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Mark Harvey, Cleveland, Ohio

Photo courtesy Echo Inc., Lake Zurich, III.

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Lawn&Landscape

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Manufacturers and operators have told us all about the differences between hydrostatic and gear-drive walk-behind mowers, but we decided it was time to experience the machines for ourselves.

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The cost of water varies widely across the country, but smart water management saves money everywhere.



72 Contractors Seek Productive Partnership

What will the contractor of the future be like? How much of a spare parts inventory is the right amount? These and other questions were on contractors' minds at a recent roundtable.

77 Consumer Communication: Showing the Way

Irrigation contractors need to be educators as well when trying to sell customers on irrigation services.

81 Marketing Strategies That Work: Making Your Move



Expanding into a new geographic market is a bold move, and one that will only succeed if the circumstances are right. Companies contemplating this type of expansion will have many decisions to make.

PUBLISHER'S FOCUS



Cindy Code Publisher

e have seen the future, and the future is here.

For nearly a decade, outdoor power equipment manufacturers have been off to the races to see who could make the most efficient and economical mid-size mower for the professional lawn and landscape contractor market — all the while keeping their sights on new product innovations for the profitable golf market.

But as manufacturers seek to expand their product and service offerings, heads quickly turned to the fastest growing segment of the dynamic horticultural industry - professional landscaping.

Development and output of commercially viable mowers has been fast and furious. Walking the floor of the OPEI show in 1996, it was clear that mowers developed for the professional lawn and landscape contractor reached an all-time high. Nearly 40 manufacturers of midsize mowers were displaying product at the show.

Yet production of mowers continues to grow.

The Outdoor Power Equipment Institute predicted that shipments of commercial riding rotary turf mowers will increase 4.9 percent for 1997 to 50,981 units, following an 8.5 percent increase in 1996. More growth is forecast for commercial riders as well in 1998, reaching 54,193 units, an increase of 6.3 percent.

Commercial intermediate-size walk-behind rotary turf mowers are expected to increase as well, although not as substantially.

The activity will make your head spin. But, as has been predicted, a shakeout period is upon us. Take note:

• Jacobsen bought Bunton giving the manufacturer its first true presence in the landscape market.

· Toro bought Exmark in a move that surprised industry experts and observers adding a new dimension to its already expanding internal product line.

• Yazoo, under new ownership itself, bought F.D. Kees.

• Last year, Dane Scag introduced the Surfer for the contractor.

• John Deere acquired Homelite in recent years and is now poised to introduce a brand new product line next month.

Keep your eyes open...there's more changes to come.

Both John Deere and The Toro Co. have made it known that they intend to capture the lion's share of the landscape contractor market by offering a full line of products to meet contractors' needs. Both companies have the name recognition and capital to make it happen. With nearly 50 million acres of turf in the United States, installation and maintenance needs are aplenty.

This is a prime opportunity for contractors to get involved. Let manufacturers know what you need out of mowers and other products. Help them understand the ins and outs of your business. No one knows your needs as intimately as you. Remember, this is just the beginning. The best products and growth opportunities are Ш yet to come. - Cindy Code

Lawn&Landsca

EDITORIAL

Cindy CodeGroup Publisher e-mail: ccode@gie.net

Editor Susan Gibson e-mail: sgibson@gie.net

Paul Schrimpf Managing Editor e-mail: pschrimpf@gie.net

Bob West Associate Editor e-mail: bwest@gie.net

GRAPHICS/PRODUCTION

Mark Rook Charlotte Turcotte Tracy Green Carolyn Antl Helen Duerr Lori Skala

Creative Director Art Director Graphic Designer Graphic Designer **Production Coordinator** Advertising Production Coordinator

Rosalie Slusher

Circulation Manager

ADVERTISING/MARKETING

Maureen Mertz Eastern Sales Manager 1723 South Hill Milford, Michigan 48381 248/685-2065 Fax: 248/685-2136 e-mail: mmertz@flash.net

Kevin Gilbride Account Representative e-mail: kgilbride@gie.net Amy Parkhill Market Coordinator

CORPORATE STAFF

Richard J. W. Foster President and CEO Cindy CodeGroup Publisher Christopher W. Foster Director, MIS Department & Internet Communications Heidi Senecoff Director, Circulation & **Database** Operations Jami Childs Director, Production Operations Cheryl Spernoga Manager, Accounting Fran Franzak Manager, Books & Directories

EDITORIAL & SALES OFFICES

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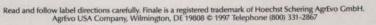
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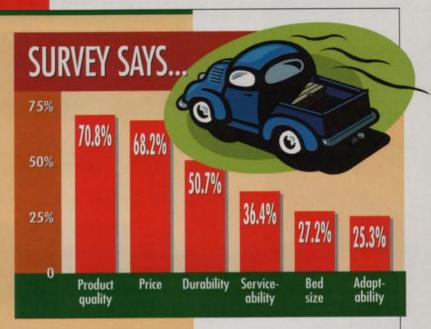
MARKET TRENDS

TRUCKS YOU CAN TRUST

Quality. Affordability. Durability.

Sounds like the makings of a great truck, doesn't it? Those are the three most popular features when *Lawn & Landscape* readers go truck shopping, according to the results from a recent survey of 1,000 readers.

Respondents were asked to note the four most important factors they look for when purchasing a new service vehicle. Clearly quality (70.8 percent), price (68.2 percent)and durability (50.7 percent) are most important to truck buyers. The fourth most popular feature was serviceability (36.4 percent), followed by bed size (27.2 percent) and adaptability (25.3 percent). And, surprisingly, the least important feature was safety features (6.5 percent).



(Credit: L&L Reader Survey)

AGRIBIOTECH PURCHASES BURLINGHAM SEEDS

In a deal that makes it the largest seed producing company in the world, AgriBioTech Inc., Las Vegas, Nev., acquired Burlingham Seeds, Forest Grove, Ore., for \$10 million. The 85-year-old seed company

be-comes the latest acquisition by the rapidly growing, full service seed company which has an eye toward advanced product research founded in biotechnology.

"Ownership of Burlingham germplasm should enhance AgriBioTech's negotiations for biotechnology access," noted Dr. Johnny Thomas, company president.

> "The turfgrass industry has come a long way in the last 10 to 15 years, but when you look at biotechnology you see that this is

really where the emphasis of the industry has to be in the next generation as opposed to seeking mechanical innovations," explained Zenon Lis, marketing manager, Burlingham Seeds. "This deal gives us a vision for the future with biotechnology and, we feel, it gives other companies someone to approach and talk to about issues of technology transfer."

.....

'This deal gives us a vision for the future with biotechnology and ... gives other companies someone to approach and talk to about issues of technology transfer.'

.....

Lis said Burlingham will continue to market its turfgrass products through its traditional channels, and most benefits from the deal won't be evident to customers until researchand-development work produces new turfseed varieties or characteristics. That will likely take seven to 10 years for those products to reach market.

ECI ACQUIRES U.S. LAWNS

Environmental Care Inc., Calabasas, Calif., completed the acquisition of U.S. Lawns,

Orlando. Cheryl Steelberg, public relations director for ECI, said the companies agreed to the deal in the spring of 1996, but they reserved comment until the due diligence phase of the process was complete.

U.S. Lawns and its 24 franchises will operate as an autonomous business unit of

ECI. Tom Oyler, founder of U.S. Lawns, will operate as president of the organization. Bruce Wilson, ECI president, will serve as CEO of U.S. Lawns. "It's Tom's vision and energy that created this company. Bruce felt Tom should continue to run the organization," noted Steelberg.

(Continued on page 12)

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Ram I, the proven Kentucky Bluegrass that still provides excellent color and top overall performance.

In national trials under both low and high maintenance conditions, Ram I ranked third and fourth respectively in overall turf quality.

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		Turf	grass (Qualit	y Ratir	ngs 1-	9; 9=1	deal T	urt: N	lonths	1/		
NAME	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
Midnight	5.3	5.7	5.2	5.2	6.4	6.4	6.3	6.3	6.3	6.6	5.9	5.0	6.2
Unique	6.3	6.7	6.3	5.6	6.2	6.3	6,4	6.3	6.4	6.5	5.5	5.2	6.2
Glade	3.0	3.8	5.1	5.5	6.1	5.9	6.0	5.8	6.4	6.6	5.7	4.7	6.2
RAM-I	4.7	4.7	5.3	5.5	5.8	5.8	5.9	5.7	6.3	6.5	5.9	5.5	6.1

Under high maintenance, Ram I ranked fourth out of 125 entries.

	Grov	vn Un	der Lo	ow Ma	inten	ance 1991 [teen L	ocatio	ons in	the U.	S.	
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NAME	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
Midnight	5.3	4.7	6.0	4.8	6.7	5.7	5.3	5.6	6.5	5.7	5.6	6.0	5.7
Barmax	6.3	5.0	6.0	6.1	6.8	5.8	5.0	4.9	5.5	5.0	4.9	5.0	5.7
RAM-I	5.3	5.3	4.0	5.1	6.4	5.7	5.1	4.9	5.3	5.6	5.3	4.3	5.5

Under low maintenance, Ram I ranked third out of 62 entries.

So whether you're producing sod that will become someone's well-manicured lawn or seeding a low-maintenance area, count on a proven reliable...Ram I.





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* Per ANSI B175.2-1990 at wide open throttle



<u>The</u> Pro Performance Team

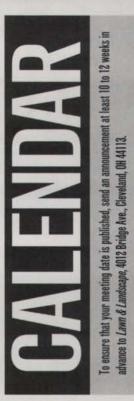
MARKET TRENDS

(continued from page 8)

MANUFACTURERS UNITE SEEKING QUALIFIED HELP

More and more, power equipment manufacturers are finding themselves seated across the table from their fiercest competitors. When they're not joining forces to counter impending regulations, they're taking a proactive approach to redefining the role mechanics play in the green industry and developing future sources of these valuable employees.

"There is an obvious shortage of qualified engine technicians in our industry, and it's going to get much worse before it gets better because the *(continued on page 15)*



JUL. 17-19 Turfgrass Producers International Summer Convention & Field Days, Minneapolis, Minn. Contact: 847/705-9898.

JUL. 25 ALCA Interior Training Seminar, Minneapolis. Contact: 800/ 395-2522.

JUL. 26-28 International Lawn, Garden & Power Equipment Expo, Louisville, Ky. Contact: 800/588-8767.

JUL. 29 Midwest Turf Field Day, West Lafayette, Ind. Contact: 317/ 494-8039.

JUL. 29-31 Penn Allied Nursery Trade Show, Fort Washington, Pa. Contact: 717/238-1673.

JUL. 31 Compost Production

Workshop, Kutztown, Pa. Contact: 610/683-6009.

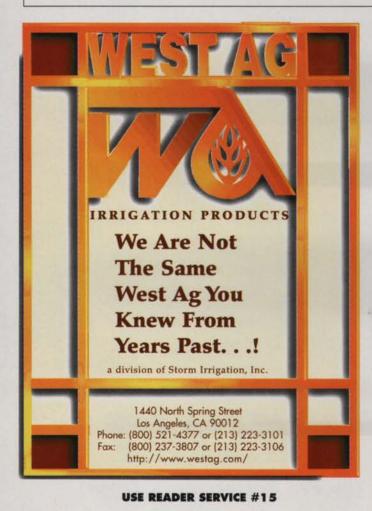
AUG. 1-3 Southern Nurserymen's Association Convention, Atlanta. Contact: 770/973-9026.

AUG. 2-5 International Society of Arboriculture Show, Salt Lake City. Contact: 217/355-9411.

AUG. 6 Illinois Landscape Contractors' Association Summer Field Day, Joliet. Contact: 630/932-8443.

AUG. 6-9 Association of Professional Landscape Designers summer conference, Boston. Contact: 312/201-0101.

AUG. 27 Ohio Turfgrass Foundation Field Day, Columbus. Contact: 614/261-6750.





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MARKET TRENDS

(continued from page 12)

equipment is getting so complicated," warned Virgil Russel, executive director, Engine & Equipment Training Council, Dallas, Texas.

"Our industry produces products that need service, and the industry as a whole is producing these products faster than they can be serviced," admitted Dave Zerfoss, president, Husqvarna Forest & Garden Co., Charlotte, N.C. "The overriding issue is the service support for these products, regardless of whose dealer it is.

"We need to establish the equivalent of the automotive ASE qualification for the power equipment industry," Zerfoss continued. "That means we, as manufacturers, have to set aside our territorial concepts and work together on this larger initiative."

Russell noted that along with improving the certification program currently available for engine technicians, the EETC is working with vocational and training schools to encourage more students to consider the profession and continue to educate the teachers.

SURGEON GENERAL'S WARNING: DON'T MOW?

Looking for a breakthrough marketing (continued on page 18)

ASSOCIATION NEWS

he California Landscape Contractors Association set July 19 as the entry deadline for its Trophy Awards Program. For the first time, a Water Budgeting Award will be presented as part of the program.

The CLCA and its women's auxiliary also awarded 47 scholarships totaling nearly \$15,000 to students in landscape-related fields through the Landscape Education Advancement Foundation.

Cindy Code, Group Publisher of Lawn & Landscape and T&O Service Tech magazines, was elected president of the Turf & Ornamental Communicators Association. Other elected board members include Michael Joyce of Novartis Turf & Ornamental Products and Steve Trusty of Trusty & Associates.

Miranda Juett and John DeLisle received \$1,000 awards in the TOCA Publishers Scholarship Program. The program is sponsored by GIE Publishing, Adams Publishing Group, NEF Publishing and Advanstar Communications.

The Florida Nurserymen & Growers Association has a new home. It is located at: 1533 Park Center Drive, Orlando, Fla., 32835. Phone: 407/345-8137.

Industry consultant and author Charles Vander Kooi will be the keynote speaker for the **Professional Lawn Care Association of America's** Annual Conference opening session. The Conference is held in conjunction with the Green Industry Expo. Vander Kooi will also present two additional seminars as part of the conference program.

The Associated Landscape Contractors of America added Kimberly Pratt to its staff as certification manager. Pratt will administer ALCA's Certified Landscape Professional and Certified Landscape Technician programs.

ALCA also hired Bonnie Van Fleet as marketing communications manager with responsibilities for external media relations.

Lou Wierichs of Pro-X Systems Inc., took office as president of the Wisconsin Landscape Federation.

The Association of Professional Landscape Designers elected John Hetrick president. Other newly elected officers are: Edward Christie, president-elect; Gerry Crouch, treasurer and Charlotte Phillips, secretary.



When grubs are actively feeding, you need more than an ordinary insecticide. You need DYLOX® Insecticide. DYLOX is the fastest grub control available. In many cases, it works overnight. And in most cases, it works in 24 to 48 hours. Speed isn't the only thing DYLOX has going for it. It's available in two formulations. Both the 6.2% granular formulation and the 80%



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MARKET TRENDS

(continued from page 15)

plan? Is there a large market of elderly residents who should be your lawn care customers?

Well, a study published by the Beaumont Rehabilitation and Health Center, Birmingham, Mich., might help close

MISSION STATEMENT:

AWN & LANDSCAPE magazine delivers superior, total coverage of the continually evolving professional lawn and landscape contractor market, from indepth business trends and technical research reports to market analysis and new product introductions. For 17 years, L&L has provided industry presidents, business owners and top-level managers the most up-to-date information needed to effectively run their businesses.

the deal.

According to the study of 10 male cardiac patients in good physical condition, pushing a lawn mower may cause heart attacks. The volunteers used manual and automated mowers to mow 25-meter plots of turf for 10 minutes.

"Based on the study results, we believe people who have a family history of heart problems or one or more of the major risk factors for heart disease should think twice before operating a manual lawn mower," warned Cindy Haskin-Popp, Beaumont exercise physiologist. "While mowing, some participants exceeded their target heart range by as much as 20 percent."

Hoskin-Popp suggested that upper body exercise, upright posture, isometric exertion, respiratory strain and hot/ humid weather may contribute to the excessive heart demands.

NOVARTIS ADDS AVID TO PRODUCT MIX WITH MERCK

Merck's divestiture from its specialty chemical business became final in May when they sold their global crop protection business to Novartis, Greensboro, N.C., for \$910 million.

The agreement puts the Novartis moniker on Avid

CORRECTION

Although the John Deere Co. has scheduled a press conference during the OPEI Show in Louisville, the company does not plan to introduce its new product offerings until August.

(abamectin), a widely used miticide/insecticide used in the ornamental, nursery and landscape market. Novartis plans to evaluate the potential for expanding the label and for new formulations for abamectin, according to Tom McGowan, vice president of Novartis Specialty Products.

The pending deal must still clear antitrust scrutiny in

The Brisco

Power Shovel

DVNADIGG

(continued on page 20)

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USE READER SERVICE #19



18 LAWN & LANDSCAPE • JULY 1997

Even The World's Greatest, Most Reliable, Most Attentive To Detail, Hardest Working Gardener, Lawn & Garden Service Owner or Landscape Contractor Will Starve To Death — Without A Steady Flow Of New Customers!

"I started with a lawn mower and built a million-dollar-plus, highly profitable, and highly respected landscape contracting business at a rapid pace—because of my Customer Attraction Secrets...now, my Free Report reveals my secrets, to those who qualify."

Dayton, Ohio- Are you frustrated by advertising that never makes the phone ring? By being beat out of good jobs by cheap bidders? Feeling like you're starting your business all over again every season? Stuck at a certain level?

A million dollar per year "entrepreneur of the year" says that most of his peers' and competitors' marketing is anemic, me-tooistic, dull, full of costly waste, and ineffective. Arrogant? Egotistical? Marty Grunder says: "React to me any way you like-but one thing is for sure, if you are in the landscaping business or maintenance business, whether you are small or large, my marketing methods can easily double or triple your business in just one year, provide better customers, help you target and get exactly the kind of business you want, increase profitability and stability, and absolutely mystify and trump your competitors.

Big talk? Yes, it is, but this Grunder wiseacre has been showing off-and blowing sceptics away-his entire life. As a freckle-faced, red headed Dennis-the-Menace type kid, he started his business with nothing more than a "push" lawn mower and chutzpah. That little business went to 75 regular customers almost overnight. As a full-time student at the University of Dayton, while his buddies drove to school in old "beater" cars and flipped burgers for pocket money, Marty arrived in his Grunder Landscaping Company truck and, at age 21, did over \$300,000.00 in business. Last year he was named Young Entrepreneur of the Year by the Small Business Administration's Midwest Region, in the 1 to 25 employees category. Currently, Marty oversees a staff of 30, 18 trucks, a backhoe, an assortment of other equipment, and a diversified business doing everything from basic residential lawn maintenance to complicated commercial landscaping projects-and, this year, breaking \$1.5 million in annual sales. He's also investing in land, lecturing from time to time, and working with other landscapers as their "marketing coach."

Million Dollar Marketing Secrets Revealed In A Free Report—If You Qualify!

Grunder DOES have "secrets" for building these types of businesses, too. Here are just a few examples:

- 1. How to **spark referrals**... how to turn "small accounts" into big business.
- How to increase Val-Pak Coupon, directmail and Yellow Pages advertising results by 10% to 30%...make your advertising much more productive and be able to accurately measure its value.

- The 5 biggest mistakes 95% of the people in this business make when advertising and how to avoid them.
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- 13. The "4-Page" marketing tool used 6 to 10x a year that is guaranteed to increase your business by at least 30% year after year...automatically!
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Marty asks that you <u>call for his free</u> <u>Report ONLY if</u>: (1) you own your own business or are the President, CEO, manager or marketing manager for the business; (2) you make the decisions about advertising, marketing, and customer service investments; (3) you are currently unhappy with some aspect(s) of your business; (4) you recognize that in today's competitive environment, just "doing a great job" isn't enough to

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MARKET TRENDS

(continued from page 18)

the United States and abroad, but approvals are expected some time later this summer.

MACH 2, CONSERVE CLEAR FAST TRACK

Officials for RohMid, Parsippany, N.J., and DowElanco, Indianapolis, Ind., are gathering state registrations for MACH 2 turf insecticide and Conserve SC, respectively, in the wake of the U.S. Environmental Protection Agency's recent registration of the products.

Although registration is expected from most states by the middle of this month, RohMid manager John Thomas said that availability will be very limited for the remainder of this year. Thomas expects that both the liquid and granular formulations will be in full production for the 1998 season.

MACH 2 contains the active ingredient halofenozide, which affects the normal molting process of a variety of grubs and caterpillars.

Conserve is labeled for landscape and turf applications, as well as nursery, golf and arborist care. This first product in the spinosyn class offers control of sod webworms, cutworms and armyworms along with a variety of ornamental insect pests.

Conserve is expected to be available on a limited basis beginning this August with full availability next year.

TORO ENJOYS RECORD QUARTER

The Toro Company, Bloomington, Minn., boosted by the acquistion of James Hardie Irrigation, announced record net sales and profits for its second quarter. Net sales for the quarter increased 22 percent to \$352.2 million with income of \$19 million, an increase of 13.1 percent.

Donald St. Dennis, director of public relations, attributed much of the record sales to the professional market, noting that sales to the consumer market were flat. Commercial sales were up 12.4 percent from last year, and Toro-Hardie irrigation sales jumped 117.9 percent over the same time. The company also announced all administrative and distribution functions for Toro Hardie Irrigation, Laguna Niguel, Calif., will be moved to Toro's Riverside, Calif., irrigation headquarters.

IN BUSINESS...

The DowChemical Company bought Eli Lilly & Company's share of DowElanco...Stens Power Equipment Parts opened a new distribution center in Atlanta, Ga... Grotech U.S.A. is doing business as TrynEx Inter-national ...BlueBird International Inc. acquired EverGreen International Inc....Asgrow and Hartz moved their headquarters to Des Moines, Iowa.

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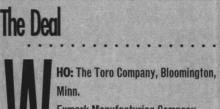
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BREAKING NEWS

EXMARK'S THE SPOT FOR TORO

The industry has been anticipating a shakeup among mower manufacturers. The first sign of that may have occurred in early June when The Toro Company, Bloomington, Minn., announced it signed a letter of intent to acquire



Exmark Manufacturing Company, Beatrice, Neb.

WHAT: Toro will acquire Exmark for between \$28 and \$30 million.

WHEN: Expected to close by end of August.

., announced it signed a of intent to acquire Exmark Manufacturing Co., Beatrice, Neb. This deal comes just weeks after

This deal comes just weeks after the new ownership of Yazoo Power Equipment, Jackson, Miss., signed a letter of intent to acquire F.D. Kees, Beatrice,

Neb. (Yazoo's

new president, Alan Herstrum, declined comment until the transaction is finalized.)

Toro's acquisition of the \$50 million manufacturer of commercial mid-sized walk-

behind and zero-turn radius mowers gives it annual revenues of approximately \$100 million in mower sales – estimated at 25 percent

of the market. The acquisition represents a significant, and to some people surprising, step toward the company's goal of becoming the "worldwide leader in the supply of equipment, services and information systems for the landscape contractor," as Kendrick Melrose, chairman and chief executive officer of the company put it. **WONDERING WHY.** Some of Toro's chief competitors expressed surprise that the manufacturing giant would look to another company to complement its product line.

TORO

"I'm not sure why Toro would make this deal," questioned Bob Walker,

president, Walker Manufacturing, Fort Collins, Colo. "It really doesn't need Exmark in terms of its product line. On it's face, this looks like a deal where Toro is just buying out one of its competitors."

"With all of Toro's expertise and resources, I'm surprised it wouldn't just develop the products itself in researchand-development," agreed

873

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(614)

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BREAKING NEWS

Dane Scag, president, Great Dane Power Equipment Inc., Elm Grove, Wis.

In questioning the reasons behind purchasing Exmark, manufacturers pointed to the 15-year-old company's reputation as favoring affordable prices over higher quality products. "Exmark has the reputation of being a price and volume leader in the market," Walker noted. "It put volume ahead of everything else, so the margins were extremely thin."

Dick Tegtmeier, president, Encore Manufacturing, Beatrice, Neb., was involved with the formation of Exmark in the early 1980s and still holds Exmark stock. He wasn't surprised that Exmark executives would sell the company. "Manufacturers can control the market either



by profit or by volume," he explained. "In my opinion, Exmark designed its sales program to control the market by pricing in order to position the company to be sold." "One benefit to Toro might be Exmark's established dealer/distributor network which targets contractors — Toro's present network focuses more on institutional and golf sales," Walker added. "But I can't see Toro allowing Exmark to be run the way it was run in the past."

TORO TALK. Don St. Dennis, director of public relations for Toro, pointed out additional benefits the company expects to enjoy from the acquisition. "We see this as one of the fastest growing segments in the lawn care or turf maintenance markets," he explained. "Exmark was one of the fastest growing companies in this market. Although we feel we've made some very good progress in developing our own products, this deal

offers us the opportunity for instant market share and name recognition."

St. Dennis added that Exmark will continue to operate from its

current headquarters in Beatrice and will market its products under the Exmark name. He added that John Smith, president and chief executive officer of Exmark, will Toro hopes to increase market share and name recognition with the Exmark acquisition. Credit: Toro

oversee the operations in Beatrice.

St. Dennis rejected claims that Exmark sacrificed quality to produce a less expensive product. "Exmark has a very healthy market share and is highly thought of for its widearea and zero-turn mowers," he countered. "Yes, this move does gives us a wide breadth of price points to offer the market, but it also complements our product line."

RAMIFICATIONS. The question now facing the industry is whether or not these deals signify an impending shakeup among manufacturers, or if they are just isolated incidents. Most agree it's a harbinger of things to come.

"I think it's clear there's going to be additional changes," noted Smith.

"There's about 39 manufacturers of midsize commer-



cial mowing machines," according to Scag, "That's a lot of manufacturers for this part of the industry."

Tegtmeier agreed consolidation is likely to continue. "Toro and Jacobsen have always combined for about 80 to 82 percent of the turf industry," he said. "All of a sudden, John Deere decides it wants a big chunk of the industry, and it will be difficult to stop them. So Jacobsen buys Bunton to broaden its base and Toro makes this deal to strengthen itself."

Tegtmeier did see one silver lining in the Toro/Exmark deal. "I have a feeling our industry may be able to make a little bit of margin again without Exmark controlling the pricing," he related. "They really forced the rest of the industry to lower its prices as well, and that hurt some companies." – *Bob West*

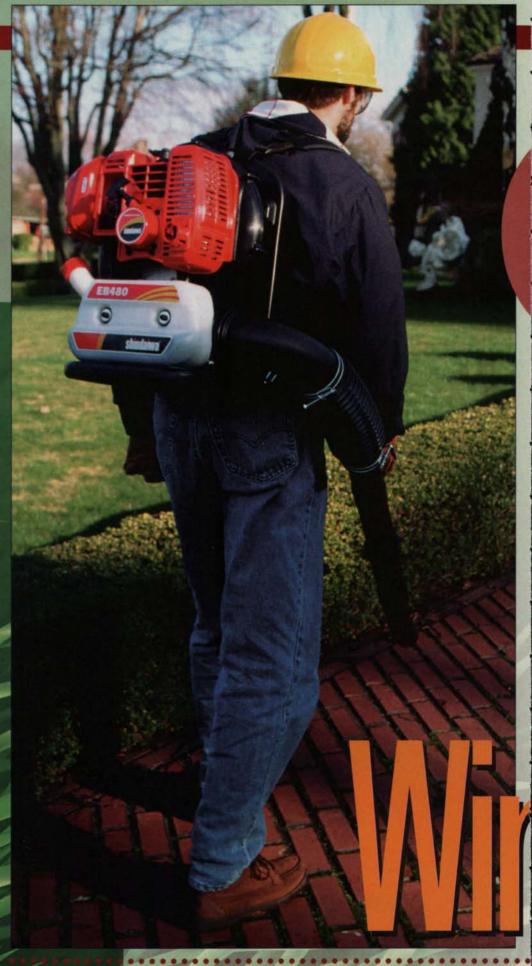
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eye on **EQUIPMENT**

Credit: Shindaiwa

Los Angeles' year-round ban is the latest and most extreme result of the public backlash against the gas-powered backpack blower, which continues to hamper landscape professionals nationwide,

By Susan Gibson



hey've been called "obnoxious," "whiny" and "annoying." They've been the subject of complaint in communities across the United States during the last 11 or 12 years. And contractors love them.

Gas-powered blowers have been at the center of a controversy for years, but it's a conflict that keeps returning like gag birthday

candles that refuse to go out. According to Robin Pendergrast of International Marketing Exchange in McHenry, Ill., who has been tracking blower initiatives across the country and helping landscapers fight back, there are more than 400 hundred communities with noise control initiatives in the United States aimed at limiting or banning use of gas-powered blowers.

The issue runs deeper, though, and in some places, it has spilled over into talk of limiting the use of other landscape maintenance products such as gas-powered hedge clippers and even mowers.

These waves of initiatives have been building in recent years, but the waters of regulation may hit flood stage soon as highly visible cities such as Los Angeles pass extreme noise ordinances.

"With all the negative coverage being given to blowers in consumer magazines and newspapers that contain tremendous amounts of misinformation, I estimate that we could see a tripling in the number of communities restricting blower use by this time next year," said Pendergrast.

LA. STORY. Los Angeles' ban on any gas-powered hand-held blower operating above 65 dba within 500 feet of a residence was slated to go into effect July 1. At this writing, the ordinance looks as though it may be challenged in court. Even if it is not, the ordinance holds several potential repercussions for the green industry:

LOS ANGELES

- ORDINANCE: No gas-powered
- blower use within 500 feet of a
- residence any time during the year.
- PENALTY: A \$1,000 fine to the
- contractor and the property owner.
- STATUS: Effective date was July 1.

'Area contractors will have to restructure their operations in terms of manpower, machines and customer prices, if they can. If contractors can't raise their prices, they will have to settle for lower profits due to increased labor costs.

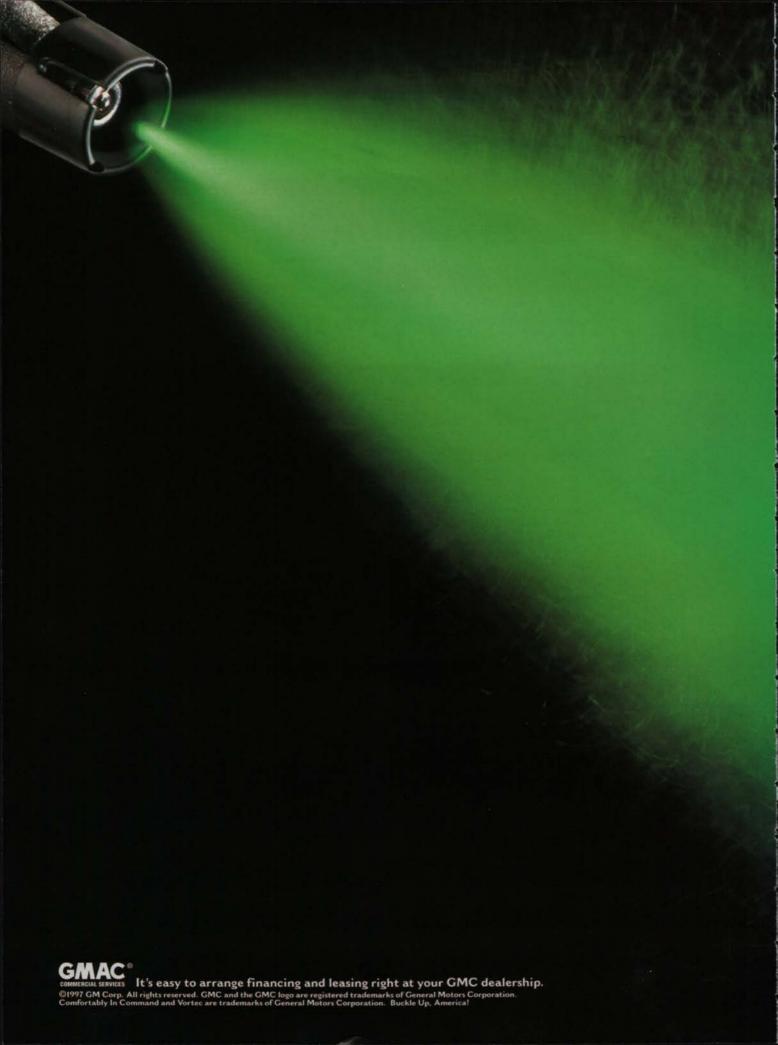
• Customers will have to get used to paying more, having less done on their landscapes, accepting possibly lower standards for their landscapes' appearance or maintaining their landscapes themselves.

• Dealers and distributors have already lost business through plummeting sales of gas-powered blowers to both consumers and commercial users, in expectation of this ordinance.

• Los Angeles' move has already encouraged other California communities to discuss or enact limitations or bans on power blower use. Some of these discussions have covered other types of landscape equipment.

• Communities throughout the U.S. are watching the situation, especially in active areas around Chicago and New York City, to see how the situation plays itself out.

The situation has been bubbling for years, spurred on in the last few years by City Councilman Marvin Braude, slated to retire July 1. Earlier this year, he got what he (continued on page 28)



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*Actual mileage varies with driving habits and environmental conditions. See owner's manual for details.



COMFORTABLY IN COMMAND"

eye on EQUIPMENT

(continued from page 25)

wanted — a much publicized debate on the issue — complete with testimony offered by movie stars.

"All the points of their arguments have been negated by new technological developments and the upcoming California Air Resources Board restrictions," Pendergrast pointed out. "The issue isn't as much leaf blowers as it is politics."

Larry Rolfes, director of governmental affairs for the California Landscape Contractors Association, agreed: "Most cities we work with are reasonable, but I can't say this

SCARSDALE, N.Y.

- ORDINANCE: Proposed ban on
- blowers June 1 to Sept. 30.
- PENALTY: First violation merits a
- warning, Violations thereafter earn a
- minimum fine of \$50.
- STATUS: After the New York State
- Turf & Landscape Association had
- the ban declared unconstitutional in
- court, the verdict was overturned on
- appeal. The industry has decided
- against further appeals.

one is. We think outright bans on leaf blowers is a mistake."

At a meeting in early May, the Portable Power Equipment Manufacturers Association and other groups asked the city to consider a one-year delay. Don Purcell, PPEMA's executive director, explained: "We asked for the delay because CARB is expected to take action within the year and that could make the noise question moot. They weren't listening. They turned it down and had no interest in delaying the ban."

At press time, the city and the industry were discussing a possible compromise which would allow use of power blowers using vacuum attachments that keep the noise level to 65 dBA or less. There was also discussion of taking the ordinance to court and the remote possibility that the city would repeal the ordinance after Braude retired.

Questions remain on whether commercial operators would accept a compromise such as this and even whether many contractors will follow the ordinance as it stands.

CLCA used an industry study to estimate that it takes approximately five hours of manual work to do the work of one hour with a blower. It also surveyed its members to determine that the cost to the contractor and the property owner is expected to rise approximately 20 percent to 40 percent when blowers are banned.

Whether the marketplace will pay higher prices, or whether contractors are content to live with lower margins, is yet to be determined. As more and more communities try to regulate operating hours or ban blowers outright, the industry will have to adjust its traditional practices.

It may mean explaining to homeowners why they will have to pay more for the same services. Rolfes noted that some homeowners may choose to maintain their own properties or let their standards for maintenance slide. "Landscapes may not look the same. You won't get the same manicured, perfect look with a blower," he noted.

Garris Chupa, owner of Garris Chupa Landscape, Santa Rosa, Calif., agreed: "Homeowners have become accustomed to a particular look for their landscapes. In

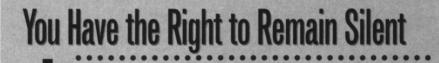
GREAT NECK ESTATES, N.Y.

- ORDINANCE: No blower use, June 15 to Sep. 15. PENALTY: "First offenders" are fined a minimum of \$250.
- STATUS: This is the first season the ban has
- been in place. Officials labeled it a "trial
- ordinance," meaning it will be enforced for one
- season and reassessed in the fall. This approach
- rendered the industry's appeal process useless.
- The industry is also concerned about backlash
- against other equipment.

areas where blowers have been banned, we see pockets of leaves left on a landscape, the garden beds may look more rustic — it's a different look. When a community says, 'We're banning blowers,' it's really saying, 'We're changing the look of where we live,' or 'It's costing us more to keep the same look.'"

For the contractors who may have to accept lower levels of productivity while employees sweep, rake, gather up and cart off landscape debris they used to blow, the noise ordinances may mean a significant loss of dollars.

Most industry experts admit that blowers have been abused and there are many tasks done just as well and maybe more efficiently without a blower (such as moving a large pile of debris some distance).



n response to the many initiatives to limit the use of power blowers, the California Landscape Contractors Association wrote a position paper intended partially as an educational tool. According to Larry Rolfes, CLCA's director of governmental affairs,

"It has caused several communities to rethink their plans."

CLCA recommends that anyone using a power blower anywhere in the country follow common courtesy rules listed below to foster good relations with the public:

- . Run blowers at half throttle and not in the morning or late at night.
- Keep leaf blowers at least 10 feet from doors or windows.
- . Crews should operate only one leaf blower at a time on a small residential site.
- Use rakes or brooms to loosen heavier debris.
- Use the full extension so the air stream can work close to the ground.
- · Use attachments in dry conditions to suppress dust.

HEATING UP. California has some 40 communities that have restricted or banned blowers, but they are not the only region in the country battling the tide of public opinion.

The village of Great Neck Estates, N.Y., banned blower use between June 1 and Sept. 15 after a three-month battle between a group of citizens and the Nassau-Suffolk Landscape Contractors Association.

According to NSLCA Executive Director Pat Voges, legal counsel has said that the ordinance would be difficult, if not impossible, to overturn because it is being termed a "trial ordinance" by the community. In other words, officials will reevaluate the bill in the fall to determine if it worked the way it was supposed to.

"The lawyers told us that if we appealed it, a judge would likely say, 'Well, this is trial law. Let's take a look at it after the season,'" said Voges. "They aren't very optimistic."

Although the rhetoric at the community meetings leading up to the ordinance was at times bizarre, Voges said the group was well-organized and was tapped into the activities of other citizen groups attacking blowers on the East Coast.

"We presented facts and figures showing the potential economic impact of a ban on blowers that included potential landscape service price hikes to customers," explained Voges. "But they came back with written testimonials from landscape customers in Scarsdale and Larchmont where bans are in place claiming that at no time did the price of their landscape service increase, in spite of the ban. This was definitely a well-organized effort."

(continued on page 90)

SANTA BARBARA, CALF.

- ORDINANCE: Proposed ban on all
- blowers, both gas and electric.
- **PENALTY: Undetermined**
- STATUS: After nearly a decade of
- appearing before city council, a
- citizen took matters into his own
- hands and generated 9,600 signa-
- tures on a petition to get the ban on
- the ballot. Voters decide in
- November.

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eye on EQUIPMENT

The Cost of Clean Air



by Paul Schrimpf ince 1990, the formerly unregulated hand-held power equipment industry has had to adjust itself to meet the public and government demands to curtail emissions.

Nearly overnight, in a business sense, millions of dollars were spent by manufacturers to create completely new research and development facilities for the testing and building of equipment to comply with regulations created by the federal government and the state of California.

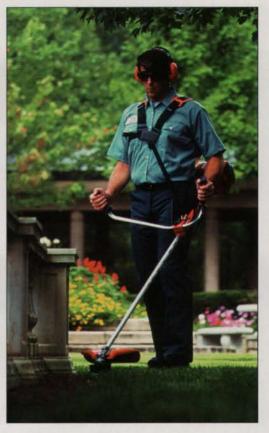
By 1995, after months of negotiations with the U.S. Environmental Protection Agency and the California Air Resources Board, the industry got what it felt were reasonable standards with EPA's Phase 1 rules and CARB's Tier I standards. Virtually identical, both required a 30 percent reduction in engine emissions and significant, but technologically feasible, adaptations for most small gas-powered engines.

Now, the industry has its sights set on nailing down the second level of emissions regulations with both CARB and EPA. Federal regulators have proven to be willing partners in the rule development process, but working with CARB officials has been significantly more challenging for hand-held power equipment manufacturers.

All this change in such a concentrated period of time has manufacturers experimenting with a wide range of adaptations of the two-cycle engine. And new engine designs are being developed that could revolutionize the hand-held equipment industry.

What these rules will ultimately do to change the hand-held power equipment of tomorrow is unknown, but it's clear that major changes are coming. The result will be improved, cleaner engine technology, but will likely also be higher end-user cost.

NO CONTROL. Contractors concerned about the direction equipment is heading find themselves stuck between the forces negotiating the emissions rules. Bob Grover, vice president of landscape management for Northwest Landscape Industries, Tigard, Ore., said he hopes the industry and regulators can come to a mutually beneficial solution. *(continued on page 32)*



String trimmers are among the many types of power equipment that will be affected by regulations designed to reduce the emissions produced by twocycle engines. Credit: Husqvarna

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Dirk Herrmann Artistic Maintenance Lake Forest, CA



Dirk had a growing problem. His old GM C-7000 trucks required expensive drivers with special licenses. And his smaller C-3500s just couldn't haul enough mulch and clippings to get the job done. Dirk solved his problem by buying Isuzu NPR trucks with 15-ft. dump bodies. The Isuzu trucks required no special license to drive, yet they hauled virtually the same payload as his more expensive C-7000s. Explained Dirk, "For what we were paying for small dumps, we're getting bigger trucks that need no special license, and they're easier and more maneuverable to drive."

Dirk likes his NPRs' fuel economy too: "It's even better than my small dumps." He also likes the extra room provided by the three-person seating. And with the convenient tilt cab, his mechanics can easily access and maintain the familiar gas V-8 engines. It's no wonder Dirk plans to continue growing his business with Isuzu. You can too. Call (800) 785-5445 ext. 2309 for your nearest dealer and your Free Information Kit. Or visit us at www.isuzucv.com.

eye on **EQUIPMENT**

(continued from page 30)

"Philosophically, I support the making of equipment that produces lower emissions," he asserted, "but on the practical side, I need to have equipment that can do the job. My biggest fears are what regulations will do to the equipment and how much they are going to cost the company."

THE SAME PAGE. Earlier this year, the indus-

try signed statements of principle with EPA that will guide the development of rules for the second phase of federal regulations. While not legally binding agreements, Don Purcell, executive director of the Portable Power Equipment Manufacturers Association, Bethesda, Md., is confident that the industry and EPA are on the same page.

In its initial proposals for Phase 2 emis-



sions rules, EPA has proposed a 30 percent reduction in emissions over and above the 30 percent reduction from the first phase. Implementation of the second phase allows a three-year phase-in period from 2002 to 2005. Other requirements include a testing program to evaluate pollutant levels and compliance provisions to ensure engines meet standards for their entire usable life.

Finally, EPA will conduct a technology review to determine whether a third phase of emissions rules should be considered. This is scheduled for the year 2001.

All of these dates may appear far away, but the industry will require the time to recuperate the investments they made in research and development to meet the first level of emissions, while simultaneously investing in research for new technology.

WORTH THE HASSLE? California is only one state in the union, but it commands the manufacturers' attention based simply on raw size. Of the more than 7.37 million handheld units that were sold in 1996, approximately 8 percent to 10 percent was sold in California, generating sales of \$350 to \$400 million, according to Purcell.

"Some manufacturers may give up the California market because the costs to meet CARB may be so phenomenal," admitted John Keeler, senior vice president, RedMax, Atlanta, Ga. Companies marginally in the two-cycle business, such as engine manufacturer Tecumseh, Tecumseh, Wis., already stopped selling small engines in the state before Tier I. Manufacturers more entrenched in the two-cycle market are circling the wagons and preparing to research new engine technologies and negotiate reasonable regulations with CARB.

The driving force behind the negotiations, PPEMA, along with other organizations, got the Tier I standards to closely resemble the Phase 1 regulations that EPA eventually settled on. The proposed Tier II rules released in May, however, go far beyond the requirements of EPA's Phase 2.

CARB, in its initial draft of the rules, is asking manufacturers to reduce emissions by an additional 70 percent for model year 1999. Although some equipment now approaches this level, no fiscally feasible twocycle technology can reach this lofty plateau.

Purcell and others in the industry have

eye on **EQUIPMENT**

said that the Tier II rules, as proposed in May, will mean the elimination of gaspowered two-cycle engines in California.

"Based on the proposals they have set forth, we believe it is the intention of CARB to eliminate all two-cycle engine sales in California," stated Purcell.

Most discouraging for PPEMA and its members was the amount of discussion and negotiation that took place prior to the release of the proposed rules in May.

"We met with the staff several times and shared a great deal of confidential information, but their new proposals did not reflect this," said Kim Liechty, engineering manager with Poulan/Weed Eater.

"They've decided this is what they want to do," Liechty continued. "They seem to have their own agenda set that they intend on enforcing, even if there is no good logic behind it."

Indeed, CARB is interested in pushing technology forward to meeting its emissions demands, according to CARB public affairs director Jerry Martin. "In the first tier of regulations, about 50 percent of the equipment already met the standards," said Mar-

CARB Emissions Rules

TIER I

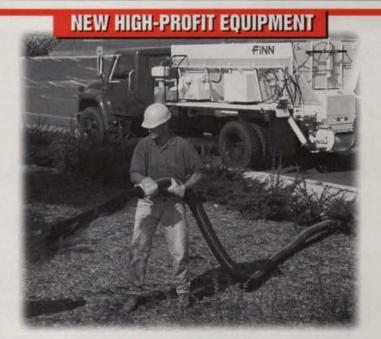
A 30% reduction in emission in HC and NOX emissions for all gas-powered, hand-held power equipment below 25 horsepower. Enforcement of the rule began with the 1996 model year.

TIER II

An additional 70% reduction in emissions is being proposed for the same equipment category. CARB has proposed extending the compliance deadline to model year 2000. CARB is presently taking comments about the rules, and will publish the next draft of the regulation this fall. tin. "The second tier is much more stringent and will require that each manufacturer do something to meet the requirements."

Martin said the CARB staff has seen enough potential engine technology alternatives that it believes Tier II as proposed is a good standard. Unfortunately for the makers of two-cycle gas-powered equipment, none of the alternatives Martin mentioned involve traditional two-cycle engines.

"There are ways to improve two-stroke engines, such as catalytic conversion and different fuels. However, two-stroke engines are not the only alternative," said Martin. "There are four-stroke engines, battery power and natural propane. These alternatives may not apply in every case, but they have potential. To the staff, there are

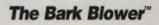


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clearly viable alternatives."

Recent developments have caught the eye of the CARB staff, which may embolden it to stick to its guns. Ryobi America, Easley, S.C., released a trimmer with a four-cycle engine to the consumer market a few years ago that meets Tier II standards. Ryobi, in conjunction with RedMax, will be releasing the engine to the professional market in a trimmer later this year.

American Honda, Duluth, Ga., applied its four-cycle expertise and created its "microfour" engine to run on a professional trimmer. The unit's weight, ability to operate when turned 360 degrees and rpm levels are comparable to two-cycle engines, yet the emissions are within Tier II standards, according to Scott Conner, senior manager of con-

Potential Emissions Reduction Amounts

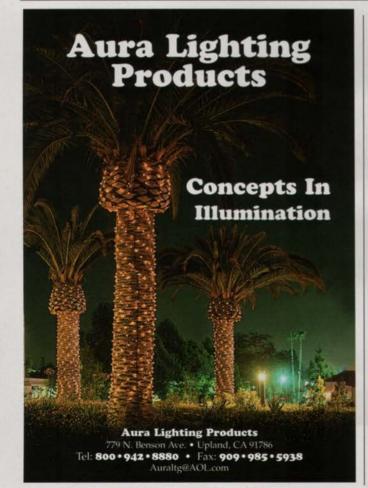
Out of all the emissions generated by machinery and industry in the United States, about 0.8% of that total are generated by hand-held equipment, according to a 1990 EPA report. EPA's Phase 2 proposed rules would require a 56 percent reduction of this percentage. CARB's Tier II proposed rules would require an 81 percent reduction in emissions. The cost to California consumers of the additional emissions reduction provided by the CARB standards would be \$64,000 to \$96,000 per ton of emissions, reflected in higher equipment costs. sumer products for Honda.

The four-stroke technology has its limitations, however. The engine cannot reach the rpm range necessary for high speed equipment such as chain saws and many blowers. It also brings a higher price tag — Honda's trimmer will start at about \$250. According to PPEMA, only about 3 percent to 4 percent of hand-held trimmers are priced greater than \$200.

For their part, manufacturers don't deny that alternatives exist. But all agree that if creating engine technology that meets the standards at an acceptable price to end-users is the goal, then nothing is available now.

The standards are now being reviewed and are available for public comment until the CARB Tier II rules are published this fall. If PPEMA can't get the standards to an acceptable level, then litigation is a real possibility, Purcell stressed.

The author is Managing Editor of Lawn & Landscape magazine.



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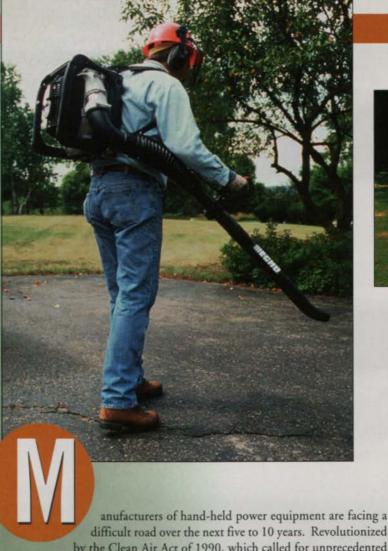
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USE READER SERVICE #36

eye on EQUIPMENT

Manufacturers continue to make improvements to their hand-held power equipment lines despite stillevolving emissions regulations.

By Paul Schrimpf & Bob West



difficult road over the next five to 10 years. Revolutionized by the Clean Air Act of 1990, which called for unprecedented reductions in emissions, manufacturers are struggling to come up with products that will meet regulations, exceed the expectations of contractors and beat the competition.

Improvements in product design continue to be released, but the U.S. Environmental Protection Agency and the California Air Resources Board won't be finished with their second rounds of emissions regulations until next year. In the meantime, manufacturers are testing a variety of engine types and adaptations to determine what will suit the equipment of tomorrow.

Companies admit they are reluctant to invest too much in research and development now when they don't know what regulatory standards the



Impending emissions regulations aren't stopping manufacturers of hand-held equipment from exploring innovative design and engine technology to put themselves ahead of the competition. Credits: (above) Husqvarna; (left) Echo.

a Away

36



equipment will have to comply with five years from now.

"The regulation issue is very real, and it does affect our willingness to invest dollars in new product development until we know where the regulations are going to be," noted Linda Mayer, vice president of marketing, John Deere Consumer Products, Charlotte, N.C.

"I don't want to say product development has taken a backseat, but we're concerned with the future," voiced Jim Elmer, marketing manager, Tanaka, Kent, Wash. "Right now, the future is regulation compliance."

"We don't have a wait and see attitude," added Mark Michaels, senior forestry product manager with Husqvarna Forest & Garden Co., Charlotte, N.C. "But we aren't sure what level of emissions reduction we will need to hit."

But John Deere, Tanaka, Husqvarna and their competitors are still improving the effectiveness of the blowers, trimmers, edgers and other hand-held equipment.

"We're looking for new pieces of equipment and entirely new categories of equipment," said Mayer.

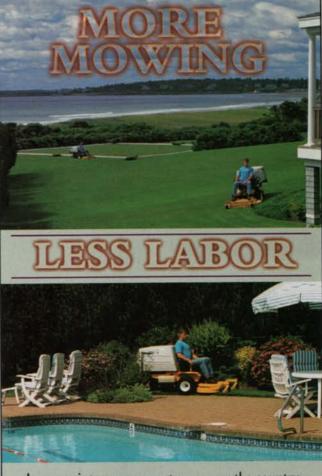
The stick edger is one particular tool enjoying growing popularity among contractors. "We've found as landscape design principles have improved, there's fewer tight areas that require string trimmers," commented Wayne Richards, president, Cagwin & Dorward Landscape Contractors, Novato, Calif.

"Many contractors use string trimmers for edging property, but that's technically incorrect in a lot of ways," observed Phil Christian, president, pdc Associates, Atlanta, Ga.

"Our edger business has taken off," added Gary Hardee, manager of power tools, Stihl Inc., Virginia Beach, Va. "These tools really offer more power for laying out beds or dealing with horizontal growing grasses such as zoysiagrass."

"We filled out our line this year by adding string trimmers,

Noise by the Nun	nbers
Manufacturers have made reducing blowers a product development prior	ority, but in reality, they are
comparable in noise level with many Whispering at 5 feet	Contraction of Contraction of the
Average conversation	
Gas-powered blowers Heavy traffic/noisy restaurant	
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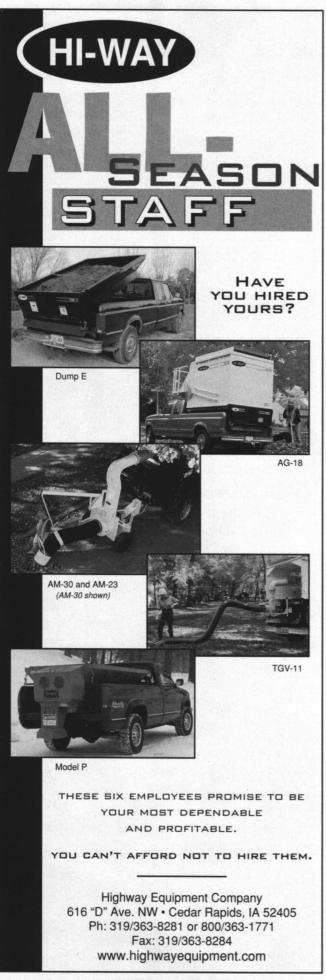
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BLOWER & S



eye on **EQUIPMENT**

brush-cutters, hedgetrimmers, a pruner and an edger," remarked Brian Masterson, marketing manager, Toro Landscape Contractor Group, Bloomington, Minn.

"We've made improvements to each of our four engine families of trimmers," added Dave Dahlstrom, marketing manager, Shindaiwa Inc., Tualatin, Ore. "We added a two-bearing clutch assembly to our T-230 for durability and added a metal engine cover. Contractors demand that these products hold up over time."

"On our blower, we've protected the power source completely so when these tools are thrown in the back of the truck, they don't get torn up," said Hardee. "Plus, all of the cables are protected in one canal for the throttle and on/off control."

Is a "Four" in Your Future?

e have seen the future, and the future looks good. No, it's not world peace or an end to poverty, but the industry's first four-cycle hand-held trimmer. Most manufacturers claim it's the industry's future but question its readiness for market. We had a chance to test the "micro-four" from American Honda. Here's what we found in a test against a leading two-cycle trimmer:

NOISE: The four-cycle engine was noticeably quieter than the twocycle product.

WEIGHT: A criticism of the four-cycle engine is that it weighs more. This was the case, however, the difference was minimal, so we don't think operators would suffer unless using the heavier product continuously for periods longer than 30 minutes.

POWER: The four-cycle trimmer handled everything, including dense weeds more than 1 foot tall.

THROTTLE: The two-cycle trimmer responded more quickly to fully opening the throttle. However, the four-cycle trimmer's head took no more than 1 second longer to get to full speed.

FLEXIBILITY: A common question about four-cycle engines is how well they operate when turned sideways or upside down. This particular product responded well in all positions.

DURABILITY: Critics argue that the four-cycle's additional moving parts will create more maintenance headaches than two-cycle products, but this remains to be seen over extended use by contractors.

MAINTENANCE: Separate oil and gas reservoirs in four-cycles require daily maintenance attention. – *Paul Schrimpf & Bob West*

NOTE: This information should not be interpreted as an endorsement or criticism of any particular product or manufacturer.

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> > So is an XT a skid steer? Maybe. Maybe not. A better question might be: Is there a job that an XT can't handle?

XT means power.

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Aerial Lift Takes Users Higher

The **Eagle 47** from **Ameriquip** is a trailer-mounted, articulated aerial lift with a 25-foot side reach and a 47-foot working height. It features positive

bucket leveling, 360-degree continuous rotation and excellent portability for easy access to a variety of maintenance tasks. A proportional control valve with neutral position interlock allows simultaneous twofunction operation and complete feathering capability. Heavy duty, quick adjust outriggers are an integral part of the lift. An 8-hp gas engine is standard equipment, and 24-volt DC electrical power or dual power (gas and electric) options are available. An insulated model is also available. **Circle 600 on reader service card**



Bandit Eliminates Job Site Waste

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Bandit Industries' Model 3680 is a high performance, cost effective machine for reducing and recycling materials, including construction and



demolition, pallets, railroad ties, sawmill logging and green waste such as stumps, trees, brush, leaves and grass, palm waste, newspaper (wet or dry) and cardboard.

The 3680 has an opening of

30 inches by 60 inches and a very powerful feed system that controls the flow of material into the cutting mechanism. The 3680 is totally road legal without permits.

Circle 601 on reader service card





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Save up to 50 percent on grass seed costs and still grow thick, uniform stands with a **Turfmaker Seeder** from **Brillion Iron Works**. Its legendary precision seeding makes each seed count. Get improved seed to soil



contact, increased germination, faster emergence and lush stands. Built for years of precise operation. Available in 5foot 4-inch, 8-, 10- and 12-foot widths. Options include either pull type or 3point hitch models.

Circle 602 on reader service card

Power On The Move In This Trencher

Brown Manufacturing has introduced a new model of their mini-trenchers designed strictly for defining landscape beds or for installing plastic edging.

The **Model F-780H Bededger** has the same trenching and edging capabilities of the Model F-702 Trenchmaster, but it is equipped with a steerable rear wheel and a larger 8-hp Honda engine. The 8-hp Honda engine provides the extra power needed to trench in the hardest clay soils, and



the steerable wheels make fancy curves and tree rings easy. Circle 603 on reader service card



Heavy Duty Spreader Gives Precise Widths

The durable **Super-Flo** spreader is available from **Central Parts Warehouse**. The Super-Flo features a 1¼-hp, epoxy-sealed motor, electronic speed



control that provides precise spread widths from 3 feet to 50 feet and a 9-inch stainless steel spinner disc with flighted auger.

The hopper holds 6 cubic feet with a 650pound capacity. The Super-Flo includes a heavyduty mounting kit and a one-year parts warranty. Optional items include the new Class III quick disconnect mounting kit and the Par 36 spreader light.

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Daniels Plows The Way To Wintertime Profits

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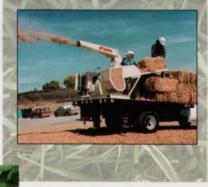
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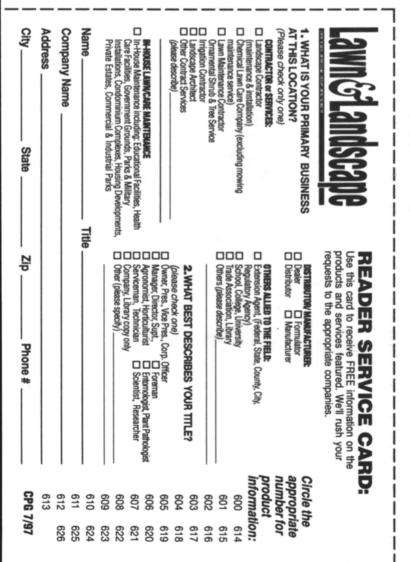


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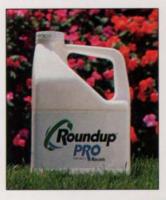
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Make Paver Installation Easier and More Profitable

BRIC-EDG, from Oly-Ola Sales, the original "L-shaped" paver restraint,

has been used worldwide by landscape professionals since 1989. Our flexible style makes curves easily without any extra cutting or snipping. BRIC-EDG is available in 2inch and 1½-inch depths as well as two lengths – 15 feet and 7½ feet (7½ feet can be shipped by UPS) and is available in both flexible and



rigid sections. BRIC-EDG can be installed two ways — either under or along the outside of the paver. Constructed of black vinyl, BRIC-EDG has no sharp edges, will not rust or kink. Non-bending, sturdy steel stakes prevent movement and secure edging.

Circle 615 on reader service card



Palmor Products Puts Contractors Right On Trac

At **Palmor Products**, personal and professional service to dealers and distributors has been the focal point for over 22 years. Working to meet the



needs of an ever-changing marketplace, Palmor has created the most extensive line of lawn vacuum equipment in the industry known as **Trac Vac**.

Whether it's the homeowner with a riding mower or a commercial operator using an intermediate walk-behind, a zeroturn machine or a three-wheel rider, the rugged construction gives the operator a sense of confidence. Palmor Products has combined its most popular vacuum

systems with a highly efficient chipper that will make yard clean up easier. Circle 616 on reader service card

Retaining Wall & Paver Tools Lighten the Labor Load

Pave Tech tools and equipment are designed for paver, retaining wall and

precast concrete products. These handling and installation products are the world's finest. Clamps, splitters, sawing accessories, marking devices, diamond blades, PaverMax mechanical paver laying equipment and Mammoth vacuum handling equipment are among the many products available.

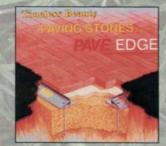
Circle 617 on reader service card







The **Pave Edge** paver restraint system from **Pave Tech** is the only selfsupporting edge restraint designed exclusively for pavers. Made of a strong PVC compound, it's totally invisible when in place and will not rust, warp or



frost heave. Lightweight and simple to install, the Pave Edge system comes in 10-foot-long sections that are both rigid and flexible for straight or curved edges.

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New Wave in Garden Ponds is Perfect Ponds Made Easy

Have you ever installed a waterscape that required too much maintenance, took too long, cost too much, or you wanted to redesign? Have you ever experienced a missing pump fitting, a leaking waterfall or a green, algae-

filled pond? We have all of the answers to these challenges for professional water garden installations with our new SuperPond Kit Catalog from Pond Supplies.

Our new PondSweep Skimmers and PuriFalls biological filters and waterfalls simplify both installation and maintenance, and they are affordable! They are great for new installations and retrofits on liner ponds.

Circle 619 on reader service card





New Dwarf Fescues Offer Endophyte Enhancement

Seed Research of Oregon's SR 3000 and SR 3100 dwarf-types are the newest improvements in hard fescues. Each contains very high levels of viable endophyte providing natural insect resistance and the ability to persist in adverse environmental conditions. SR 3000 and SR 3100 both form an attractive, dark green, dense turf. They require minimal water and fertilization and exhibit excellent performance in the shade. These characteristics make



SR 3000 and SR 3100 ideal for use on golf courses, parks, roadsides and reclamation areas, as well as residential properties.

Circle 620 on reader service card

Snapper TurfCruiser Provides A First Class Cut

Snapper's TurfCruiser[™] outfront mower includes such first-class features as a low deck profile for cutting under shrubs, zero-turning radius for excellent maneuverability and mulching capabilities. A powerful 22-hp Kohler Command OHV engine with full pressure lubrication and a spin-on oil filter powers the TurfCruiser and its 61-inch deck made of 7-gauge steel.

Additional engine assets include a 15-amp charging system and an 11-plate 380 CCA battery. With a hydrostatic drive system featuring separate hydraulic lines, filtering systems, cooling fans and reservoirs for each hydro unit, users can expect a long life of quality performance.

Circle 621 on reader service card





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Throw away your shovel and save hundreds of dollars in labor by using the



Edge-R-Rite by Turfco Mfg. Quit using the Edge-R-Rite by Turfco Mfg. Quit using shovels and trenchers to edge flower and bush beds; the Edge-R-Rite does it quickly and cleanly. The five unique blades also make installing all kinds of edging easy and profitable. Concrete or brick tree rings can be installed in minutes. Save hours of labor on edging and installations, wire installation, drainage problems and general edging. A power shovel does sidewalks too! Circle 622 on reader service card

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T & O Service Tech is the only magazine dedicated to training and educating the front-line service technician in the lawn and landscape industry.

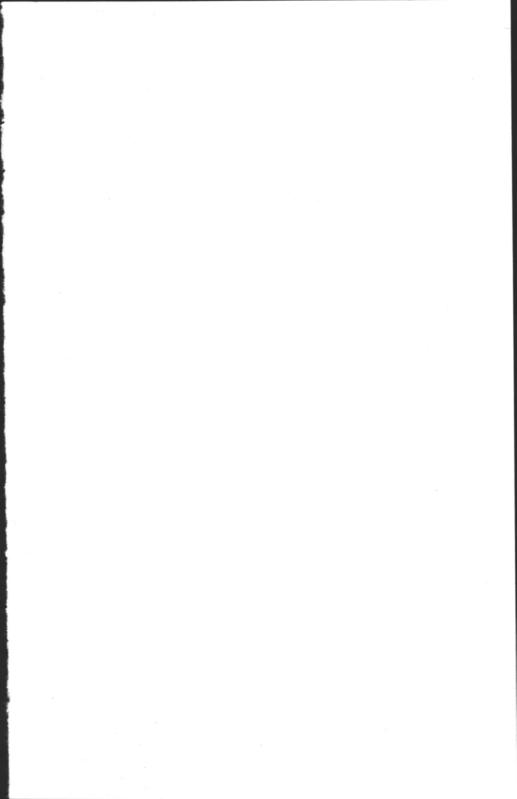
1.8.0 Service Tech provides technical and practical information in a variety of important areas, including equipment and pesticide use and safety, irrigation systems, pest and disease identification and control and tree and turf care. It also addresses critical sales and marketing issues such as customer communication.



delivering excellent service and working to become a true green industry professional. Subscriptions are \$8 per year for four issues.

Circle 623 on reader service card





PENDULUM

When it comes to season-long control of crabgrass, goosegrass, oxalis, spurge and many other troublesome weeds, PENDULUM®



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herbicide gets down to business. No other preemergent turf herbicide can match its spectrum of weeds controlled and cost-effectiveness. • PENDULUM brand Pendimethalin also offers greater flexibility than ever before, with a complete preemergent product line that includes sprayable formulations, combination fertilizer products <u>and now a 2%</u> <u>granular formulation</u>. • When you consider cash rebates available to you from American Cyanamid, it's easy to see that PENDULUM really does mean business. Smart Business. • To learn more about the rebate offer or for the name of the PENDULUM distributor nearest you, call 1-800-545-9525, Ext. 931.



Circle 625 on reader service card

BISNE

4-CYCLE. All of these developments are worthless, however, if the equipment doesn't conform with impending regulations from the California Air Resources Board and the Environmental Protection Agency. (See stories on page 24 and page 30.)

The drastic cutbacks mandated by the proposed restrictions, especially with CARB Tier II, have forced manufacturers to abandon much of their traditional development paradigm and sail into uncharted waters. Much of their efforts right now are focused on making the cleanest operating two-cycle engines possible using technology such as catalytic conversion and fuel injection, as well as developing an efficient, affordable, durable four-cycle engine that is workable for hand-held equipment.

"We, as an industry, can only do so much with the two-cycle engine to make it cleaner. It does leave a lot of unburned hydrocarbons," admitted Dahlstrom. "Trying to make it run leaner means running it hotter, and that will affect the service life of the engine and require cleaning up the exhaust with catalytic conversion systems.

"The next step in the technology is the four-cycle engines," Dahlstrom continued. "The problem is that thus far, a four-cycle has not been developed which works as well as a two-cycle engine."

"Four-cycle engines will have an easier time meeting the regulations, but traditionally they include more moving parts, they are heavier, the power band is different and they don't operate as well when turned over," agreed Elmer.

At least two trimmer products will be sporting new "micro four-cycle" engines in the next model year. American Honda Power Equipment, Duluth, Ga., and RedMax, Atlanta, said they will be releasing products with the four-cycle engine design.

RedMax is working in conjunction with Ryobi North America, Easley, S.C., to bring Ryobi's four-cycle engine to the commercial market. The engine has been available in consumer trimmers for a couple of years at a price point ranging from \$179 to \$229, and has been a success so far, according to Frank Coots, director of public relations for Ryobi.

"It is inherently cleaner than the twostroke engines and easily meets both levels of CARB and EPA standards," noted Coots. American Honda's micro-four engines will power a new line of commercial trimmers, according to Scott Conner, manager of consumer products. Conner said the goal was to give the units a two-cycle feel with the advantages of four-cycle technology.

He claimed that many of the problems associated with four-cycle engines in handheld equipment, such as the inability to turn the unit 360 degrees while it is running, the weight and low rpm levels have been addressed with these new units.

Conner said he expects the engine life to equal Honda's other overhead valve engines, which is about three times longer than a two-cycle engine. There are two engines available – a 22-cc and a 31-cc. The 22-cc weighs about ¾-pound more than comparably powered two-cycle units, and the 31-cc is only a few ounces heavier.

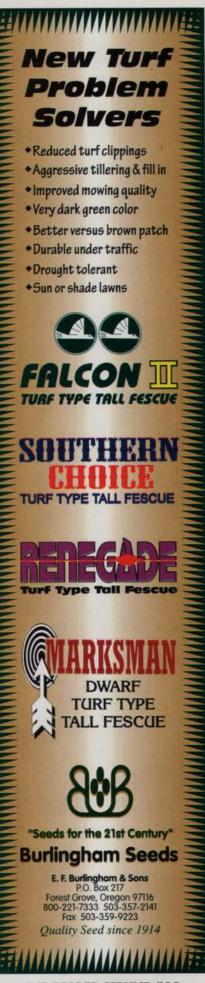
Conner also claimed the four-cycle provides more usable power, which makes a difference in certain applications, such as running a blade on a trimmer. Still, the engine's rpm range of 8,000 to 9,000 falls short of the requirements of high-speed equipment such as chain saws and blowers.

FLEXIBILITY. In addition to the focus on making equipment work better, manufacturers are working to make equipment easier to maintain.

One of the newest innovations has been to tie a group or "family" of equipment together using a single engine. Husqvarna developed the e-tech engine to meet proposed EPA Phase 2 emission standards and chose to make the engine fit a variety of product applications to maximize their research and development investment. It also creates a positive maintenance situation for servicing dealers and contractors.

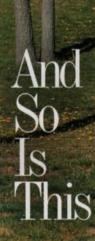
Stihl has also gone to the family concept. "We have 11 different tools running on one engine type," Hardee noted. "All of the parts, filters, starter mechanisms and fuel systems are interchangeable for all 11 tools. This allows a company's mechanic to become very familiar with this engine and use that familiarity to work on all 11 tools with the same competency level."

The authors are Managing Editor & Associate Editor of Lawn & Landscape magazine, respectively.



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1



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When you're thinking of ways to expand your business and boost profits, Roundup[®] Pro herbicide may be your most useful tool. Roundup Pro can solve almost any lawn care problem you can think of. And it can create some opportunities that may surprise you.

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1 GIVE NEW LIFE TO LAWNS

Take out areas of old worn, damaged grass or an unsightly varietal mix and start with a clean slate. The control you get from Roundup Pro gives new turf a healthy start. The perfect first step in a total or partial lawn renovation and to long-term relationships with customers.

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First, zap weeds with Roundup Pro; wait three days for it to move into the roots; then whack 'em with a string trimmer while they're still green. You'll get fast, effective results in hard-to-reach places. Plus, Roundup Pro gives you complete control—roots and all—with no regrowth.

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To get more information on these and other profit opportunities, call the Monsanto Customer Relations Center at 1-800-332-3111 and ask for these sell sheets by name:

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Know Your Postemergence Options





Be ready for this summer's onslaught of turf weeds by understanding the products that keep them under control.

By Nick Christians t is often said that the best weed control is a well maintained turf. This is true as grasses that are properly watered, fertilized and mowed are very competitive with the many weed species that infest turf areas. However, even the best maintained area is not a guarantee against weeds. Diseases, insects, winter damage, soil compaction, wear and other factors which affect the density of the turf can provide opportunities for both grass and broadleaf weed species to grow.

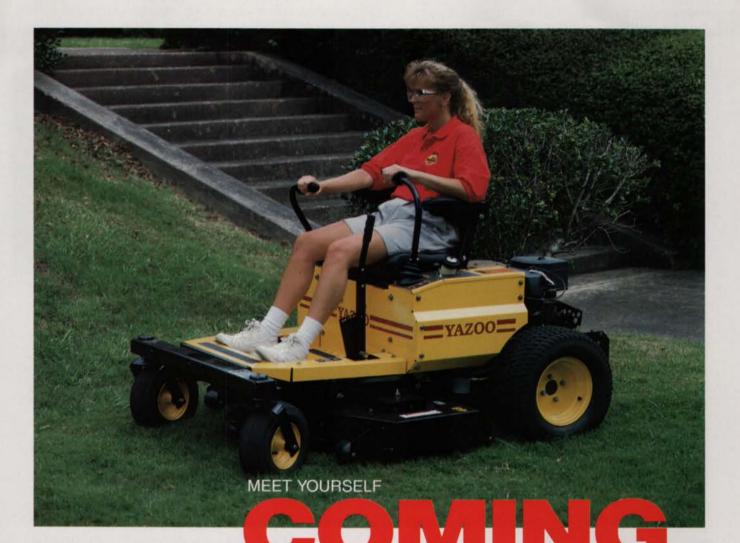
And even the best maintained turf area may need a postemergence herbicide treatment to keep it free of these troubling species that we call weeds.

ANNUAL GRASSES. The annual grasses are species that die each year and must re-grow from seed. There are both summer annual and winter annual grasses that infest turf. Summer annuals are those that germinate in the spring and die in the fall, such as crabgrass, goosegrass and foxtail.

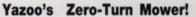
Winter annuals germinate in late summer or fall, live through the winter as a mature species, produce seed in the spring and die. Annual bluegrass (*Poa annua*) is the most common winter annual grass found in turf.

The best way to control summer annual grasses is to apply a preemergence herbicide that will kill the germinating seed with little damage to the mature turf, but perfect timing is not always possible. Customers will sign up for service after the crabgrass has germinated in the spring, or annuals may germinate after the preemergence application has lost its effectiveness.

ANNUAL CONTROLS. The organic arsenicals Methar 30[™] (DSMA) and Daconate 6[™] (MSMA) are the oldest herbicides used for postemergence annual grass control in turf. These products can be effective, but can be difficult to use due to inconsistent control and dependence on specific (continued on page 44) (Top) The lawn on the right is treated with postemergence broadleaf weed control and the lawn on the left is untreated. (Lower) The area on the left is heavily infested with crabgrass and the area on the right was treated with a crabgrass control material. Photos: David Minner







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weed control

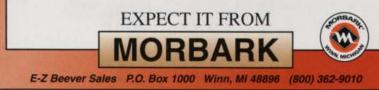
(continued from page 44)

environmental conditions. They also pose a risk of turf phytotoxicity. There is minimal residual preemergence control with the organic arsenicals, and weeds may re-germinate if a separate preemergence material is not also applied. Effectiveness varies by region and these materials should be evaluated on test areas before treating a large turf area. Acclaim Extra[™] (fenoxaprop-ethyl), released last year, is a reformulation of the postemergence annual grass control product Acclaim that was introduced in the 1980s. The new formulation now contains more of the active ingredient. It is more consistent in its control of annual grasses than the arsenicals, and phytotoxicity is not as great a problem. It is not as sensitive to



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First with the disc-style brush chipper . . . first again with the patented E-Z drum-style brush chipper. Morbark remains on the leading edge of chipper technology today. Thousands of customers have turned to Morbark over the years for simple, dependable, heavy duty wood chippers . . . no fancy gadgets, just solid machines designed to last. We thank you for your past business as we continue to make every effort to earn your business now and in the future. The **2000 Series of E-Z Beevers** includes a full lineup of exciting new designs covering every size and price range to fit every waste wood disposal application and budget. Contact your E-Z Beever dealer or call us direct for more details. Compare features, performance and production . . . we believe you'll discover the best value in an E-Z Beever chipper from Morbark.



It is possible to control some annuals with preemergence herbicides, but their germination timing is often such that postemergence treatments make more sense.

.....

weather conditions as the arsenicals but it is less effective when applied following dry conditions. Combining Acclaim Extra with phenoxy herbicides, or applying it after a phenoxy has been applied also results in poor crabgrass control. Acclaim has no preemergence activity and germination may occur in the treated area if it is not combined with a preemergence material.

.

Dimension[™] (dithiopyr) is the first herbicide to have both preemergence and postemergence activity on annual grass weeds. Its postemergence activity is limited to the early stages of weed development, and its effectiveness varies in different parts of the country. In the Midwest, we have found it to be a very good material for early postemergence control. Its preemergence activity is excellent and will usually provide season-long control even in wetter years when other herbicides begin to break down.

Quinclorac, which will likely be called Drive[™] when released, is an experimental product for postemergence control of crabgrass and certain broadleaf species (particularly white clover). It has limited preemergence activity. In my research, I have observed it to provide a very rapid knockdown of weeds. Like Acclaim Extra, quinclorac would have to be applied with a preemergence material to prevent late germination.

BROADLEAFS. Both annual and perennial broadleaf weeds are common problems in cool-season turf. It is possible to control some annuals with preemergence herbicides, but their germination timing is often such that postemergence treatments make more sense. Perennials like dandelion, plantain and *(continued on page 48)*

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Honda has accomplished what many thought impossible by developing a quiet, lightweight, fully inclinable 360° 4-stroke engine to meet the needs of handheld power equipment

users. We're confident these amazing new engines will soon be the power of choice for string trimmers, leaf blowers, backpack blowers and mini tillers all over the world.

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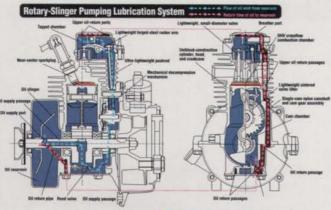
When We Say Small, We Mean It.

These lightweight engines are hard-working, clean-running and incredibly easy to start. They measure less then ten inches square, length by width, and are about eight inches deep. Actually, they're about the same size or even smaller than most two-stroke engines, but so much better. Small engines. Big difference.

This ultra-compact, lightweight design is accomplished through a uniblock construction that integrates the cylinder, head, and upper crankcase into one piece. The innovative OHV format uses a single cam to actuate both intake and exhaust valves. And the durable nylon cam gear assembly and ultracompact fuel tank further lighten the engine –making the Mini 4-Strokes the smallest and lightest four-stroke engines made today for hand-held power equipment. Available in two sizes, the 22cc GX22 and the 31cc GX31, these breakthrough 4-stroke engines are ideal for all hand-held power equipment.

Use Anywhere, Do Anything.

With 360° inclinable operation, Honda's Mini 4-Stroke will run like a charm. This unbelievable agility is possible because of a clever rotary-slinger pumping lubrication system that keeps oil in a completely misted state and circulates it using pressure fluctuations generated by the movement of the piston. Built-in passages effectively return the circulated oil to the oil reservoir from every part of the engine. Plus, an oil-return point positioned in the center of the reservoir ensures that oil cannot



mechanical noise even more. These various features all work in unison to help eliminate annoying noise and smoke and help reduce user fatigue.

Convenient and Economical to Use

With Honda's four-stroke engines, there is no oil and gas to mix, no messy containers, no special storage requirements. The Mini 4-Strokes also suppress spark plug carbon buildup and carburetor clogging, maintaining like-new starting ease even after long periods of use or storage.

> Other Honda design innovations allow these engines to deliver fuel consumption approximately half that of two-stroke engines. The end result is lower maintenance costs that actually make the engine more economical the longer you own and use

it. Efficient 4-stroke combustion significantly lowers emissions, making the Mini 4-Strokes more environmentally friendly.

And They're Powerful

Following in the footsteps of every Honda engine before, the Mini 4-Strokes are packed with power. Legendary Honda power, to be exact. And when you combine this esteemed power with the engines' flexibility in application, ultra-lightweight construction and amazingly compact size, you have a revolutionary new engine that is ideally suited to all kinds of hand-held and portable equipment. You have the future of hand-held power right in the palm of your hand.

For a free brochure on the incredible Honda Mini 4-Stroke Engines, call 1-800-426-7701.

Please read your owners manual before operating Honda Power Equipment. Specifications subject to change without notice. ©1997 American Honda Motor Company. Inc.

USE READER SERVICE #43

Unbelievably Ouiet

in use.

With this new 4-stroke technology comes a new level of quiet hand-held power. This is because in two-stroke engines exhaust gases are released in a high-pressure state, resulting in a loud muffler noise and fatiguing vibrations. But Honda's Mini 4-Strokes take advantage of the four-stroke combustion format to reduce noise by delaying the opening of the exhaust valve. A nylon cam gear assembly dampens

accidentally flow into the combustion chamber.

That translates into inclinability and flexibility

first 360 universally inclinable ultra-light, ultra-small, four-stroke engines, the Honda Mini 4-Strokes.

They're here-

the world's



weed strategies

(continued from page 44)

clover require postemergence treatments.

Table 1 lists postemergence herbicides for perennial broadleaf weed control in turf, and they are the basic ingredients found in single ingredient and combination herbicide products.

Many of these herbicides are available in either the ester or the amine formulation. The ester formulation is more volatile, but it is better able to penetrate the cuticle of weeds and is usually more effective at dealing with the difficult to control species. The amines are less volatile and are thereby safer in urban environments where susceptible, non-target species are nearby.

There are low-volatile esters available for some of these active ingredients. These materials have improved effectiveness over the amines but with less volatility than older esters. Low-volatile esters are preferable in the fall when the risk to non-target species is minimal. In the spring, or when highly susceptible species surround the treated area, the amines are the best choice. **BROADLEAF PRODUCTS.** Dicamba is a very effective herbicide for the selective control of broadleaf weeds in turf. It is particularly effective against some of the more difficult to control species like thistles, buckhorn plantain and ground ivy. Dicamba is usually combined with other materials such as 2,4-D, MCPP or MCPA.

Dicamba is usually sold in the ester formulation. Its primary limitation is its volatility, which limits its use in urban environments where highly susceptible species, like tomatoes and grapes, can easily be damaged.

The newest addition to this category is Vanquish[™]. This is an amine formulation of the same active ingredient in dicamba. Our research in 1995 with this product at the Iowa State University turf research area

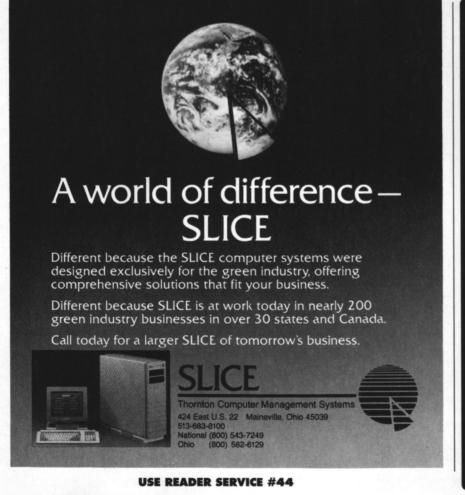
BENZOIC ACID Dicamba Vanquish BENZONITRILE Bromoxynil PHENOXY ACID 2,4-D MCPP MCPA 2,4-DP PYRIDINES Clopyralid Triclopyr

Table 1. Selective, postemergence herbicides used for broadleaf weed control in cool- season turf. (Bingaman, Christians, and Gardner, 1996) showed it to be very effective on broadleaf weeds. It was also quite effective when combined with triclopyr, a pyridinoxy acid herbicide that will be discussed later.

The phenoxy herbicides, around since World War II, are inexpensive and effective. There are some variations in weed control among the different materials, however. While 2,4-D is very effective against dandelion, plantain and other common weeds, it is less effective against white clover, violets and some of the other more difficult to control species. MCPP is much more effective

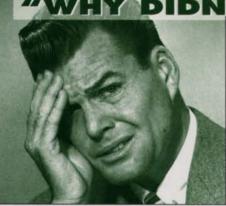
against clover and some of these other species. The MCPA and 2,4-DP each have their own variations in species effectiveness as well.

(continued on page 50)









• THE COMPETITION

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Valley View Industries

weed control

(continued from page 48)

An effective strategy is to formulate combination products with the phenoxy herbicides to take advantage of their variable characteristics. MCPP and 2,4-D are commonly combined to broaden the control spectrum. Another widely used group of combination products contain 2,4-D, MCPP, and dicamba. These products are marketed under a variety of commercial names including Trimec,TM Triplet,TM TrexanTM and others. Other combination products formed by combining the phenoxy herbicides include Tripower,TM which is a combination of MCPA, MCPP, and dicamba, and Dissolve,TM which combines 2,4-D, 2,4-DP and MCPP.

Later research into alternatives to phenoxy herbicides led to the discovery of the

Neumann Municipal Golf Course. First weekend in May. Over 500 rounds played. More divots than pars. More spike marks than bogeys. The scores were appalling. But the course was impeccable. Even on Monday.

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can't look any better.

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pyradines. Triclopyr was the first of these materials to reach the turf market. It provides excellent control of white clover, violets and some of the other hard to kill broadleaves. It is somewhat weak on dandelions, however. Triclopyr was first released in a combination product with 2,4-D called Turflon-D,TM This is a very effective combination on a wide variety of weeds. Turflon-D is an ester formulation, and there is some risk of non-target damage.

Later, an amine formulation of this combination product called Turflon II[™] Amine was released. The list of combination products containing triclopyr has recently been expanded with the release of Cool Power,[™] a combination of triclopyr, MCPA and dicamba and Horsepower[™] which contains triclopyr, MCPA and dicamba in an amine formulation.

Clopyralid, which is closely related to triclopyr, was released in the turf market in 1990. It is generally not used alone but is combined with triclopyr and marketed under the trade name Confront.[™] This product is 33 percent triclopyr and 12.1 percent clopyralid.

Confront[™] is very effective on many difficult to control broadleaf weeds, including clover, violet, spurge, and yellow woodsorrel (Oxalis). It is also good for sensitive sites because it doesn't drift to nontarget plants.

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The author is weed specialist in the department of horticulture at Iowa State University, Ames, Iowa.

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hydro walk-behinds

í,

Manufacturers and operators have told us all about the differences between hydrostatic and gear-drive walkbehind mowers, but we decided it was time to experience the machines for ourselves.

By Paul Schrimpf & Bob West t was something we had discussed for several months. We'd heard all the claims and documented testimony from manufacturers and contractors about the relative merits and shortcomings of gear-drive and hydrostatic walk-behind mowers. But, we thought, how can we weigh these claims without experiencing the machines first-hand?

Paul & Bob's

1

So, on an unseasonably cold spring day in May, we set out to discover the truth. Richard Bear, owner of Bearco, a dealer and distributor of power equipment in Strongsville, Ohio, offered us a testing area and two machines to operate. Since Bearco is a Scag dealership we used Scag mowers, but the machine features and differences we were interested in experiencing are fairly generic to hydro- and geardrive machines across most brands.

We looked at speed, ease of operation, maneuverability and control factors and considered price point and maintenance.

THE GEAR DRIVE. The 48-inch, twin-belt machine we tested featured six speeds — five

forward and one reverse. Bear explained in our pre-test instructions that reverse gear in many gear drive mowers is an "iffy" thing.

"You have to lock up the handles, make the shift, unlock the handles and back it up," noted Bear. "Most operators will simply pull the handles halfway (continued on page 56)





(top) Gear-drive mower tires tore the turf during our test. (middle) West gets his operating instructions from Richard Bear. (bottom) Schrimpf takes the hydro for a spin.

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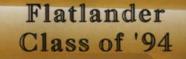
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hydro walk-behinds

(continued from page 52)

up to release the transmission and physically pull the unit backward."

Having not operated the machine before, we both immediately noticed how much tension the operators experience when pulling on the drive handles. Bob, who has experience working for a lawn maintenance contractor, expected this strain, but Paul was surprised by how immediately he felt it.

One of the most significant aspects of the gear-drive mower we noticed was its turning capability. Attempting zero-degree radius turns with a gear-drive unit requires that one wheel is not moving while the other wheel continues its forward motion. This forces the stationary wheel into the turf with the weight of the mower pushing it down. We were running the mowers over both dry and relatively soft, damp turf, and, where the ground was wet, we left patches of damaged grass.

We did not run the mowers long enough to experience the belt slippage that has been (continued on page 58)

The Maintenance Factor

ne of the critical differences between the hydro and the gear-drive machine is in the maintenance costs. The hydros provide productivity advantages, but the cost is greater attention to maintenance.

The heart and soul of the hydro is the two hydraulic pumps. It is critical that operators keep enough oil in the pumps and keep the oil clean and free of debris for maximum productivity and long-term mower health. Bear said he has seen a number of problems created by improper hydro pump maintenance. For example, he explained that the pumps use a mesh filter which is 10 times finer than engine oil filters, but too many contractors use the engine filters to save money. This allows excessive debris to enter the pumps and clog them.

When one pump clogs, it won't pump as much oil as the other pump, and the mower will end up pulling slightly toward the side of the clogged pump. Bear also noted that many manufacturers have extended the recommended oil change cycle on these units because contractors oftentimes do more harm than good when they change the oil. — *Paul Schrimpf* & *Bob West*



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hydro walk-behinds

(continued from page 56)

described to us by contractors, but Bear assured us that slippage can be a considerable factor in wet turf conditions.

THE HYDRO. The hydrostatic machine, for fairest comparison, was also a 48-inch unit. These machines have a hydraulic pump connected to each wheel that drives the wheel motors and makes true zero-turn



The added maneuverability of the hydro units provides the economies of productivity when compared to gear-drive unit.

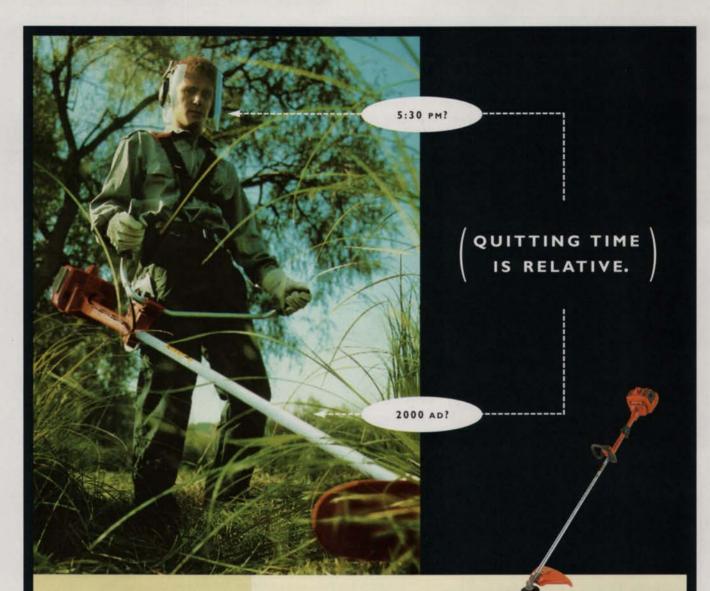
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response possible.

The machine is operated by manipulating pistol grip hand controls which shorten or lengthen the control rod running from each pump up to the handles. Lengthening the rod opens up the pump, allowing more fluid to flow to the wheel motor resulting in greater speed. The longer the rod is, the more open the pump is and the more oil that gets pumped into the wheel motors. This gets the wheels moving faster and, obviously, moves the unit faster.

Rather than having to shift a gear, reverse is achieved by pulling the handles up past neutral on hydrostatic units. This is obviously an easier procedure than with a geardrive unit; plus, by pulling the handles in this manner, the mower's wheels actually drive the unit backward so the operator doesn't have to pull the machine. The reverse capability was particularly valuable getting the unit into tight places, which would be an obvious advantage for tricky properties. The hydro units also offer the turf-sparing zero-turn action — one wheel spins backward while the other spins forward.

The added maneuverability of the hydro units provide the economies of productivity when compared to the gear-drive unit, but we found this difficult to take advantage of, even after running the machine for a while. (continued on page 60)



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hydro walk-behinds

(continued from page 58)

CONCLUSION. Both machines have the potential to provide an excellent cut and were fairly easy to use without much training. However, to truly take advantage of the benefits of the hydro walk-behind requires extensive training and use. Having Bear available to observe our technique and correct our mistakes was a tremendous help, but we wonder how many new mower operators get the same benefit. When an operator knows what he or she is doing, the hydro benefits are real.

The authors are Managing Editor and Associate Editor of Lawn & Landscape magazine, respectively.



West noted that the hydro machine provided more comfort and maneuverability than the gear drive. What's Best for You?

hen it comes to productivity, the primary difference between the gear- and hydrostatic drive units is control. For the additional \$900 to \$1,000, the user is able to control forward and reverse on the fly and achieve true zero-turning operation with the hydro unit. Operators trained to maximize this advantage can enjoy an additional 20 percent in productivity, according to Richard Bear, owner, Bearco, Strongsville, Ohio.

For contractors starting out in the industry, the gear-drive is an excellent machine. Bear described a recent gear-drive purchaser who was buying a machine for his sons to start a lawn maintenance business. "It didn't make sense to sell him a hydro," explained Bear. "The gear-drive made perfect sense for what they needed." — Paul Schrimpf & Bob West

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Banner B-10 Leader-This new machine breaks the price-performance barrier, handles 10 to 15 tons per hour and chews limbs up to 8 inches in diameter. At a price that leads the pack, it is an incredible return on your investment.

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The cost of water varies widely across the country, but smart water management saves money everywhere.

By Luke Frank

et's face it ... water today is a bargain. The value of water to everyone and everything on the planet is immeasureable, yet there is tremendous disparity in the cost of water vs. other commodoties. Consider that the price of a gallon of municipal water in Albuquerque, N.M., is \$.0009, while a gallon of milk costs \$2.75 and a gallon of gasoline runs \$1.22.

But it's not likely to stay that way. Local governments strapped by short supply and the high demands of growing populations are making decisions that will restrict water use, raise rates and enforce penalites on the violators. Rather than a threat, however, professionals in the lawn and landscape industry should see it as an opportunity.

Helping residential and commercial customers get and stay in compliance with ordinances as they are implemented will be a major source of business for contractors as water supplies continue to be stretched and governments are forced to make tough policy decisions.

(continued on page 64)

Of Water Use

Municipal water ordinances in water-short regions of the country present opportunities for contractors to act as consultants to help clients use water efficiently. Credit: Hunter

Industries

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irrigation

(continued from page 62)

STATE OF THE UNION. The United States uses 19.4 billion gallons of fresh groundwater a day for public and private supply, irrigation, livestock, manufacturing and more, based on the National Ground Water

Association's research. Eightyone percent of the public water supply is groundwater, according to *The Water Encyclopedia*. It also lists typical urban water use by a family of four for lawn watering and swimming pools at about 100 gallons per day, or 30 percent of the family's daily total consumption.

Considering this level of de-

mand, we should be seeing some significant changes in the cost of irrigation water, particularly in the Southwest. But even doubling the price to \$.0018 probably is not going to have much of a bite, unless you consider a 23-acre business park that soaks up 75 million gallons of irrigation water a year. Then there is a more obvious opportunity for water (and monetary) restitution.

Because water's price isn't consistent with its value, the Safe Drinking Water Act and the Clean Water Act might ultimately have to garner industry and consumer reflection.

'The average residential and commercial (irrigation) system is less than 50 percent efficient.'

.....

.....

"During the next five years, we'll see continual increases in the (water) rates that will become an inconvenience to the public," predicted Donna Pacetti, water conservation specialist for Denver Water. "New regulations in the Safe Drinking Water Act and the Clean Water Act are going to affect the cost of water." WATER RATE VARIATIONS. The variability in the base cost of treated, municipal water available for residential and commercial irrigation across the country is vast — from \$.68 per hundred cubic feet (748 gallons) in Albuquerque, to approximately \$4 per CCF in Boston, Mass. Why this difference?

"We can only charge what it costs us to produce and deliver water," explained Andy Terrey, water resource specialist for the City of Phoenix. Metro centers like Phoenix, Albuquerque, Las Vegas and Los Angeles are getting water consumers' attention. Ordinances and programs offering incentives and "disincentives" for certain landscape and irrigation design and management practices are opening the eyes of both consumers and contractors.

"In selected water-short areas, the price of water is encouraging good conservation practices," offered David Zoldoske, director of Cal State Fresno's Center for Irrigation Technology. "Many municipalities are adopting two-tiered water pricing based on *(continued on page 66)*





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eleven different power tools manufactured exclusively for lawn care professionals and arborists. The entire line is powered by STIHL's all new, made in the USA, 25.4 cc engine. Common parts mean you could pull an air filter, starter rope or other engine part from your edger to keep your grass trimmer going. And it means routine engine maintenance is the same, as is the fuel mix, saving you both time and money.



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irrigation

(continued from page 64)

square footage of the landscaped area. Water is allotted based on historical evapotranspiration and plant material needs. Then, consumers are charged a higher rate for irrigation water used above that."

MANAGING BEHAVIOR. Select water suppliers discourage "excessive" water use through tiered pricing. The cities of Tampa and St. Petersburg, Fla., have graded rates whereby higher use rates equate to higher charges. In St. Petersburg, commercial water rates are formulated by averaging an account's previous 12-month use (a rolling average), explained Kathy Foley, water conservation analyst for the Southwest Florida Water Management District. The price per 1,000 gallons used within the average is \$1.43; the



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500 Gal,	6600 Sq/Ft/Load	\$ 4795.00
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USE READER SERVICE #64

average to 1.4 times the average is \$1.79; 1.4 to 1.8 times the average is \$2.43; and finally, more than 1.8 times the average is \$2.86.

Las Vegas, a community known for its appreciation of water, imposes four tiers on its Las Vegas Valley Water District customers, noted Joe Fortier, conservation program coordinator for the Las Vegas Public Water District/Southern Nevada Water Authority. With a net gain of 5,000 people a month, odds are that water there will increase in value. "We recently developed a fourth tier (at \$2.27 per 1,000 gallons) for the top 5 percent of water users within meter-size categories," Fortier offered. "This top 5 percent is billed at a higher rate, strictly for water conservation."

IMPOSED ALTRUISM. The benchmark in water conservation law was formulated, or at least influenced, by the landscape industry. After seven years of debilitating drought, many local California entities began adopting their own somewhat restrictive landscape and water use ordinances, said Marsha Prillwitz, environmental specialist for the Bureau of Reclamation, on loan from the state Department of Water Resources. "The landscape industry rallied and began to take political action," she added.

California's touchstone Water Conservation and Landscaping Act (AB 325) was passed by the state assembly in 1990. The Act required the Department of Water Resources to develop a state model ordinance for landscape water efficiency and conservation. The Model Water Efficient Landscape Ordinance was adopted in 1993, requiring 513 California cities and counties to adopt the state model or another ordinance, create their own ordinance or issue findings that no ordinance was necessary.

"Nearly half took a water budget approach, 174 imposed turf limits of 25 percent of the total landscape area, 60 issued findings that no ordinance is needed and 51 created a point system that rates landscape and irrigation designs on a point scale, with a minimum number of points required to pull a permit," Prillwitz explained.

CYBER COPS. Water cops are popping up all over, but these enforcement officials are more likely to be behind a computer than in (continued on page 68) "After 40 years of cutting grass, I've created an equipment graveyard. But all my Hondas are alive and well."

HOND

Don Nelson Nelson's Lawn Service Ocala, Florida When you make your living by cutting grass, dependable equipment is your lifeblood. Nobody knows that better than Don Nelson.

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irriagtion

(continued from page 66)

a truck. Florida state law reads that all automatic irrigation systems must have a rain switch, punishable by a \$500 fine. In Phoenix, large turf areas of 10 acres or more receive an annual allotment of water based on plant material, size and ET. If customers exceed their allotment once, they receive a 200-percent surcharge on the groundwater portion of the water used. The surcharge can leap to 1,000 percent if the violation runs into a third year.

Phoenix rules also require the use of approved low water use plants on right-ofways and the use of effluent water in turf facilities of five acres or more.

Albuquerque has an ambitious ordinance that appears to be saving significant amounts of water. "The major elements of the ordinance are plant and irrigation design restrictions for new residential commercial landscapes," noted Irrigation Conservation Manager Doug Bennett. "We limit the quantity and use of high water-use plants in landscape designs.

......

During the next five years, we'll see continual increases in rates that will become an inconvenience to the public."

.....

"We also offer a rebate program that provides \$.15 per square foot of landscape that converts high water-use plants to xeriscape plants, with a cap of \$250 per customer," he added. "But the real incentive is generated through the water waste enforcement program."

In 1995, the city took action against 286 violators. Bennett compared their annual water use in 1994, 1995 and 1996. "On average, they each conserved about 376,000 gallons of water in 1996. To date, we have enforced nearly 1,000 properties."

EDUCATING USERS. Denver Water runs public service announcements about irrigation and water use on television during the summer months, Pacetti said. It also offers xeriscaping classes and a mobile auditing team that will come to a site, evaluate irrigation system performance and make recommendations to improve efficiency.

Plant guides and evaluation services are sprouting all over the sun belt. "Our goal is to educate landscape professionals and the public on how to conserve water before we ever have to take enforcement action," said Fortier.

"We process a lot of requests for water use information from all sectors of Florida," added Foley. "People are becoming more proactive."

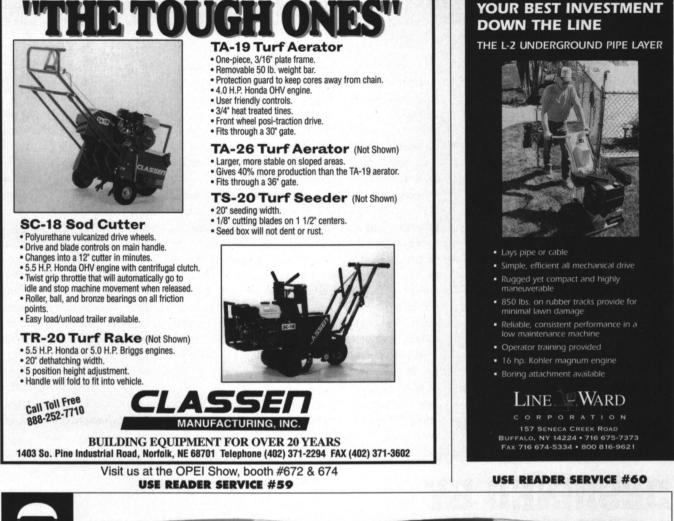
INDUSTRY OPENINGS. What does this mean to the landscape professional? It means while (continued on page 70)





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irrigation

(continued from page 68)

you develop and hone your irrigation design and management skills, the public and private sectors will seek you out. Professional educational programs are available year round in all parts of the country. From the Irrigation Association's design and auditing certification curricula to CIT's sprinkler modeling software packages, you can develop conservation skills that the consumers are expecting and even demanding.

How much opportunity is there? Zoldoske claims that, based on field auditing and system modeling with software, the average residential and commercial system is less than 50 percent efficient. That means less than half of the water applied to landscapes is actually being used by the plant material.

What's a realistic goal for irrigation efficiency? Irrigation consultant Steve Smith, president of Aqua Engineering in Fort Collins, Colo., said 80 percent efficiency is achievable.

"We set the threshold for significant monetary savings with new irrigation equipment and redesign at \$100,000," Smith said. "If a site has 100 acres or an annual irrigation water budget greater than \$100,000, it needs a sophisticated control and management system. Chances are the proprietors can afford it. With that big of a cost, there's a good opportunity for a capital investment to pay for itself in a few years."

This should be easy to sell for large sites. Quantify annual irrigation water use based on previous billing statements (\$100,000); run several catch can tests and determine system efficiency (say 50 percent efficient); project an improved efficiency based on system repairs and upgrades for improved performance and historic water needs (hopefully about 75 percent); translate that into dollar savings (\$25,000 saved annually).

For smaller sites, be creative. Offer to pay the customer's water bill for a year, based on statements from the previous year. Anything you save them, you pocket. Make minor system adjustments, like using the same make and model of heads for each

zone, ensuring that sprinkler nozzling is uniform, moving or adding heads to improve coverage, operating the system at the prescribed pressures, installing a rain override switch on the controller and maintaining the plant material to prevent interference with sprinkler trajectories.

Add in regular scheduling adjustments that fit the site's seasonally fluctuating microclimate(s), soil and plant maturity conditions.

Design for uniformity, management and the end user. Provide the plant only the water it needs at a rate that the soil can absorb. Keep the water in the active rootzone. Adjust runtimes as often as possible (at least monthly), and maintain the system with regular irrigation checks, actually watching the system operate during the day.

The author is a free-lance writer specializing in irrigation and water issues for the landscape, turf and agricultural industries, based in Albuquerque, N.M.

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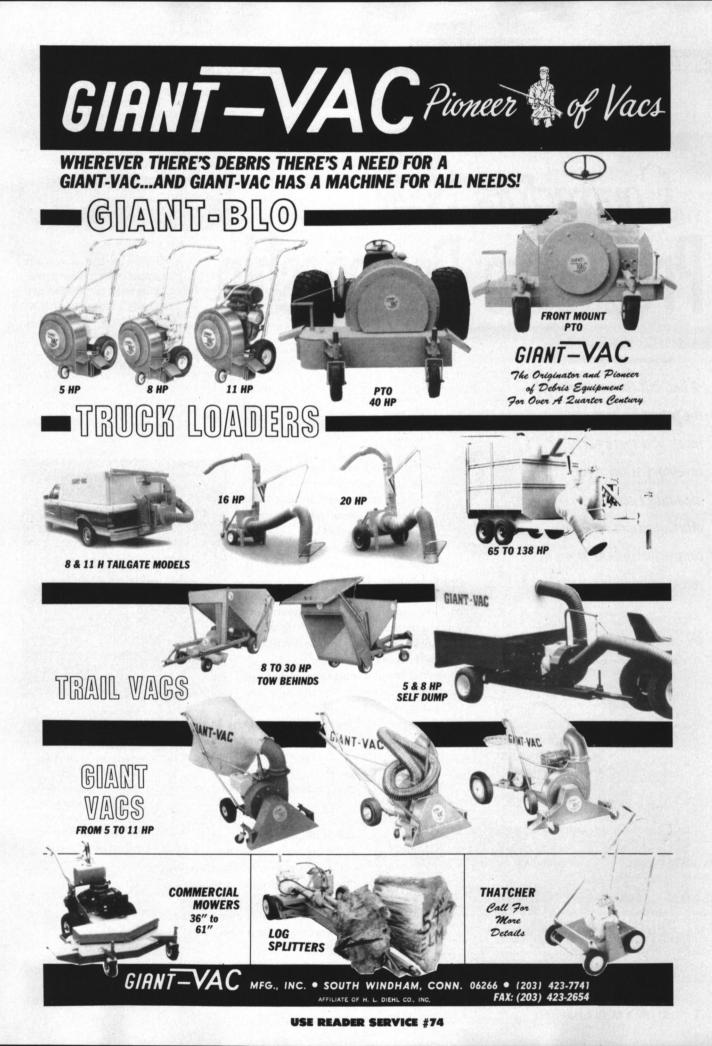
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CONTRACTO



Contractors Seek **Productive Partnership**



'I wonder how many of us... have sat down with manufacturers and dealers to find out what their costs are, what's driving those costs and what we can do to keep those parts less costly so they can pass the savings to us." — Wayne Richards (second from right)

What will the contractor of the future be like? How much of a spare parts inventory is the right amount? These and other questions were on contractors' minds at a recent roundtable.

By Susan Gibson

'I want parts turnaround in 24 hours. I should have enough spare equipment to cover myself for a day.' - Roger Braswell (center)



everal topics such as training, productive equipment and trends in landscape management occupied the thoughts of several top contractors, who gathered in March for a two-day roundtable sponsored by Lawn & Landscape magazine and Husqvarna Forest & Garden, Charlotte, N.C.

These industry leaders had a rare opportunity to interact directly with a manufacturer about the most significant equipment and industry concerns they have that are affecting the way they do business.

Our May and June issues carried summaries of some of the discussions. In this final article, participants sounded off about the use and

effectiveness of string trimmers, making the decision to buy new equipment, ordering, storing and maintaining an inventory of spare parts for equipment and the needs of contractors of the future.

Here are more insightful comments from our roundtable participants:



THE TRIMMER DEBATE.

String trimmers are the root of all evil. Hours are wasted out there with those, which also result in injuries and damage." - Dale Elkins

"They're time killers. We're trying to find ways to put the trimmer away." ----Gary Kuykendall

"Properties are better designed so there (continued on page 74)



With so much personal preference in equipment buying, we've found that employees can destroy the productivity on a piece of equipment if they think there is something better and they want to use it." - Bruce Wilson

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NUMBER ONE IN RELIABILITY

(continued from page 72)

are less places where we need a trimmer. But people are still battering plant material with the line trimmer." - Wayne Richards They can be a valuable piece of equipment, but training is needed. Fatique can

.....

'String trimmers can be a

needed. Fatigue can cause

the head to bend one way

valuable piece of equip-

ment, but training is

cause the head to bend one way or the other. Good coaching is needed for their proper use."-Randy Ferrari

EQUIPMENT BUY-ING DECISIONS.

With so much personal preference in equipment buying, we've found that employees can destroy the produc-

tivity on a piece of equipment if they think there is something better and they want to use it." - Bruce Wilson

"We don't have to have the same manu-

facturer as long as we're getting a good partnership with the people we deal with. However, we are trying to limit the number of people we deal with." - Ferrari

"The relationships issue with a manufac-

turer or dealer is important to our buying decision." - Kuykendall When we get the chance to field demo equipment for a season, we take advantage of that. It gives them feedback and adds to our inventories." - Mike or the other. . .' — Ferrari Guthrie

ON SPARE PARTS.

"We use bar coding for ordering parts like nuts and bolts. Our mechanic decides what he wants, then electronically orders them and they get shipped automatically."

- Ed Laflamme

Sometimes the pricing of spare parts seems out of line. It feels like we're being gouged sometimes." - Ferrari

"We have to have parts, but sometimes we feel like we're being held over a barrel like we're being nickel and dimed to death." Kuvkendall

"I brought in a fleet and equipment consultant who went over all our trucks and equipment. He told us to narrow the kinds of equipment we have and stock as many parts as we can because of the costs of ordering. We figured it's cheaper to pay for the inventory than to order it. If we only have a select amount of pieces, especially if they're interchangeable, we can keep backup parts." - Laflamme

"I wonder how many of us in our industry have sat down with manufacturers and dealers to find out what their costs are, what's driving those costs and what we can do to keep those parts less costly so they can pass the savings on to us." - Richards

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Steve Bell, President, SKB Industries, Lilburn, GA

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✓ "Some manufacturers release a product before they have the parts line going, and they're not even sure what is going to break down on the equipment. All of us like to try new equipment to be more competitive, but with an early product release we have to wait until the parts supply is going." — *Wilson*

✓ "Parts supplies determine who we buy from. I may not buy from a dealer because I know his parts service is horrendous." — *Guthrie*

✓ "The ideal parts service for us would be to have the parts at the dealer and get them the same day. We stock parts, but the one that breaks is the one we don't have! Getting a part the next day is nice, but you'll still lose production on the next day too because it is probably not going to get there before the crew goes out in the morning." — Wilson

✓ "We carry a parts inventory out of necessity, but we want dealers to carry a better inventory." — *Guthrie* Ferarri and Kuykendall continue their discussion while touring Husqvarna's parts warehouse in Charlotte.



✓ "I'd like a system where we tell the manufacturer how many hours we're on the equipment and they tell us what we need for maintenance. I won't have to stock a lot, and they'll tell me what I need so I'm not spending a lot of time figuring out what I need and what to do myself." — Laflamme

"I would bet that all of us are willing to do things to reduce our payroll costs in the shop or in the field, and we're always looking for the best system to improve the productivity of our people. I think the best possible system would be to have the manufacturer tell me what equipment parts to stock, and also give me the ability to sell it back to them if they're wrong. I want a parts turnaround of 24 hours. I should have enough spare equipment to cover myself for a day." — *Roger Braswell*



CONTRACTORS OF THE FUTURE.

✓ "In the future, equipment will be more important, maintenance will be more important, we'll continue to increase productivity and reduce our costs, and we'll increase our margins. The crew chief will emerge as a professional-level person with the mobility to go from contractor to contractor and the expertise to produce and manage more." — *Phil Christian*

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'Performance will continue to be the single biggest management problem. We're going to have to become better recruiters.' From left to right, Ferrari, Lee Greathouse, Wilson, Mark Michaels of Husqvarna, LaFlamme and Steve Wood of Husqvarna engage in discussion.

✓ "Customers will be more willing to let us manage their properties with a sense of reducing costs. They'll allow us to eliminate the things we don't think need to be done for those properties. Those relationships will be all important." — Laflamme

✓ "Crew chiefs will be more self-directed team leaders, and the people in the crews will be more involved in the management of their tasks. They'll have more financial information to manage those tasks more effectively." — *Richards*

Contractors will become more open book with customers, which allows both to share in the savings." — *Elkins*

Performance will continue to be the



single biggest management problem. We're going to have to become better recruiters." — Braswell

✓ "We have to ask ourselves, 'What are our employees going to need to be like five years from now?' We may be training employees just based on where we are or where we want to be today. The industry always focuses on closing that gap, but we need to be more visionary. We should be focusing on training for the future where we want them to be, and realize that this will take time." — *Wilson*

The author is Editor of Lawn & Landscape magazine.



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Consumer Communication

Showing the Way

Irrigation contractors need to be

well when

educators as

trying to sell

customers on

irrigation.

By Bob West

Consumers need to understand that properly designed irrigation systems provide the greatest benefits to their property.

nyone can stand in their front yard and move a sprinkler around, right? So why would some-

thousand dollars for a professionally installed irrigation system that still applies the same water as that sprinkler?

That's the challenge facing irrigation contractors — convince customers that just because professional systems apply the same water doesn't mean they don't do a better job. In fact, it's the process of applying the water that separates the professional systems from those sprinklers on the end of the hose.

GO ALL THE WAY. For many contractors, getting a foot in the door with potential customers isn't the biggest challenge. Convincing customers to spend the necessary money and have the system designed properly for their property is where the challenge lies.

"Most customers initially contact us, and that means they've already realized there is a need for a professional system," noted Bob Dobson, owner, Middletown Sprinkler Co., Port Monmouth, N.J. "Money becomes an issue when it comes time to design a quality system to do the job correctly."

"The hardest selling point is always trying to convince customers that they get what

Many of the problems contractors encounter with customers can be avoided by sharing the right information with customers ahead of time. This section is designed to help contractors better communicate with customers. Reprints of this section are available — call our reprints division at 800/456-0707 for more information.

Consumer Communication

Why Me?

rrigation contractors are often hard to tell apart for homeowners and commercial clients. Some manufacturers offer literature which contractors can use with potential clients to help them in the selection process and include questions such as these: **Q.** What type of product will be used and why?

A. The contractor should tell you what type of controller, valves and rotors or sprayheads are best for your landscape.

Q. Is after-sale service provided?

A. A professional contractor should be willing and able to provide after-sales service.

Q. Is there a warranty on the system?

A. The contractor's work should be guaranteed; a one-year warranty is typical. Ask for names and phone numbers of recent satisfied customers you can call and check with.

Information courtesy Rain Bird Sales

they pay for," agreed Bryce Kinney, irrigation supervisor, H&R Lawn and Landscape, Stillwell, Kans. "People who are really concerned about the appearance of their property are generally more receptive when we start talking about price, but it's still important to make sure they understand the value they are purchasing in terms of water savings."

MAKE THEM SEE. A common tact for contractors to show a system's value to hesitant customers is to do a rough system design or actually put out the flags for head placement.

"Putting out the flags lets me point out how impossible it is for someone to manually water each of those locations for 30 minutes," Kinney noted.

Designing the system as part of the sales process helps Ed Carpenter, owner, Carpenter's Lawn Sprinklers, Cleveland, Ohio, educate customers. "I talk to them about things like head-to-head coverage and the importance of quality materials like piping," he said. "They have to realize that if they are too interested in saving money that they won't know there's a problem with the system until it's too late. And if

all a customer wants to talk about is saving money, then I'll usually walk away from the job."

The author is Associate Editor of Lawn & Landscape magazine.

That's a Good Question

hese questions and answers represent a healthy exploratory dialogue for a potential customer and an irrigation contractor:

Q. Will an automatic sprinkler system use more water than I'm currently using?

A. No. In fact, it will conserve water. You'll never have to worry about runoff from overwatering or wasting water when you forget to turn off the hose.

Q. Does having a sprinkler system really save time? A. Yes. You won't have to spend another minute of your time watering the lawn. The system does all of the watering for you – it even turns itself on and off when you're away from home.

Q. Will an automatic sprinkler system water as well as I can water by hand?

A. It will do a much better job because a professionally designed system will deliver exactly the right amount of water to specific areas.

Q. We generally get 40 or more inches of rainfall a year. Do we really need a sprinkler system?

A. If it rained at your house every three days – the same exact amount each time – you probably wouldn't need a sprinkler system. But nature doesn't work that way, and the only way to ensure healthy, lush growth is to make certain your lawn and plants receive a regularly timed, evenly measured amount of water.

Q. Are there different systems from which to choose? **A.** A typical system will be comprised of a controller (the brains of the system), valves (which open and close to control the flow of water) and sprinklers (which distribute the water). It's best if all components of a system are manufactured by the same company in order to ensure they are designed to work well together.

Q. Can I save money by installing my own system? **A.** No. In fact, it could cost more money in the long run. A professional irrigation contractor will design and install the most cost-effective and energy-efficient system possible. The contractor will pay special attention to important factors such as sprinkler patterns. And because your contractor is familiar with local plumbing and electrical codes, you won't have to worry about costly mistakes in wiring or pipe installation.

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Marketing Strategies that Work



Expanding into a new geographic market is a bold move, and one that will only succeed if the circumstances are right.

By Bob West

Making Your Move

rowth is good, and, obviously, it's what most companies strive for. But expanding a company's service market into an entirely new geographic area is a risky move that is as

potentially dangerous as it is profitable.

The carrots of additional profits, less dependence on one market and pride in owning a growing company are too enticing to dissuade many green industry professionals from expansion, however.

GO TO THE MARKET. So you want to grow your company into new markets? Well, where are you going to do that? Choosing the wrong area to expand into dooms the expansion to failure.

"Experience has taught us you have to go where people live who are earning the money necessary to buy our services, and they have to live in a density to make it worthwhile," noted Ed McGuire, president, The Lawn Co., South Dennis, Mass. "We're also more willing now to go where the competition is more intense, because that's where the customers are."

Chris Senske, owner, Senske Lawn & Tree Care, Kennewick, Wash., relies on numbers to decide where his company's next branch will open. "I'm looking for areas which are economically healthy, so I'll take statistical information such as buying income figures or using the mailhouses for population counts and postal carrier routes broken down by income," he explained.

McGuire also looks at how potential customers in possible new markets currently care for their properties. "A company has to understand what it's currently doing that makes it successful and what characteristics define its best customers. Then find similar

Marketing Strategies that Work

Contractors who have successfully expanded say that identifying a strong target market includes making sure that it has a desirable customer base and that landscape practices used by contractors already in the market are similar to your own.



areas to the markets it's already in," he pointed out.

Some companies who have been extremely successful in their expansion efforts disagree as to the benefits of growing by slowly extending the reach of a service route from the same office. "I would characterize the majority of our growth as organic," commented John Carson, division manager, Ehrlich Green Team, J.C. Ehrlich Co., Reading, Pa., explaining how their growth expands the reach of an office into potential markets. "When the revenue becomes substantial enough to justify two or three routes, we'll open a new office," he added.

Carson said a major benefit of this approach is using those initial service routes as cost-effective marketing tools. "People seeing the trucks in the neighborhood is really a significant source of business, and we have the salespeople then follow the trucks into an area," he added.

Chris Davitt, vice president of landscape installation, Ruppert Landscape Co., Ashton, Md., commented that Ruppert also favors slow growth out of current branches. "In the large markets we target, companies can take small hops outward and soften the blow," he explained. "Then you already have name recognition and market familiarity, and the money already invested in developing the company's image will pay off immediately."

"I'm really a proponent of companies thoroughly penetrating the markets they're in before expanding. The problem, though, is there is a tendency to start doing jobs that take you further away from the core client base," countered Dave Hanson, vice president, Environmental Care Inc., San Jose, Calif. "This ends up happening in opposite directions, and I think the managerial attention given to a job is directly proportional to the manager's proximity to that job."

Carson admitted keeping staff focused on maintaining their quality level of performing on core jobs can be a challenge. "In some cases, we're willing to put a couple of guys in a hotel for a night or two to handle a number of jobs in an area. But you have to watch for the managers who want to send guys to jobs two states away," he said. "Generally, we'll only go into the next county and try to keep driving times under one hour. You have to maintain a strong local feel."

In addition to finding markets which will support the business, Hanson focuses on finding markets which present a minimal amount of learning challenges for the new office. "We look at markets with turf types and landscape practices similar to what we're used to," he remarked. "This helps minimize the learning curve."

SET UP SHOP. Having a long-range plan is obviously a key to any expansion effort, but

it is especially imp<mark>ortant when it comes time</mark> to select an office location.

"We're always trying to minimize the driving distance that will be necessary to get from the office to the customers," Senske related. "We look for a prebuilt facility where we can get a three-year lease. It's more difficult to predict the new branch's short-term needs, but after three years we should have a sense of where the branch should be located and what type of facility is necessary."

Besides location, selecting a payment method is the other big decision for setting up the facility. "We always enter new locations with a lease," Senske noted. "It's a cash flow issue as much as anything else because bank financing can require up to 25 percent of the price up front to buy the property."

"Even though you'll pay more per square foot for a lease, there's no capital expense out front," Hanson pointed out. "Plus, if you have to close down the market, the only cost is the remainder of the lease."

Current employees can be valuable when opening a new office. "You'll definitely have to expand the staff, but I recommend taking some people into a new operation," offered McGuire, who emphasized the importance



of the branch manager. "The most difficult challenge is developing the continuity between the branches. One of our new branches struggled at first because we had someone trying to put their personal stamp on the business. We want them to do things our way, however, because it's been successful for us for 18 years."

"We always try to open new facilities with current employees," agreed Senske. "Usually, this is through promotion, so it's good for the employees, and it makes for one less variable to worry about since we know the culture and operations will be what we want."

While most companies expressed concern about embedding the corporate culture into the new operations, Carson actually looks for autonomous operations. "We

call our facilities district offices, not branch offices, and we want the employees to have a sense of ownership," he explained. "They set their own parameters for pricing, warranties, policies and so on. Then the employees are paid as a direct result of that specific district office's profitability."

GET THE NAME OUT. When the goal of expansion is increased profits, the immediate priority for a new operation becomes marketing, and contractors' opinions vary on the best way to get a company's name out.

"We continue to do what a lot of companies do by focusing on direct mail efforts," noted Senske. "We send out multiple postcards and self-mailer pieces to the same houses at a rate of one per week or 10 days through the spring. Then we follow up with telemarketing after the second or third week."

"We focus on the people-to-people approach with full-time salespeople being the key to success," countered Carson. "We've really seen a tail off of long-term results with telemarketing. We used to generate a significant number of new accounts this way, but you really have to do a lot of promotions and discounting to get these accounts, and the retention levels aren't there."

Telemarketing isn't entirely useless, though. "It's still a good way to prime the pump and generate some immediate revenues while the new office is attracting the long-term, valuable clients," Carson admitted.

"This is one area we've really struggled with," lamented McGuire. "We've tried just about everything – Yellow Pages, advertising, newspaper inserts, telemarketing – but we haven't gotten the results we want yet.

"As a lawn care company, our focus is on getting in touch with landscape contractors who we can work through for referrals," McGuire continued. "We try to get in touch with as many people working in or with our industry as possible in new markets."

PROFITABILITY PLAN. Three years surfaced as the rule of thumb for growing a new operation into the financial black.

"We commit about \$300,000 over a threeyear period to get the new branch rolling," Senske commented. "So we know the new branch will cost the company about \$100,000 a year in profits." "Profitability will occur at different times for each branch depending on the market," Hanson noted. "For the real positive returns, however, companies have to look long term. Expansion should not be entered into for immediate profits. It takes a longterm commitment in terms of people, money and energy."

"We're looking for profitability in three years, but there are real variables between markets in terms of property acquisition, labor and overhead," Carson agreed. "Plus, most of the day-to-day expenses vary based on productivity, and that's where management becomes truly important."

"The biggest costs are related to marketing and acquiring customers," Senske added. "We look for a at least 1,000 full-service customers after three years, but we'd really rather be closer to 1,500 customers. The problem is that it costs a great deal of money to build your company's name recognition in a new market."

The author is Associate Editor of Lawn & Landscape magazine.

<u>By the Buy</u>

Le xpansion via acquisition should always be considered as a method of growth. "When we're going into areas we're not very familiar with, we tend to favor acquisition," noted Dave Hanson, vice president, Environmental Care Inc., San Jose, Calif. "This allows us to immediately acquire people, experience and knowledge about the area."

"The pros to acquisition are immediate revenue, an established customer base and the employees' experience," agreed John Carson, division manager, Ehrlich Green Team, J.C. Ehrlich Co., Reading, Pa. "But the downside is that there's no assurance of a high retention rate over the time frame in which you're looking to recoup the investment."

Chris Davitt, vice president of landscape installation, Ruppert Landscape Co., Ashton, Md., agreed that acquiring other companies can be valuable for expansion. "We don't want acquisitions to ever eliminate internal growth, but acquisitions offer the opportunity to bring in employees on a higher level, and, most importantly, to keep an influx of new ideas coming into the company so management's thinking doesn't become stale," he explained. "But an acquisition just for acquisition's sake is a mistake."

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LITERATURE

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Hunter Industries' Handbook of Technical Irrigation Information is written to assist irrigation professionals in the planning and installation of residential and commercial systems. The spiral-bound guide has more than 130 pages divided into four sections: formulas, conversions, tables and friction loss. Each section is illustrated with charts, graphs and site drawings.

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The *Handbook of Turfgrass Insect Pests* includes 140 pages of information examining pest management from a variety of angles. Published by the **Entomological Society of** America, the book discusses preventive control measures and provides detailed descriptions of insect identification methods. A directory of local resources, 60 color photos and 58 illustrations add to the book's educational value. Circle 202 on reader service card

Safety and the Supervisor is a bi-weekly newsletter designed to help supervisors and managers create an accident-free work environment which is compliant with applicable OSHA standards. In addition to the regular newsletters, subscribers receive safety meeting presentations and handouts with each issue and quarterly special reports on key safety issues.

Circle 203 on reader service card

Husqvarna Forest & Garden's newest product catalog includes the latest additions to the Husqvarna product family. In addition to specification charts, graphics and photography depicting each product, the catalog explains features exclusive to Husqvarna products such as E-Tech[™] engine technology.

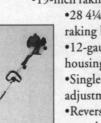
Circle 204 on reader service card

from one transmitter •One battery lasts entire season without recharging **Circle 208 on reader service card**

Toro string trimmer

•23-, 26- or 30cc commercialgrade engine •26-cc or 32-cc industrial-grade engine •Straight steel shafts with six

ball bearings •Anti-vibration grips and engine mounts **Circle 209 on reader service card**



Jacobsen Turf Rake •5-hp, 4-cycle Briggs &

• 5-np, 4-cycle Briggs & Stratton engine • 19-inch raking width

•28 4¼-inch long raking blades •12-gauge steel housing •Single 5-position adjustment lever •Reversible shaft for extended use **Circle 210 on reader service card**

FMC Talstar®products

•Insecticide/miticide for knockdown of 53 species of insects and mites

•Control insects such as sod webworms, chinch bugs and mole crickets

•Available in granular and flowable formulation •Talstar[®] Lawn & Tree Flowable water-based formula-

•Odor-free and safe on turf

Circle 211 on reader service card

Burlingham Seeds Falcon II tall fescue

•Dark green turfgrass

- •Intermediate, shorter growth habit
- •Fine leaf texture



•Improved resistance to brown patch

•Performs well alone or in blends Circle 212 on reader service card

DowElanco Rubigan A.S.

•Liquid fungicide

•Broad-spectrum control of turf diseases

•Guarantted to control 80 percent of summer patch, necrotic ring spot and Fusarium blight •Packaged in 21/2-gallon case Circle 213 on reader service card

Finn Bark Blowers

•Self-powered, pneumatic conveyors

•Convey wood mulches, saw dust, compost and other bulk materials

•80-hp John Deere 4039 diesel engine

•750 cfm of air flow at maxi-

cellent coverage with better

moisture retention for faster

germination.



mum 12 psi •Move up to 20 cubic yards of material per hour •Spray materials up to 300 feet •Blower mounts directly to a truck chassis •Models hold 8.2 and 15.7 cubic vards Circle 214 on reader service card

Lebanon Turf Products IsoTek31 fertilizer

•Designed for turf, annual

and perennial flowers, shrubs and trees

•14-14-14 composition

•Combines isobutylidene diurea and methylene ureas in a homogenous granule

•Delivers slow-release

nitrogen through hydrolysis

and microbial degradation

•57 percent of nitrogen is controlled release

•50-pound bag covers up to 7,000 square feet

Circle 215 on reader service card

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•Front-mount, zero-degree turning mowers •Advanced design with no daily lube points



BOX SCRAPER

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•Ross ME wheel motors

•25-hp Kohler engine

•Use same front-mount

attachments as 4000-Series

•60- and 72-inch decks available

Circle 216 on reader service card

Danville Express pesticide edger

•Manifold applies product to saturated roller

•Direct application of product to turf without drift

•Available with 4- and 6-inch rollers

> •1-gallon application capacity

'No mechanical pump mechanism required •Easy-to-reach on/off switch

Circle 217 on reader service card



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•Reinforcing steel posts Circle 218 on reader service card

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MacKissic Mighty Mac[®]blower

- •11-hp walk-behind blower •Briggs & Stratton Industrial Plus engine
- •215 mph wind velocity
- •2,600 cfm of air volume
- •Durable poly impeller
- Circle 220 on reader service card



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18-, 24- and 40-inch blade models
Gircle 221 on reader service

card

Nomix SuperPro 880 spray lance

•Set and spray calibration •Operator wears lance as

backpack unit •Rechargeable battery pack

'47,000-square-foot applica-

tion capacity •Applies all NoMix herbicides

Circle 222 on reader service card

DowElanco Conserve SC

•Controls sod webworms, cutworms, armyworms, other ornamental and turf pests •Quick activity ceases pest



feeding damage immediately •Caution label

- •Low dose rate, low odor and no phytotoxicity
- Limited availability in

August Circle 223 on reader service card



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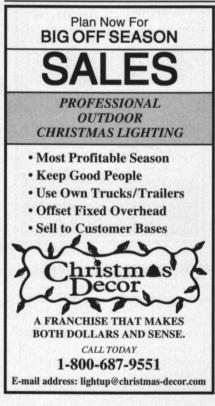
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eye on equipment

(continued from page 29)

The growing sophistication of the antiblower movement could give groups in communities across the country momentum to go forward.

But that's not to say blower critics have been given free reign to set up noise ordinances. The mayor and city council in Princeton, N.J., reversed their course in early June and decided against a blower ban they had already passed.

"They realized this ban was going to set a dangerous precedent," noted Pendergrast.

The ban originally passed despite testimony from the police chief who said it would be at the bottom of the list of laws to enforce, according to Hunt Stockwell, a local activist working to stop the ban.

The author is Editor of Lawn & Landscape magazine. Paul Schrimpf & Bob West contributed to this report.

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If ONE man on a GRASSHOPPER is your most productive crew, think what TWO or a FLEET will do.

Grasshopper is Number One in productivity, because a single Grasshopper can outmow traditional riding mowers and a trailerload of walk-behinds.

- Zero-radius, outfront deck design and responsive duallever steering eliminate most secondary trimming.
- Combo Mulching[™] Deck^{*} lets you bag, discharge or mulch without changing decks.
- Quik-D-Tatch® mounting system* lets you switch deck sizes and add attachments in minutes without tools.
- Robotic-welded steel construction and specially designed components, such as fully enclosed dual hydrostatic direct drive, for reduced downtime.
 *patent pending



"When you mow close to 15,000 lawns a week, your equipment must deliver maximum productivity with virtually no downtime. I know of no other machine that can even come close to staying with a Grasshopper." Dan Copeland, S & D Lawn Maintenance Safety Harbor, FL

• Maximum operator comfort with iso-mounted, high-back seat lets you stay in the seat at

maximum mowing speed. Mow all day with little or no fatigue.

 Easy day-to-day serviceability.

Move up to GRASSHOPPERABILITY

grass 'hop' per abil' i' ty n. the ability to make all the right moves for mowing quality and timesaving productivity.

First to Finish...Built to Last



Call or write for the name of your nearest dealer and a "hands on" demonstration. The Grasshopper Company • One Grasshopper Trail • P.O. Box 637 • Moundridge, KS 67107 U.S.A. Phone: (316) 345-8621 • FAX: (316) 345-2301

WHAT IN THE WORLD Do you need to do?

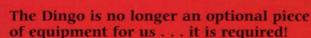






Put the Power of Dingo on Your Team

Not often does something come along that truly revolutionizes the way you do your work. The Dingo Digging System does just that! It is a fully integrated, multi-task system. A hydraulic power plant on wheels with over 35 attachments to choose from. Most attachments can be changed in less than 60 seconds by one person. The labor saving advantages of the Dingo will help you re-engineer the way you do your jobs. And labor saving means cost savings.



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USE READER SERVICE #45

I was skeptical at first, but not any longer!

The Dingo Digging System is definitely the labor saver. There was an immediate increase in crew productivity and a decrease in labor costs. It is true that one piece of equipment has turned. 3 and 4 man crews into 2 man crews, but it doesn't end there. The 2 man crew still gets the job done faster and with less expense.

> Clayton Sheeler, Vice President Prolawn Proscape, Blue Ash, OH

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