18
Longhorn Inc.	61
Metromail	52
NEBS	16
New Holland	55
New York Turfgrass	42

North Carolina Turfgrass Conference & Show	90
Oldham Chemicals Co.	84
Polecat Industries	84
Protech	69
Real Green Computers	38
Regal Chemical	51,74
RISE	34*,35*
Rohm & Haas	28,29
Sandoz	46,47
Sensible Software	88
Sharp & Lube	32
Shindaiwa	57
Snapper Power Equipment	7
SPS Consulting	24
Steiner Turf Equipment	56
Sure-Loc	18
Toyota Motor Sales	2
Trimmer Trap	91
Tuflex	76
Turfco Mfg.	20
United Horticultural Supply	67
University of Georgia	61
Walker Mfg.	83
Wells Cargo Inc.	38

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