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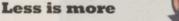
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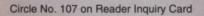
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March

14-18 Nat'l Arborist Assoc. Winter Management Meeting / Ft. Myers, FL; 603/673-3311

23-25 Capital District Garden & Flower Show / Troy, NY; 518/356-6410

26-28 Building With Trees National Conference Nebraska City, NE; 402/474-5655

April

5 Adirondack Regional Conference / Lake Placid, NY; 800/873-8873

8-10 EETC Training Council Annual Conference Virginia Beach, VA; 512/442-1788

8-11 North American Snow Conference / Indianapolis, IN; 816/472-6100

May

19-23 ASIC National Conference / Savannah, GA; 816/472-6100

June

15 Turf-Seed/Pure Seed Testing Field Day / Rolesville, NC; 919/556-0146

July

10-15 ANLA Convention & Executive Learning Retreat / Cleveland, OH; 202/789-5980, ext. 3010

16-17 PLCAA Legislative Day on the Hill & Arlington Renewal Project / Washington, D.C.; 800/458-3466

19-21 Turfgrass Producers International Summer Convention and Field Day / Toronto, Canada; 800/405-8873

20-22 EXPO 2001 / Louisville, KY; 800/558-8767

24 Midwest Regional Turf Field Day / West Lafayette, IN; 765/494-8039

August

4-8 Soil and Water Conservation Society Annual Meeting / Myrtle Beach, SC; 515/289-2331

19-25 International Garden Centre Tour / New York-Baltimore; 202/789-5980, ext. 3010

21 Cornell University Field Day / Ithaca, NY; 800/873-8873

September

13-14 Southwest Horticultural Trade Show / Phoenix, AZ; Sponsored by the Arizona Nursery Association; 480/966-1610

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Independent Turf and Ornamental Distributors Association 25250 Seeley Road Novi, MI 48375 248/476-5457

American Society of Irrigation Consultants P.O. Box 426 Byron, CA 94514-0426 925/516-1124

The Irrigation Association 8260 Willow Oaks Corporate Dr. Suite 120 Fairfax, VA 22031-4513 703/573-3551 www.irrigation.org

National Arborist Association 3 Perimeter Road, Unit 1 Manchester, NH 03103 603/314-5380 www.natlarb.com

Ohio Turfgrass Foundation 1100-H Brandywine Blvd., PO Box 3388 Zanesville, OH 43702-3388 888/683-3445

The Outdoor Power Equipment Institute 341 South Patrick St. Old Town Alexandria, Va. 22314 703/549-7600 opel.mow.org

Professional Grounds Management Society 720 Light Street Baltimore, MD 21230 410/752-3318

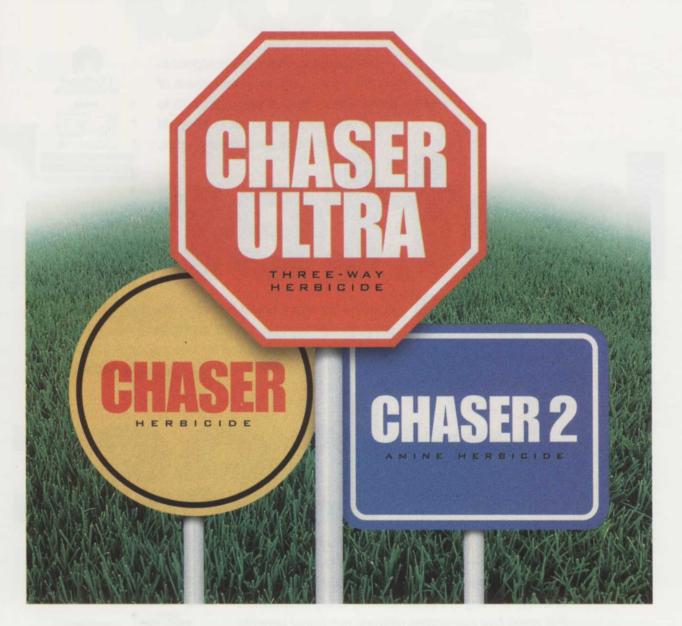
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on the record

BY SUE GIBSON / EXECUTIVE EDITOR

They don't know you

like to call them "landscape's stakeholders." They're the interest groups who can make or break this industry, yet many don't have a very good picture of the services you provide, the expertise you

apply in your work or the value you bring. These stakeholders are residential and commercial customers, industry suppliers, the general public, the media, the business community and large institutions, current and potential investors, regulators and politicians, students and potential employees.

Individually and with your peers, you need to give these stakeholders a good image of landscape work as an admirable profession providing work of great value. After all, you're trained and skilled. You enhance outdoor spaces. You're environmental stewards. You have a career with unlimited financial potential and creative opportunities. You know that, but many of those stakeholders don't.

If there was an industry-wide public relations program, they'd understand. If there were days when several of you worked together to build the Evergreen Foundation's greenways, renovate veterans' cemeteries, or enhance local public areas, they'd see your professionalism. If there were even modest but coordinated efforts on both the local and national basis, those stakeholders would see you in a different light. I would love to see one or two enthusiastic people in each of this industry's professional organizations (local and national) encouraging members to support one strong public relations program. I would be so happy to see my media colleagues devise ways we can jointly promote this program within our pages, Web sites and seminars. I would be thrilled if the associations, industry suppliers and educational institutions decided this project is worth their time, energy and dollars.

Finally, I would be proud if landscape organizations from large franchises to institutions to smallest family firms contributed annually to such a program.

The impossible dream?

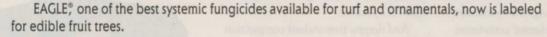
Is this realistic? I've seen the associations coordinate their efforts for the annual Gallup poll of homeowners, so I know they can work together for something that benefits their members. My media colleagues have plenty of wonderful, creative ways to encourage landscape professionals to participate. In the past, many generous industry suppliers and institutions have shared time, energy and money for good causes, so I know it's possible.

And despite tremendous competition and fragmentation, I've seen lots of landscape organizations work together on projects with a lot less direct benefit than this would bring. It would be fun to see even a modest and very limited version of the milk lobby's "Got Milk?" campaign for landscape. It could have politicians, movie stars, sports heroes, business leaders, children, even grandparents telling how much they enjoy their landscape service. As an industry, we could have a lot of fun appealing to potential employees, young students, property owners, even regulators. We just need a solid program, a clear plan and a willingness to work together. Can we start soon?

Contact Sue at 440/891-2729 or e-mail at sgibson@advanstar.com

I would love to see one or two enthusiastic people in each of this industry's professional organizations (local and national) encouraging members to support one strong public relations program

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ohm and Haas. ALWAYS READ AND FOLLOW LABEL DIRECTIONS. Eagle is a registered trademark of Rohm and Haas Company. T-O-312 12/99 Circle No. 109 on Reader Inquiry Card RON HALL / SENIOR EDITOR

Welcome to our wild and wacky world

r. Jonathan P. Ward, congratulations on your selection as the president and chief executive officer of Service-Master (NYSE:

SVM). Welcome to the services business, particularly to the Green Industry. We think you'll find that the Green Industry, specifically the professional landscape side of it, to be a wild and wacky business. (Where else, for example, can a guy with a pickup truck and a lawnmower declare himself a businessman and start signing up clients immediately?)

Mr. Ward, you come to our industry with impressive credentials. In a 23-year career at R. R. Donnelley & Sons Company, you progressed up management, and in 1997 assumed the title of president and chief operating officer of the largest commercial printing operation in the United States. That firm, based in Chicago, is about the same size as the company whose future you're now directing. ServiceMaster, headquartered in the Chicago suburb of Downers Grove, reported 2000 revenues of about \$6 billion.

We understand you've been extremely busy since taking the helm at ServiceMaster in mid-February. We've been told you've been meeting with ServiceMaster executives and managers, among them the folks guiding the fortunes of TruGreen ChemLawn and TruGreen Landcare at division headquarters in Memphis, TN. While lawn care and landscaping are just two of many services that ServiceMaster offers, they're vital to its growth and profitability. In fact, the combined revenues of the two services account for one-fourth of Service-Master revenues.

New spark needed?

It's no secret to you, or to anybody who has been following the company's quarterly reports, that things didn't go as well as they could have for ServiceMaster's Green Industry operations last year, in particular landscaping. The job of consolidating 100plus formerly independent landscape operations into a single national company seems to have been more difficult to accomplish than your company expected. At least, that's what it looks like from here.

Perhaps the executives in Memphis thought they could duplicate their success in consolidating the lawn application business where they've gobbled up all but a few of the country's largest and most successful application companies to dominate the marketplace. But there's a big difference between running a lawn application service and operating a landscape business. In the labor and equipment-intensive landscape arena, the competition is even fiercer for accounts and profits.

Too early to call

After just three years, it's too early to predict ServiceMaster's success or failure in landscaping. The Memphis executives may yet turn TruGreen Landcare into a profit powerhouse. Reputations (and big salaries) ride on it.

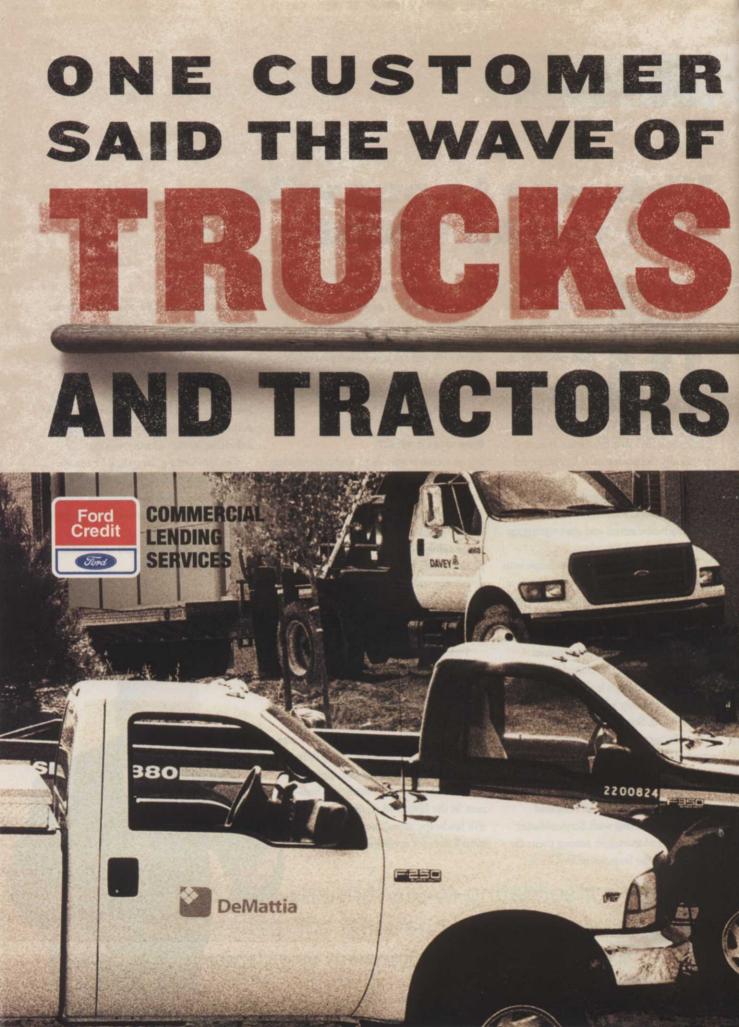
I'm betting that the message you're delivering to the troops is that ServiceMaster, as its name indicates, is in the business of delivering service. Quality service.

I'm also betting that you'll be implementing programs, starting with improving customer and employee retention, to spark ServiceMaster in the Green Industry again.

Contact Ron at 440/891-2636 or e-mail at rhall@advanstar.com

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The job of consolidating 60-plus formerly independent landscape operations into a single national company seems to have been more difficult to accomplish than [ServiceMaster] expected.



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BY GEORGE VAN HAASTEREN / GUEST COLUMNIST

We may know more than those above us when it comes to grounds care, but it matters little if we can't communicate our ideas.



Learn to communicate



any grounds managers across the country tell me how difficult it is to get their point across to their supervisors. Some even feel they must constantly justify their position or their department.

For the most part, grounds

managers are a rare group who are dedicated to their profession. They know how to grow turf, plant trees and move snow. The difficulty comes when everyone around them "seems" to know their job better than they do. This may happen because many grounds managers don't know how to present their own ideas and thoughts through memos, reports or careful budget preparation.

We may know more than those above us when it comes to grounds care, but it matters little if we can't communicate our ideas. That's why it's equally important for the grounds manager or supervisor to know how to communicate effectively.

In order to have your supervisors' understanding and support, you need to be as good as they are in writing, speaking and computing skills, budgeting, knowledge of labor laws, gender issues, etc. This won't happen overnight, but here's how you can start to improve those skills.

1. Attend workshops, seminars or classes. Don't just attend something that pertains to the technical aspect of grounds management. Look for a skill you need to improve as a manager or supervisor.

If you have difficulties working with your computer, take courses that will assist you. Most work is done through a computer. Get on top of this to be an effective communicator.

If you have trouble conveying your thoughts or recommendations on paper, look for a class or workshop that will help in that area. As a grounds manager, it's important to stay current with the laws and regulations that pertain to labor, gender and diversity as well as have a knowledge of the budget procedures at your place of employment.

2. Join and get involved with a professional association. Becoming involved with an association that represents who you are and what you do is a great way to expand your role as a grounds manager. I've found networking and building professional relationships with other grounds managers to be a tremendous asset in dealing with problems and finding solutions. Getting involved means attending national and local meetings and being an active member, not just being a dues payer.

3. Become certified. One of the most important decisions I made in my professional career was to become a Certified Grounds Manager because it showed my administration that I was committed to my job and profession.

I'm convinced certification gives more weight to our requests for funds and equipment, as well as our presentations to the administration. Face it: anyone can call themselves a grounds manager, and John Q. Public has no way of evaluating the reliability of that claim. Certification provides one undeniable barometer for everyone.

The real benefit of certification for grounds managers will come when many more of us become certified and our employees and employers begin recognizing it.

We're in a profession that requires an ever-increasing amount of technical and management ability. We, individually and collectively, must draw attention to that fact.

— The author is Director of Grounds Operations at the Dwight-Englewood School in Englewood, NJ and current president of the Professional Grounds Management Society. He can be reached at 201/569-9500.

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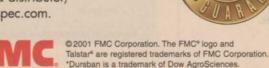


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industry almanac

EII acquires Fullbach

CALABASAS, CA — Environmental Industries, Inc. acquired Fullbach Landscape Services, Inc., a \$10 million landscape maintenance company headquartered in Louisville, KY with branches in Illinois, Missouri and Michigan. Fullbach will operate under Ell's landscape maintenance umbrella as Fullbach/Environmental Care.

Bayer acquires Compass

KANSAS CITY, MO — Bayer Professional Care acquired Compass fungicide (trifloxystrobin) from Novartis. The Bayer group now holds all patents, marketing authorizations, trademarks worldwide, and production and formulation expertise for the strobilurin-based fungicide line.

Profile acquires Wood Recycling

BUFFALO GROVE, IL — Profile Products LLC acquired the hydraulic mulch business of Wood Recycling, Inc., manufacturer of Re-Fiber and Hydroblanket brand products.

Toro nabs Disney

LAKE BUENA VISTA, FL — The Toro Company became the official turf and irrigation company of Walt Disney World Resort. The agreement is an extension and expansion of a previous pact with Disney, and applies to most Walt Disney World properties.

Time to raise the H-2B cap?

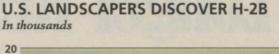
WASHINGTON D.C. — If your company relies on the H-2B temporary worker program, here's a tip always get your workers certified as early as possible. Here's why. Last year, U.S. demand for

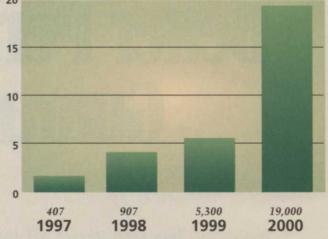
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U.S. demand for H-2B workers exceeded the cap. The program allows for the entry of 66,000 unskilled seasonal foreign workers, but the U.S. Department





Number of H-2B class workers certified by landscape contractors

SOURCE: U.S. DEPARTMENT OF LABOR

of Labor (DOL) certified 75,300 H-2B workers, reported the American Nursery & Landscape Association (ANLA). A lot of this extra demand came from the landscape industry.

"In 2001, the H-2B cap could be a problem by mid-year," reports the ANLA. "In 1999-2000, INS (U.S. Immigration and Naturalization Service) did not keep an accurate count of the number of temporary H-2B visas granted. But DOL did certify 75,300 applications for a maximum of 66,000 visas. Once this cap is reached in 2001, the program will be shut down for the year." ANLA said the solution is to raise the cap.

HOW MANY YEARS HAS YOUR ORGANIZATION BEEN IN OPERATION?

Anton a think	Total	<\$100K*	\$100-500K	>\$500K
< 5 years	11.3%	18.6%	5.6%	6.3%
5-10 years	30.4%	41.9%	33.3%	15.6%
11-20 years	32.2%	18.6%	36.1%	43.8%
>20 years	26.1%	20.9%	25.0%	34.4%

SOURCE: LM READER SURVEY 2000, PENN & ASSOCIATES

continued on page 23

How do you get more power to the root of your weed problem?





The proof is in the leaf.'

Monsanto scientists used scanningelectron microscopy to photograph the effects of weeds sprayed with Roundup Pro and an imitator. Taken just one hour after application, these images clearly show more formulation in the leaf sprayed with Roundup Pro.

Get Roundup Pro[®] herbicide with patented PROformance[™] technology.

In the first two hours, it delivers three times more power to the roots than Glypro Plus herbicide.





The proof is in the roots.'

Scientists also used autoradiography to photograph and measure the amount of herbicide in the roots two hours after application. Time after time, at least three times more herbicide showed up in the weeds sprayed with Roundup Pro. With the imitator, barely any herbicide has moved to the roots. This is a cross-section of a weed leaf magnified 1000x. The yellow droplets mean Roundup Pro is already at work inside.

Scientific photography taken two hours after application shows three times more Roundup Pro in the roots. More color means more herbicide.

This weed, sprayed with the imitator, has almost no droplets in the leaf.

Glypro Plus

In the first two hours, almost no imitator herbicide has moved to the roots.

The proof is in your control.

See for yourself the difference Roundup Pro with patented PROformance technology can make in your weed management. See your dealer or call **1-800-ROUNDUP** for more information.

Free video shows science in action.

See PROformance technology at work in a free, five-minute video. Scientists Dr. Tracey Reynolds, Ph.D., and Dr. Jimmy Liu, Ph.D. demonstrate the autoradiography and cryo-SEM techniques used to compare Roundup Pro with Glypro Plus on two identical weeds.

Call **1-800-ROUNDUP** and ask for your free Roundup Pro video today!

Always read and follow label directions. Test conducted with MON 77360, EPA Reg #524-475 with comparison to Dow product carrying EPA Reg. # 62719-322. 1.Test methodology: In scanning-electron microscopy Monsanto scientisti identified penetrated formulations of both Roundup Pro and Glypro Plus in the mesophyll cell layer. These micrographs support the evidence that formulations containing Monsanto's patented PROformance technology rapidly penetrate the leaf surface. 2.Test methodology: Radiolabeled formulations were applied at equal acid-equivalent rates. Radioactivity was visualized by autoradiography following a simulated rain event two hours after application. Monsanto laboratory tests, 2000. Glypro Plus is a trademark of Dow AgroSciences LLC. Roundup? Roundup Pro' and PROformance™ are trademarks of Monsanto Company. [10613 jct 1/01] ©2001 Monsanto. Company RUPRO-10613

What an awful way to go

Fire ants lose their heads over new bio-treatment

AUSTIN, TX — A tiny imported fly no larger than the head of a pin may be the key to controlling the imported fire ant, a serious turf pest in the South.

The phorid fly, a natural predator of the fire ant, hovers over its victim and injects an egg into it. The egg hatches several days later, and the miniscule maggot moves into the fire ant's head. As the maggot matures, it releases an enzyme that causes the ant's head to fall off.

Larry Gilbert, an ecologist at the University of Texas, has established a phorid fly breeding farm in Austin, TX. So far, he and his team have released more than 100,000 flies in Texas. Similar trials are underway elsewhere. Researchers in Gainesville, FL, for example, say the flies they released over a period of several years can now been found over a 1,000-sq.-mi. area.

Sanford Porter, with the USDA in Gainesville, FL, says that the imported fire ants stop their foraging and flee when they detect the presence of the flies. While the flies may not be able to kill great numbers of fire ants, they may cause enough of a disruption to give native ants an advantage to reduce the impact of the imported pest ants, he explained.

The imported fire ant was inadvertently brought to the United States about 80 years ago from Brazil. Although both the federal and state governments have spent hundreds of millions of dollars trying to eradicate the pests, their range keeps extending. Imported fire ants are commonplace in the Southeast, and their range is spreading west and north. Phorid fly injects egg into fire ant.
 After hatching, the maggot travels to the fire ant's head.

3. After reaching the fire ant's head, the maggot matures, releasing enzymes which cause the head to fall off.

Both Gilbert and Porter cautioned against counting on the phorid flies to have a great impact on fire ants anytime soon. Testing will continue for several years, they said.

People & companies

L.R. Nelson Corp. ap-



pointed Douglas Ramsdale vice president, international and

managing director of its wholly owned European subsidiary, Nelson, BV.

Exmark Mfg. promoted Dan Dorn to product marketing manager.

Green2go.com named Robert Shoelson merchandise manager for the web site's green products.

Otterbine Barebo appointed Chris Barebo president. Harmony Products, Chesapeake, VA, named Gregory R. Moore northeast regional sales manager.

Stens Power Equipment appointed Terry Deneau territory manager and Lee Boehm to oversee management at Stens' seven distribution centers throughout the U.S. Craig Smith was promoted to market development manager.

Environmental Care, the



landscape maintenance company of Environmental Industries, hired **Scott** **O'Donnell** as a member of its national accounts team.

Yanmar Diesel America announced the certification of its compact air-cooled diesel engines by the United States Environmental Protection Agency.

Cebeco International Seeds retained the services of **Eric Schmidt**, with Schmidt Services, LLC, as southwest regional representative.

John Deere's 4700 compact utility tractor was honored with an AE50 award by Resource Engineering & Technology for a Sustainable World. AE50 awards are given each year to honor companies that release the best new products engineered for agriculture, food, biological and related systems.

Tyler Enterprises ex-

panded its product marketing efforts into municipal and independent athletic fields and grounds. **Brian McGuffin** was hired to head the effort. It also opened a full-service warehouse and delivery operation in Indianapolis, IN that will serve as a distribution center for its custom blended fertilizer products and specialty chemicals and an office for the Indiana sales team.

industry almanac

Researcher identifies perennials tolerant to salt

WOOSTER, OH — For the first time, a researcher has come up with a list of perennial species that are more salt tolerant than others. Now, landscape professionals looking to beautify sidewalks, driveways and roadways subjected to heavy de-icing during winter don't have to guess as to which perennials will work best.

Laura Deeter, an Ohio State University Agricultural Technical Institute researcher, analyzed 38 perennial species and compiled a list of 15 plants that performed the best under various levels of soil applied sodium chloride.

VIDEOS AND LITERATURE FOR THE GREEN INDUSTRY

FIND A BRIGHT IDEA... in HADCO's "At a Glance" brochure, which provides an overview of the company's landscape lighting fixtures and allows lighting



specifiers to make easy comparisons for specific illumination requirements. To obtain a copy, call 717/359-7131 or log on to www.hadcolighting.com.

SEE INTO THE FUTURE...with ALCA's Crystal Ball Report 21 entitled, "Implementing Technological Change in Your Company: Incremental Improvement or Re-engineering." The report tells landscape contractors how technology can help their businesses and what the challenges are in incorporating technology into their every day operations. It costs \$5 for ALCA members and \$25 for non-ALCA members. To receive a copy call 800/395-2522 or log on to www.alca.org.

BAYER PRODUCTS, PROGRAMS AND RE-

SOURCES...can now be found at www.BayerProCentral.com, a new customized Web site devoted to professional service providers. Whether you want to enroll in the free Bayer Accolades rewards program or look up pest information, the Web site will be there 24 hours a day.

TREE PRUNING GUIDELINES... are offered in the International Society of Arboriculture's (ISA) Tree-Pruning Guidelines publication. Written and reviewed by a committee of top arborists and educators, it was developed to accompany the new A300 Pruning Standard set forth by the American National Standard Institute (ANSI) and designed to be used in the field as a handy pocket reference or to assist in training. To order contact ISA at P.O. Box 3129, Champaign, IL, 61826-3129.

LOTS O' SEED...can be found in Barenbrug's new catalog entitled, "Grass Seed Mixtures for the Professionals." The catalog profiles more than 35 of Barenbrug's varieties so that its grass seed users can select the correct variety for their needs. To obtain a free copy call 800/435-5296. Species found to be very tolerant to salt were:

- Splendens sea thrift
- Karl Foerster feather reed grass
- Helen Allwood pinks
- Blue lyme grass
- Perennial fountain grass

Other species found to be tolerant included Powis Castle wormwood, Silver Mound artemisia, Elijah Blue fescue, variegated hosta, sea lavender, Cherry Cheeks and Stella d'Oro daylilies, Autumn Joy sedum, creeping lilyturf and Palace Purple alumroot.

Deeter discovered that it was each plant's ability to regulate where the sodium went within the cell that determined how salt tolerant they were.

The five-year project started in a greenhouse before ending in a hand-salted field. "I wanted to see if the results of the greenhouse study accurately predicted salt tolerance during dormancy, and they did for those plants studied," Deeter says.

All in the family?

Only 3 in 10 family businesses survive the transition from the first to the second generation.

Only 1 in 10 of these businesses survive the transition to the third generation.

---steve Natio, AOT Business Viewpoint (January/February 1999) publication of the Associated Oregon Industries

24 LANDSCAPE MANAGEMENT / MARCH 2001 / www.landscapegroup.com

Laws target bio-tech vandals

RICHMOND, VA — Two state lawmakers here have proposed harsher penalities for those convicted of vandalizing agricultural research projects, reports the Mid-Atlantic Grower. The legislators are sponsoring the action in the wake of raids on bioengineered crops and animal research laboratories. Animal rights activists and organizations opposed to genetic engineering have claimed responsibility for the mayhem.

Justin White of The American Crop Protection Association (ACPA) says there



Find those plants

Plant searchers, rejoice! Now, not only can you browse through 215,000+ plants, post items to buy, auction items to sell, and check out events and industry news, you can lis



information about your company along with your

complete catalog on-line at www.plantfind.com. First of all, membership is free, and by clicking on the Myplantfind section, you can add your company information, logo, catalog with pictures, and a banner ad at no charge. The PlantFind.com auction is also open and fully functional at no charge unless the auction or procurement items you list receive winning bids. Metasequoia glytostroboides? Buddleia davidii? Berberis thunbergii var atropurpurea? They're all here. have been 40 attacks on ag bio-tech research in the last two years. Last June, for example, the Anarchist Golfing Association caused damaged estimated at \$300,000 to turf plots at an Oregon seed research facility.

California toughened its penalties for vandalism to ag research, and other states are debating bills that treat vandals as criminals.

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> and lower 742 coters a 25 1/2* uide swath maintenance costs over an extended lifetime.

And you'll cover more ground too. Both our 530 and 742 Aerators have free-wheeling outer tines for greater maneuverability, they're easy-touse, and two of the most productive walkbehind aerators, covering up to 37,100 sq. ft./hour. For more about BlueBird Aerators and

for the distributor or dealer nearest you, call **1-800-808-BIRD**.

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Circle 112

Crew size is the kind of issue that's maybe "too close for comfort" — or at least too close to get the attention it deserves. It's so obviously important that perhaps we look right past it. LANDSCAPE MANAGEMENT knows at least two successful contractors who understand the importance and competitive value of getting their crew sizes right. They've agreed to share with you what they've learned over the years about the ideal crew size.

Jerry Gaeta, The Good Earth, Inc.

Jerry Gaeta is president of The Good Earth, Inc., Mount Pleasant, SC, a \$3 million company with 62 full-time employees that provides lawn, design/build and landscaping irrigation services, plus a turf program covering sports fields. Gaeta also serves as a management consultant to the Green Industry under the aegis of Charles Vander Kooi, a Littleton, CO-based management consultant to the Green Industry and related industries.

> As part of his consulting duties, Gaeta gives seminars and does public speaking — often on crew size, a subject he is passionate about.

Landscape Management:

Why are you so interested in crew size?

Gaeta: Because labor is nearly the whole thing we sell, and with the lack of experience in the work force today, typical crew leaders cannot handle more than two or three people efficiently.

Labor is the primary thing that costs us money in this industry. Many

BY GEORGE WITTERSCHEIN

Most landscape companies believe a three-man crew is ideal for commercial or larger sites.

people in our industry focus too much on materials, whereas our company focuses on labor. Labor is the key factor that makes you competitive or non-competitive. With so much unskilled labor today, you're much better off having the most efficient crew size and rewarding those people a little bit more so they don't have to "babysit the deadweight" so much.

If we need larger crews on a particular job site, we'll put two crews together with a responsibility level. The objective is for the foreman to remain within eyeshot of the laborers, aware of where they are at any time so that he can get more efficiency out of them.

Keeping that in mind, we've been running with 20 fewer employees since the summer. Our productivity has gone up, which means our labor costs have come down.

It's customary for landscapers in this region to do everything by 12-month contract. As labor costs climbed over the last six or eight months, we had to increase our productivity if we wanted to make money on our fixed contracts. That meant we had to reduce our crew size by one or two persons.

LM: How do you measure productivity?

Gaeta: By comparing the estimated man-hours on a job vs. actual hours. We also do time and motion studies during the year to validate our assumptions.

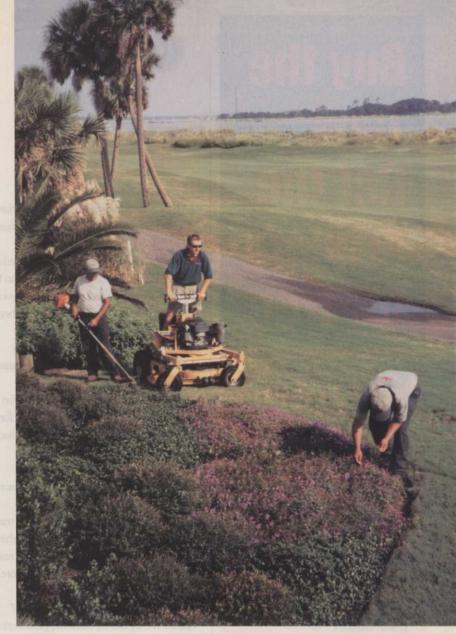
LM: What do you call the right crew size for a particular kind of work?

Gaeta: We try to have the right number of people that our foremen can handle, which is normally three. When a foreman has four or five people, two aren't producing much, and the foreman spends most of his time babysitting.

I have people here who can efficiently handle five or six people. We look at the volume of work the job site requires and try to do that work with the most efficient crew size possible. At a larger job, we stick with a threeman crew.

LM: What's the right crew size for your residential lawn maintenance work?

Gaeta: We do a lot of lawn maintenance work. About 70% of my business is maintenance under fixed con-



tracts, and our crew size for maintenance is two to three people. Some special projects have four-man crews, and these are managed by our most experienced foremen.

LM: How about a basic commercial property traveling crew that does things like bed work and irrigation? Gaeta: We have an irrigation service technician who's a one-man show. We don't have a detail crew because all the detail work is typically done by the crew on the job site. We do have an "enhancement" crew that plants our annuals and does our mulching. In the past, we found that having a detail crew sometimes made the regular crew lazy.

We break out the "big mow" crew at certain times of the year or for certain projects to do some of the cutting with a big mower and keep the other guys moving quicker.

continued on page 28

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CREW SIZE

continued from page 27

LM: Does the issue of crew size have anything to do with the problem of labor availability these days?

Gaeta: Absolutely. Once you understand that you're selling labor hours that are hard to find in the marketplace and productivity is your competitive edge, you'll automatically begin to focus on a smaller crew size.

LM: Do you find that your crew configuration makes any difference?

Gaeta: We typically have a foreman, who we call a supervisor; a lead person, who's a foreman in training and who can serve as a backup foreman; and a laborer.

LM: What kind of equipment do your crews use, and how do your crews get to jobs?

Gaeta: We run in a regular van/pickup truck which sometimes has an open trailer behind it. We're looking at getting a large cutting machine this year to reduce labor some more.

LM: Do you ever change your basic crew? Gaeta: We try not to, but it happens during the winter sometimes when our schedule is lighter and we have to shift people around for things like hard pruning. We try to keep the basic crew together — we may pull a float man off another crew — but we've found that shifting crews around causes bedlam. This is especially the case in the maintenance business, where the object is for the people on the crews to know the job site and go in knowing exactly what to do.

LM: Do you find that the cohesiveness of a crew can get messed up if you keep shifting crews around?

Gaeta: Exactly right. We have a very good foreman who's been with us for a long time and he used to be the training ground. This frustrated him because he would train somecontinued on page 30

Time and motion studies — should you be doing them?

When asked whether or not time and motion studies are important in his company, Tony Bass of Bass Custom Landscapes replied with an enthusiastic "yes." In fact, he says efficiency is impossible without them.

Bass: I concentrate on time and motion studies a lot. Many people in our industry talk about the "morning circus" - the situation that occurs when people do everything except getting into the truck and heading out to the first job. You can't possibly run an efficient operation if you have the "morning circus" going on. I did a time and motion study in our company a few years ago, and it turned out we, in fact, did have the "morning circus" going on. My study revealed that the problem was the 180 feet from our time clock to the truck parked farthest away on our yard. After some observation, I realized that no one was walking a straight line to the truck. Now, as a solution to this problem, we have one employee who comes in early and lines the trucks up just outside the office doors. As a result, the trip from the time clock to the truck cab is now 15 steps, and our managers find it easy to keep an eye on everyone. This study led to crews to arrive an average of six minutes earlier per day at their first job. Clearly, time and motion studies are also useful in establishing vour correct crew size.

LM: Where did you learn to do time and motion studies?

Bass: [laughs] I started doing them in the early days to keep from starving to death! I have an agricultural engineering degree from the University of Georgia, and that's where I learned to perform time and motion studies. (Our readers can also learn to do those by taking courses at local community colleges, or looking for professional organization seminars.)

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CREW SIZE

continued from page 28 body and then that person would leave. But if you're switching people around, you have to tell them exactly what to do every time you're on a job site. That slows things down, and could cause problems for the client.

LM: Do you find that your crew members like to work with the same people for a long time? Gaeta: Yes. We like to keep the basic makeup of the team the same.

LM: Do you ever form SWAT teams to do things like hydroseeding?

Gaeta: We subcontract out our hydroseeding, but we do have some special service crews in the maintenance business. We have one crew that does our annual planting and mulching, and they can be that SWAT team as necessary.

LM: Do you feel you have finally found your right crew size? Gaeta: I'm not sure you ever find that. I feel that our crew size is working properly now for the job sizes we have, but given some of the work we're starting to chase, we may have to increase our crew size here and there. For example, you may have to increase your crew size if you have a larger job that has to be completed within a short period of time. An extra person can occasionally help with detail/bed work on big jobs with short time frames. But I don't think we'll

Spending for employee training – 1% to 2% of total sales

Avoiding the spending trap

No matter what crew size you use, your employees will be more efficient, effective and careful with continuous training. *Landscape Management's* Best Practices Panel recommended a variety of training dollar ranges from .5% to as much as 10% of total sales, but it doesn't have to be expensive. In fact, training may have a higher cost in time than actual dollars.

Resources to the rescue

Where can you get good training resources? Do-it-yourself is a good start, but there are so many thorough, inexpensive and worthwhile resources available, including:

Associations — National and regional associations have video programs, training guides and "tailgate" programs on equipment use and technical topics.

Local associations — They offer reasonably priced one-day programs on specific topics.

Suppliers – Many dealers, distributors or manufacturers provide on-site training, training days, videos, product manuals and other resources for free.

Conferences – Get in the loop at state or regional turf, horticultural or association educational conferences. Outdoor demos — Grab a

- good opportunity to review and try out safety and operating features.
- Group training programs Experts may hold their own seminars or ongoing programs offering specialty or multi-language training.
- Company training Bring in your own professors or experts to make sure everyone has a solid technical foundation.

ever go over four people per crew, even though we do have some foremen who can handle larger crews.

Pressures also work in the other direction. On some jobs, we'll try to get our three-man crews down to two people via natural attrition. Our costs for things like labor, gasoline and health insurance have started to go up, and given that I can't raise my prices much, I'll try certain (mostly residential) jobs with crews of two. It's difficult to raise prices in this industry, especially on service, so crew size is the first thing I look at when fighting cost increases.

LM: Has your crew size contributed to your success? How do you measure that?

Gaeta: Yes, it has. I measure success in two ways: first, I've been in business 26 years, and second, we're still holding onto our good long-time accounts.

Two more signs of our success are that we've been getting minimal increases in our contract prices, and we've signed a lot of renewals for maintenance contracts. The fact that I've been keeping the price in line and the quality high tells me that I'm succeeding.

Tony Bass, Bass Custom Landscapes

Another landscaper with a passion for getting crew size right is Tony Bass, owner/president of Bass Custom Landscapes, Bonaire, GA. His company has been in business since 1987, commands revenues of \$2.5 million a year and has a peak-season workforce of 55 people providing landscape, design/build and lawn maintenance services to commercial and residential customers. Tony Bass's Isuzu cab-forward trucks only seat three, so that's how many crew members arrive together at a job site.

LM: Is crew size something you've paid attention to over the years? Bass: It certainly is. There's lots of low-skilled labor out there, but it's hard to attract that labor, so it makes sense to have the right crew size. It's your way of using productivity to fight against labor and cost increases. With wages starting to go up in our industry and customers remaining intolerant of price increases, we have to make sure we're operating at maximum efficiency.

LM: What are your ideal crew sizes?

Bass: We have two-person crews for residential lawn maintenance and three-person crews for commercial lawn maintenance. We generally use three-person crews on our landscape construction jobs as well. For really big jobs, we'll put two crews together...

LM: Rather than increase the size of one crew?

Bass: Exactly. Seldom do we work with four- or five-man crews.

LM: How do you arrive at your crew sizes?

Bass: [laughs] A lot of it has to do with the size of the cab of the truck! We mostly use Isuzu cabforward trucks, the so-called "Super Lawn Truck System," and they seat three. We insist that our people seat themselves properly in the cab and put their seat belts on. That means you can only get three people into the cab.

Some companies have config-

ured their trucks differently. There are dual cab trucks that can seat six or seven — something we will consider in the future for large commercial project because of the shortage of available drivers!

And we've begun to run some numbers because of the prospect of landing some super large projects — properties of more than 25 acres to take care of in one day. We find that the most a three-man crew can cover in one day is 18 to 20 acres, so if we have properties of more than 20 acres in size, and if it's important to get the job done quickly, we'll consider a larger truck/larger crew.

LM: You said "run some numbers." What you mean by that? Bass: We look at the average wage of our crew. In most cases, our three-man crew has a crew supervisor, who's also the driver of the truck earning, say, \$9 an hour. Then, we have what we call our "number two" man, someone who could probably run the crew but is being held back by something (usually the lack of a driver's license, English language skills or leadership skills). This person is usually going to earn about \$7 an hour. The third person is usually a rookie earning about \$6 an hour.

The average wage of that crew is \$7.33 an hour. Let's say we're going out to a big property, perhaps 40 acres in size. Our numbers tell us that at our production rates, we can take care of



that 40 acres reasonably quickly and profitably if we had six people on that job.

LM: You said, "Our numbers tell us..." Do you keep management information?

Bass: Yes. When we attempt to take care of a new property, we'll physically measure all of the critical components of that landscaped area — the square footage of the lawn, the square footage of the beds, the number of shrubs (categorized as small, medium or large), the linear feet of edging, the number of zones of irrigation to be inspected on a regular basis, the square footage of weed eating and the estimated amount of time needed to blow off debris.

LM: And do you store all of this information somewhere?

Bass: You got it. We use these items on our estimate worksheet in Microsoft Excel. We create the estimate in an Excel spreadsheet, and, after we interpret the information, we plug the combined numbers into CLIP software to monitor the budget for the job per visit or per year. CLIP is a software program we use to help route and schedule and calculate job costing on our lawn maintenance jobs.

LM: You do that so that when you're facing a really big job, you're in a position to base your decisions about crew size on historical information from your own company.

You're not just flying by the seat of your pants.

Bass: That's right. We're not just driving through the property saying, "I think it's going to take 'x' number of days." You have to have concrete information with the physical data that's out there.

We spend a great deal of time on estimating to make sure make sure we don't make mistakes on our bids.

LM: And that careful estimation probably tells you a lot about the crew sizes you're going to need. Has the effort you've put into determining your proper crew sizes paid off? Bass: We are a successful company, and we're constantly looking to acquire new business. Right now, we're doing just that. I compare our profitability to ALCA standards, so I know that we are above average.

The effort we've put toward figuring out our ideal crew size has definitely paid off. I would say that the tendency toward incorrect crew sizing constantly threatens us, though. If somebody in our business today thinks they can add an unnecessary person to a crew and still survive, they're seriously mistaken. The margins we operate on in the Green Industry don't permit us the luxury of putting even a little more labor on a job than is necessary to get the job done efficiently or to an acceptable level of quality. LM

EMPLOYEES

Tony Buss's Buss cob-forward backs only sein filme, so that's frow many ower mambers are together at a job site.

Eliminatir

BY BILL HOOPES

ILLUSTRATION BY MATT COLLINS MCOLLINS@WEBQUILL.COM

before they affect your crew

SES

It's a mid-summer Monday morning in Grassville. You've just completed your regular, small company team meeting, made assignments and recognized top performers.

At this week's meeting, you tried to emphasize your belief that if your company doesn't deliver better customer service than the competition, your business will suffer: You talked about checking with homeowners every chance you get to identify any problems that may need attention. You talked about "doing the job right the first time" to avoid unnecessary service calls. A quick survey of the crew's faces signaled that they got the message.

After the session, you watch over the day's start,

making sure the crew is organized and on the road, then turn your attention toward repairing an important spray rig. In the middle of the job and missing some parts, it's clear you'll have to pick up some supplies to finish.

ur own way

As you head for the store, you notice two of your vehicles at

a McDonald's restaurant. That's strange, you think to yourself. I provided plenty of coffee and doughnuts to the guys only 20 minutes earlier. Why are some of my guys at McDonald's?

s lots of

continued on page 34

Busters'

continued from page 33

Since you can't find a logical reason for their presence, you pull in and enter the restaurant through a side door.

Two of your people are sitting behind a row of plants. One is a new employee, and the other is a veteran.

You slide into a hidden seat opposite the row of plants.

As you listen to their conversation, you witness the attitude of an all-too-common employee you know as the "Team Buster," or "TB." These insidious, negative employees create divisiveness and negative attitudes that can destroy a team's morale, productivity and loyalty, leading to increased turnover.

As the conversation progresses, you find it hard to stay cool. Tom, your six-year veteran, is lecturing Anthony, your new employee. Tom details his extensive experience working with customers. He tells Anthony that "what you heard in the meeting is the typical manager's 'take' on customer service."

With a superior sneer, Tom outlines what he calls "the real world" and lets Anthony know in plain terms that "what he told us to do is what all bosses try to get employees to do."

You steam up more as you hear, "These owners don't do what we do, kid. In fact, most of them haven't touched a spreader for so long, they wouldn't know what to do with one."

The lecture continues, "If you want to know how to get the job done, here's what you do." Then, Tom proceeds to undo all the instructions and training you just gave to Anthony.

In no time, your new employee has been indoctrinated by the TB. He now thinks that "knocking on the door wastes your time" because "nobody's home anyhow." He learned how to write comments on invoices in advance because "doing it on the lawn takes too much time."

Anthony has also been carefully instructed on how to answer the typical questions "those stupid customers ask" and why "all you really need to do is blow a little smoke at them and get outta there." Tom even told Anthony when, where and how to relieve himself in the bushes.

Tom then begins to describe how to observe female sunbathers in his territory who "really make the job fun in the summer."

That's when the game ends.

Damage control

You've had it. You get up, approach the startled workers and say: _____. What do you say? What action would you take? Can the damage be repaired? How long had this been going on?

"Team Busters" are negative people who will poison your team if left in existence. These people will tear down your team's morale and your operation will suffer.

Positive steps

Start by setting positive standards. You have the right to run your business any way you choose and that privilege includes establishing customer service attitudes, as well as procedures. Your staff has a responsibility to meet your standards.

React immediately! Don't just hope a negative person will 'see the light' and change once things get less hectic.

Be certain you have clearly communicated your standards and expectations. Under difficult circumstances, even the most committed of us fail to live up to our own standards. Before you blame and take action, check out the effectiveness of your communications.

If you're convinced the employee knew how the job was to be done, conduct an immediate and private performance intervention interview.

In the interview, review the training you have provided and the instructions you have given. Get the employee to acknowledge that he or she understood your job performance standards.

Now, communicate the specific performance problem in detail. Be specific, detailed and unemotional. Confine comments to specific performance. Do not attempt to analyze why the performance was unacceptable, just describe what actually happened.

Ask the employee to explain his or her performance. Listen with an open mind. Do not jump to conclusions or "bait" the employee to prove your point.

Most managers believe the employee deserves at least one verbal and one written warning. Depending on the severity of the unacceptable performance, you may decide to terminate the employee on the spot. If you decide to warn the employee, give the *specific and detailed instructions* on the level of performance you expect in the future, beginning immediately.

Establish follow-up performance benchmarks and a timetable for improvement. Always follow-up quickly.

The worst thing any manager can do is *nothing*.

Keeping TBs off the team

Once stung, most managers either develop the opinion that "people just don't want to follow directions," or they learn to keep a closer ear to the ground.

Here are two things you can do to minimize the chance that a "TB" will invade your staff:

Require staff input as a part of the planning and problemsolving process. People are positively motivated and work harder to succeed when they feel ownership in the process.

Hold regular "one-on-one" meetings with your staff. Make them frequent, private and personal. Ask questions that probe the employee's mind. Learn as much as possible about their overall level of satisfaction or frustrations. Be bold enough to ask your employees straight out, "How can I make your job a little bit easier?" Once they know you genuinely care, they'll care too.

 The author is director of training and development at Scotts' Lawn Service, Marysville, OH. He can be reached at 937/644-7207.

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LM PRESENTS

award-winning landscape management

Property at a glance

Location: Shelter Gardens, Shelter Insurance Co., Columbia, MO Staff: Shelter Insurance Co. Category: Industrial or Office Park Year site built: 1974 Acres of turf: 22 Acres of woody ornamentals: 14 Acres of display beds: 6 Total paved area: 13 Total man-hours/week: 340

Maintenance challenges

- Preventing disease and insect
- Providing for public (safety)
- Irrigation maintenance

Project checklist

- Vietnam Memorial
- Built new stone bridge
- Installed new irrigation system in garden

On the job

6 full-time staff, 2 seasonal employees, 5 licensed pesticide applicators

Shelter Gardens

A 2000 Grand Award Winner of the Professional Grounds Management Society for Industrial or Office Park

Just because it's an insurance company doesn't mean Shelter Insurance of Columbia, MO, doesn't deserve nice landscaping. It's surprising that any of the employees come back from lunch, with all there is to look at and enjoy: a Vietnam Veterans Memorial complete with bamboo and Japanese maples; a newcomer school that's a 19th century replica of a one-room schoolhouse; and a breathtaking rose garden complete with hybrid teas, floribundas, climbers and shrub roses.

The rose garden takes 20 man-hours per week, a fraction of the time it takes to care for the 8,000 to 10,000 annuals planted the first week of May. Over 22 acres of turf must be mowed two to three times per week, and a chipper sits ready to help after storms. Since the gardens rarely close, grounds crew members have to consider visitors' safety when fixing broken irrigation lines and applying insecticides and fungicides. Two grounds crew members design and plant one of 23 annual flower beds located on the Shelter grounds and gardens.





Editors' note: Landscape Management is the exclusive sponsor of the Green Star Professional Grounds Management Awards for outstanding management of residential, commercial and institutional landscapes. The 2001 winners will be named at the annual meeting of the Professional Grounds Management Society in November. For more information on the 2001 Awards, contact PGMS at:

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The Japanese maple garden consists of many varieties of maples. Each variety is labeled and identified. A pagoda gives this garden a taste of the Orient.





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KC's "Trial Hill" is the ultimate mower test

BY JASON STAHL / MANAGING EDITOR

wing is pretty much all the Kansas City Parks and Recreation Department does in the spring and summer. In landscape technician Dave Stark's district alone, there are 1,500 acres of fields and lawns to cut.



Dave Stark and his new Ferris mower.

"We're out there mowing 12 hours a day, six days a week," Stark says.

Stark has tested just about every type of mower in his 14 years with the department, and knows exactly what he likes in each machine.

"I like a mower to have a low center of gravity so that I feel safer on hillsides," Stark says. "I also like good ground speed that matches cutting speed, and a comfortable ride."

Stark also says he looks for a mower that can climb any hill, and he doesn't just take the manufacturer's word for it. The first thing he and the other 15 employees of his district do to demo a mower is take it to a steep hill in their area known as the "Trial Hill." They drive it from the bottom to the top — if it can make it.

> "The Ferris mower was the only one that made it to the top. The others cut off about halfway up," Stark says.

Based on the demo, Stark's department is purchasing 11 Ferris mowers, a mix of 72-in. IS 4000 Zs and 61-in. IS 3000 Zs. They will join a fleet of Grasshoppers and Dixie Choppers. Because the new Ferris mowers can handle the hills, the department has done away with walk-behinds.

Stark says he will pull out the Ferris not only when there's a steep hillside to tackle but when aesthetics are important. Crews in the department tackle one-foot tall areas with stand-

ing water, but they're also in charge of mowing the grounds around the outdoor Starlight Theatre. They'll have to take particular care in mowing Satchel Paige Stadium once renovation work is completed.

"The Ferris won't tear the turf because the tread is less aggressive," Stark says.

With the coming of spring and the prospect of all-day mowing, Stark expects some squabbling over the new mowers. "Because of its four-wheel independent suspension, everyone's going to want to hop on the Ferris."

BUYING THE BEST COMMERCIAL MOWER.

Investing in a new commercial mower for your business is an important step; and it's a decision that takes some thought. If you're thinking about a zero-turn rider, there are a number of features you should look for:

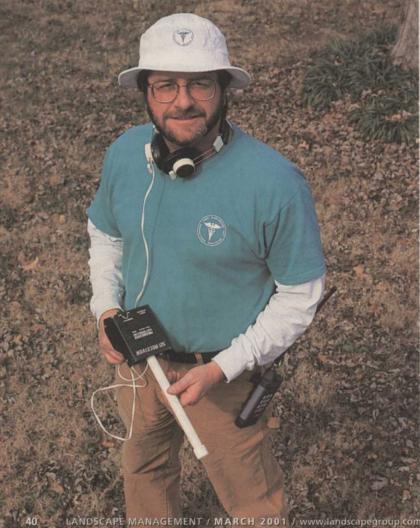
- The latest technology. Today's most advanced zero-turns feature independent suspension (either 2 or 4-wheel) for increased comfort, speed, traction, stability and a more consistent cut.
- Rugged deck construction. Choose a hand-welded deck with overlap-welded corners, a double top deck and reinforced side skirts to make sure it stands up to years of tough, commercial mowing abuse.
- Serviceability. A simpler design means fewer parts and easier access to the engine compartment and hydraulics for routine maintenance and service. You should also look for 2-year warranties on parts and labor.
- Important features. A low center of gravity; foot-operated deck lift; 360degree pivoting, anti-scalp rollers; twin A-section hydro drive belts; and radius-cut, 1/4" thick hardened steel blades... they're all important to your comfort and productivity.

To make your choice of a new mower even easier, be sure to see the new 2001 line of Ferris mid-mount, zero-turn riders at www.ferrisindustries.com. Ferris is the innovation leader in commercial mower design. Don't make a decision to buy a new mower for your business without visiting your nearest Ferris dealer.

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Green Space

Greg Mitchell Owner, Turf Surgeons Irrigation Services, Fort Worth, TX, and **President of ALIRT**



BY JASON STAHL

(Editor's note: Green Space is a new feature that provides a candid profile of an irrigation contractor. By reading it, you will learn about the contractor's personality and view on industry issues. Hopefully, you will also relate to the challenges he/she faces in everyday work situations. Look for it to appear in future issues of LM.)

Why did you start ALIRT (Association of Landscape Irrigation Repair Technicians)?

I felt like the associations that were currently in existence didn't focus enough on issues that concern irrigation repair technicians - they were built around the manufacturer-distributor-installer group. As a group, I felt like we could gain a little bit of clout and voice some of our concerns to manufacturers or distributors.

Why didn't you think irrigation repair technicians had the clout they deserved?

We didn't have any clout with distributors because all they ever see is a bunch of little ticket items. What they fail to see is the big ticket item. A repair technician will go in and buy a half dozen valves and 15 to 20 heads and one controller, and that doesn't seem like a lot of stuff. But we buy those quantities every day. In the summer, we might buy those sort of quantities two to three times a day.

How has response to ALIRT been so far?

I feel very encouraged at this point. Once we became affiliated with the Irrigation Association (IA), we gained some credibility. Since our second meeting at last year's IA show, we've had over 40 new members join. I get very good response in Texas, in part because I teach a course there called Diagnosing, Troubleshooting and

Green Space

Repairing Lawn Sprinkler Systems. There are many more people interested than there are people who have paid membership dues, and I think the reason for that is because you have to become a member of the IA first.

How did you establish your customer base when you first started in this business?

I did all my marketing in a residential area. Most of my 1,000 customers are located in eight adjacent map pages in the phone book — they're places I can get to from my home office in six to eight minutes. In my first two years, I did a lot of door-todoor advertising, but I haven't done any marketing in five years. The only commercial accounts I have are nursing homes, which are considered residential, and churches. Some of my customers are doctors or dentists, and I'll take care of their homes and office buildings.

What is the most common problem you come across involving irrigation systems?

Wiring problems. The toughest problems are related to poor underground splices in the wiring or poor quality, old wiring used in the original installation. In Texas, many installers use thermostat wire, which isn't rated for direct burial. Over time, it deteriorates and loses its continuity. Sometimes I'll come across a wire that was taped together after having been cut by someone who planted a tree. Eventually, that wire will lose its continuity, too.

You have to be a detective of sorts to be a good irrigation repair technician, don't you?

Yes, because we walk onto properties we've never seen before and are asked to troubleshoot systems with no print to work with. At most, all we have is a little information from the customer. You have to learn how to filter information from the customer, because they will always try to tell you what they think is wrong. You have to decide how much of what they're telling you is fact, and how much is coming from their own personal opinion. You can't go off in one direction just because someone said so. You have to use systemic procedures. You can be trained to learn how to do that, but a lot of it comes from experience and making mistakes.

Wouldn't it be more profitable to become an irrigation installer?

Yes, but it's so competitive and so price driven that I really don't foresee myself ever getting into it. Installers and repair technicians need to do a better job of educating consumers on the long-term cost of maintenance. A system that is easily maintained will cost more, but I can't tell you how many times I've had somebody spend as much to repair a system as they did to have it installed. If it had been done right in the first place, I wouldn't have had to repair it.

Do you think it's easier to install an irrigation system or repair it?

Well, it takes a heck of a lot more labor to install one than repair one. But you can have less technical knowledge of irrigation systems and still have a successful installation business. I know for a fact that there are installers in Texas who have no idea how a control valve works, but they know how to put the common

wire on one side of the solenoid and the hot wire on the other. That's all they need to know because they don't service these systems.

What is one of the most common gripes you hear among repair technicians?

The crowding of the piping around control valves. We often find that the installer, in order to dig the smallest valve pit as possible, crowded the piping around the control valve. I've even found piping on top of the control valve, which means you have to cut the piping out of the way to do any service. That's like putting an engine in a car and welding the hood shut.

continued on page 42

Vitals

Years in business: 8 2000 gross revenue: \$90,000 Projected growth for 2001: Not available Number of employees: 1 full-time Business mix: 99% residential Market area: Arlington / Ft. Worth, TX

Green Space

continued from page 41

What is the one part you fix the most?

Solenoid control valves. I'm a big advocate of rebuilding control valves in the ground rather than cutting them out and replacing them. However, it's often difficult to rebuild because of the way the installer packed it in. Still, a rebuild might take you an hour and a half, whereas replacing the valve could take 4 ½ to 5 hours. If you're charging an hourly rate, you're talking five to six times the cost.

What advice would you give to installers to minimize future problems with systems?

Use good wire, and use wire splice materials that are fit for direct burial. Also, leave enough pipe between fittings when you install valves so if a valve needs to be cut out and replaced, it can be done easily.

Why don't they do these things in the first place?

They don't really think about it because they don't intend on coming back. They're thinking, "If I have to put a piece of pipe here, I'm going to have to excavate more, which means the job will take longer. I have a price on this job, and I don't have time to dig a bigger hole." They had to underbid somebody to get the job instead of selling a better quality job. They think the only way to make money is to do it cheaper and faster than the next guy. Because they don't have a service department, they don't realize that if they keep this customer and do a good job, they'll be the one coming back to service it and make money off this customer for years to come.

What do you dislike the most about your job?

When I first started, I had to do a lot of explaining to customers about the procedures I undertook. I felt that it was important that I did that, but it wore me out. Now, I have literature that explains to customers what is the most common problem with systems, why we can't give them a set price up front, etc. Good communication skills are a must, because a customer is going to ask what you're doing. An invoice that says, "Fixed sprinkler system: \$533," just won't cut it.

What do you like the most about your job?

I like working outdoors. I also like being a problem solver. I like being a hero, too. In Texas, when it can get up to 108 degrees in the summer, you're the main man when someone has a broken irrigation system and an elaborate landscape that won't survive without water.

What kinds of rewards do heroes like you get?

People are so thankful, they give you pats on the back and iced tea. One time, someone brought me a big shade umbrella from their pool that I could work under. The things that mean the most to me, however, are letters and notes from customers. Over the years, I've developed many personal relationships with customers. Some of them leave just their first name on the answering machine — they don't even leave their address or phone number. They'll just tell me that the garage door opener will be in the barbecue pit, and leave the bill on the controller.

Have you ever considered going into landscaping?

Yes, especially since I'm so environmentally conscious and am a big proponent of water conservation. Personally, I would gravitate toward the organic approach of landscape management. I would never use chemical pesticides or fertilizers. What really worries me is the runoff of these chemicals that gets into our ground water. Sure, they filter it, but there would still be parts per million of no telling what all in our water. And all these diseases that have come out that they can't explain. Who's to say they're not caused by what's in our water?

It sounds like water is a pretty big deal with you.

Well, something about water is magical to me, whether it's coming out of the sky or in a swimming pool or whatever. To me, there's nothing like the smell of fresh water hitting parched earth — it makes me high.

What do you see for water in the future as it gets scarcer and scarcer?

People need to start stressing water conservation now, not just how to put irrigation in cheaper than the next guy. Irrigation installers need to learn how to sell the conservation and long-term maintenance aspect of an irrigation system. They can't just concern themselves with new construction. They need to start thinking about retrofitting existing systems to save water and working with trade associations to implement incentives for people to install efficient, conservative systems with, for example, rain sensors. Otherwise, landscape irrigation is going to be curtailed to the point where none of us can make a living. If we don't conserve water, we're going to be the first people who get cut off from it. If we can't irrigate the landscapes that landscape contractors put in, they're going to be out of business, too. LM



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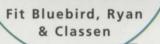


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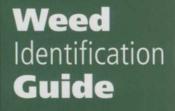
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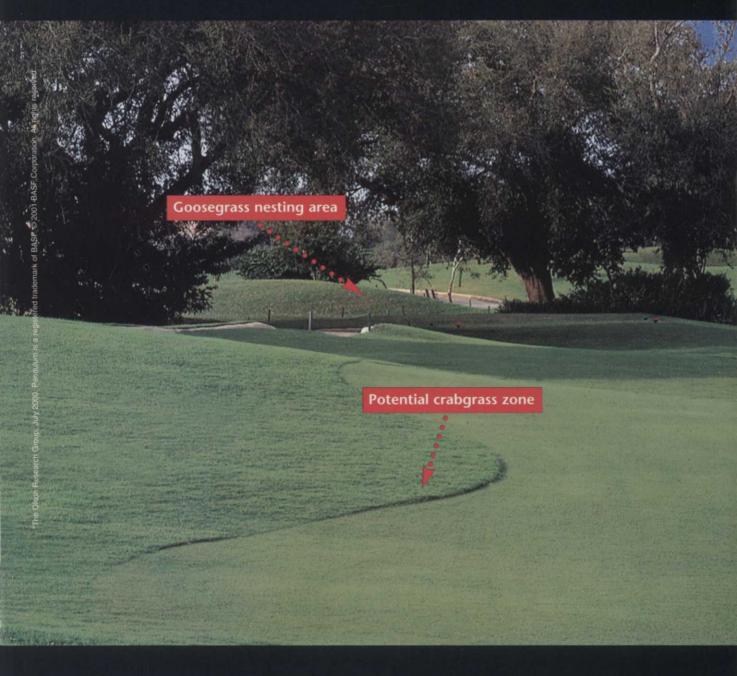
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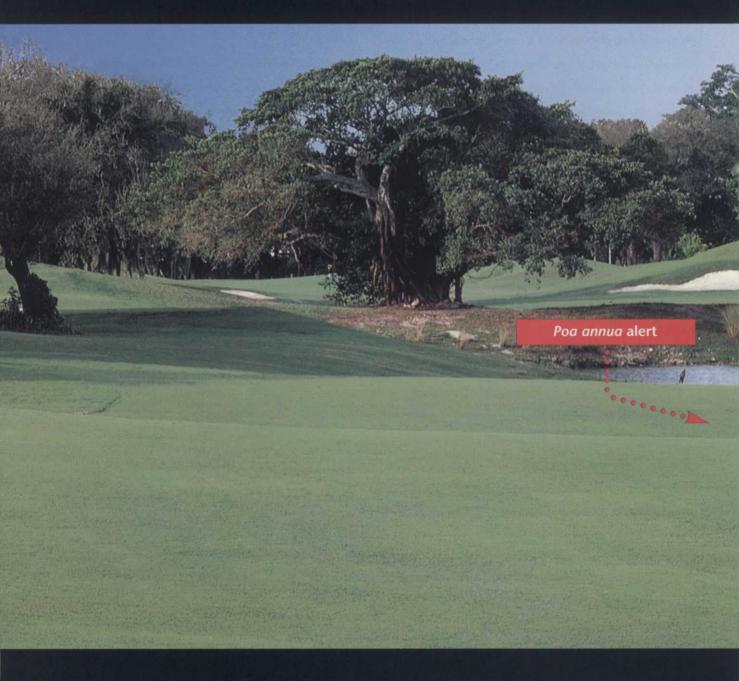
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WEED IDENTIFICATION GUIDE

INTRODUCTION

Successful weed identification is a combination of timing and user-friendly data. Timing in relation to the maturity of the plant (the older, the easier) and user-friendly data, meaning an identification guide that is designed to facilitate the identification process. Both were considered in the design of this guide.

Timing: When identifying either monocot (grassy) weeds or dicot (broadleaf) weeds, studying a mature or flowering sample is very important. All of the most easily identifiable traits flowers, seeds, leaves and roots—are present then, so take some time to find a mature specimen to examine.

User-friendly data: For ease of use, this guide concentrates on those plant characteristics that differentiate one species from another rather than those traits each has in common. These differences are represented visually with added text to refine the distinctions between similar plants.

Understanding the terms used in this guide

Understanding the parts of a grass plant are essential to accurately identify monocot weeds. In the example shown, pay particular attention to the seedhead, the ligule and the collar. They are the plant parts which have the most differentiating traits.

Abbreviations

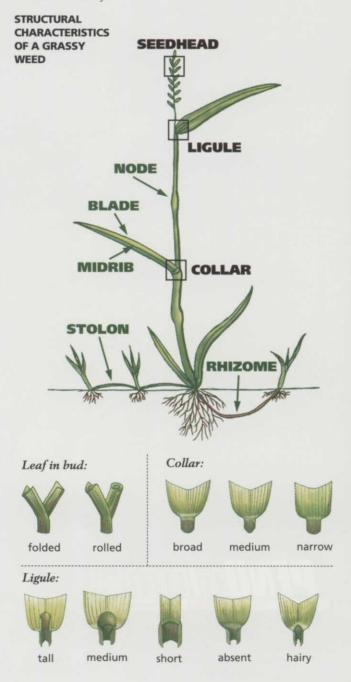
aka = "also known as" (different common names are popular in different parts of the U.S.)

Further help

The use of this guide was designed to help managers substantially reduce the number of possible weed species identifications. However, variations in a plant's vegetative characteristics or distribution may require that managers forward samples to their local extension service for confirmation. BASF's local technical representatives can also be contacted for further help at 800/545-9525 or on the Web at www.turffacts.com.

Sources

Information was compiled from the Scotts "Guide to the Identification of Grasses," the Southern Weed Science Society's "Weed Identification Guide," A.S. Hitchcock's "Manual of the Grasses of the United States" and the extension department at Cornell University.



Monocot weeds

Because of natural variations within grasses and differences that occur under varying environments, the illustrations included herein are meant to be representative but not definitive. Users need to consider all of the information—seedhead, in-bud, ligule, collar, descriptive text, tips and distribution—to accurately identify a weed.

As you proceed, keep in mind that you should not rely on an individual characteristic to be conclusive, rather total the number of similar characteristics between the sample and the guide to help narrow the number of possibilities.

The monocot weed species illustrated herein were selected for their likelihood of appearing in turf and their latest reported distribution.

Identifying a monocot weed

Once a mature sample has been selected, check each of the listed plant parts as follows:

- seedhead—size, shape, openness and number, size and shape of branches and seeds
- in-bud—cut through a leaf stem and determine if it is folded or rolled
- ligule—remove a leaf from its stem and with a hand lens check the size, shape and texture
- collar—lay the leaf flat, underside up and check the size, shape and top and bottom edges
- tips—check for additional vegetative plant characteristics
- distribution—confirm that this weed species has been identified in your state

ANNUAL BLUEGRASS

aka Poa annua, poa

DIAGNOSTIC TIPS:

Very persistent self-seeding winter annual or biennial

Short, narrow leaf blades with parallel edges and boat-shaped tip

Some leaf blades wavy

Germinates in late summer/early fall

Shallow-rooted, dying under heat or moisture stress



STRUCTURAL CHARACTERISTICS:







Ligule: medium pointed

Collar: narrow top pinched

DISTRIBUTION:

folded



SANDBUR

DIAGNOSTIC TIPS:

A mostly prostrate, narrow-leafed summer annual that likes sandy soils

Distinctive yellow seedhead contains 6-20 large, sharplyburred seeds

Burred seeds can cause painful injury to unprotected feet or ankles

STRUCTURAL CHARACTERISTICS:



Leaf in bud: folded



Ligule:

hairy

Collar: broad bottom pinched

DISTRIBUTION:



FOXTAIL BARLEY aka *squirreltail barley*

DIAGNOSTIC TIPS:

A narrow-leafed prostrate summer annual

Leaf blades coarse to touch, often with sparse, stiff hairs

Seedhead is a single tufted spike

Seed has a 2-3-inch-long hair at pointed end

STRUCTURAL CHARACTERISTICS:



folded





Collar: broad bottom pinched

Ligule: tall toothed



GOOSEGRASS aka silver crabgrass

A narrow-leafed dense prostrate summer annual

Leaf color is darker green than most annual monocots

Collar area has sparse long hairs

Seedhead has 2-13 branches which are white to silver in color

STRUCTURAL CHARACTERISTICS:



Leaf in bud: folded



Ligule:

short

toothed & divided

Collar: broad continuous

DISTRIBUTION:





A very wide-bladed semiprostrate summer annual

Stems may be branched at nodes and frequently bent upright

Seedhead has multiple short perpendicular branches

Seeds are coarse with short

STRUCTURAL CHARACTERISTICS:



rolled





Ligule height: absent

broad

DISTRIBUTION:



burrs

Leaf in bud:

Collar width:



CHEATGRASS

aka chess, rye bromegrass

A narrow-leafed, mostly erect winter annual

Underside of leaf is often hairy

Seedhead is open with multiple semi-erect branches carrying 1-4 seed clusters

Seeds look like cultivated wheat or rye



Ligule:

short

toothed

GREEN FOXTAIL aka green bristlegrass

A wide-leafed mounded summer annual

Leaf blades are limp, bright green and sharply pointed

Stems bent upright at nodes

Seedhead cylindrical with tufted pale green seeds



STRUCTURAL CHARACTERISTICS:

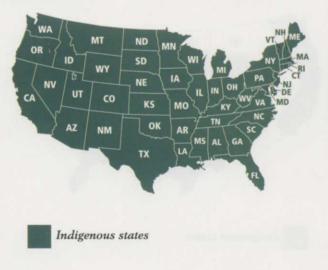


Leaf in bud: rolled



Collar: broad bottom pinched

DISTRIBUTION:



STRUCTURAL CHARACTERISTICS:







Ligule: hairy

Collar: narrow continuous

DISTRIBUTION:

rolled



LARGE CRABGRASS aka hairy fingergrass

A wide-bladed prostrate summer annual

Leaves are hairy on both surfaces with a prominent midrib

Older nodes are often branched and rooted where contacting soil

Seedhead open with 4-6 slender branches

STRUCTURAL CHARACTERISTICS:



Leaf in bud: rolled



Ligule:

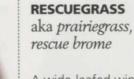
tall

toothed & pointed

Collar: broad top pinched

DISTRIBUTION:





A wide-leafed winter annual or biennial

Leaves are hairy at edges and on upper surface

Seedhead is open with bending slender side branches

Seed clusters look like cultivated wheat or rye



STRUCTURAL CHARACTERISTICS:







Collar: broad bottom pinched to

Ligule: tall toothed & pointed

DISTRIBUTION:

rolled



smooth crabgrass aka fingergrass

A narrow-leafed prostrate summer annual

Leaves are not hairy except sparsely haired in collar area

Stems branch at nodes, but do not root

Seedhead has 2-6 slender upright branches



Ligule:

tall

rounded

STRUCTURAL CHARACTERISTICS:



Leaf in bud: rolled



Collar: broad bottom pinched

DISTRIBUTION:



STINKGRASS

A narrow-leafed annual

Leaves are dull on upper surface and glossy on underside

Collar area has sparse long hairs

Plant has a very disagreeable odor when cut or damaged



STRUCTURAL CHARACTERISTICS:







Ligule: hairy

Collar: narrow continuous

DISTRIBUTION:

folled



WITCHGRASS

An erect wide-bladed summer annual

Leaves are densely haired on both surfaces

Emerging seedhead is fountainlike

Mature seedhead is large and very open with slender branches carrying single seeds



Ligule:

hairy

YELLOW FOXTAIL

An erect wide-bladed summer annual

Upper leaf surface has long hairs in collar area

Leaves are often slightly twisted in an open spiral



STRUCTURAL CHARACTERISTICS:



Leaf in bud: rolled



Collar: broad continuous

DISTRIBUTION:



STRUCTURAL CHARACTERISTICS:







Collar: narrow top pinched

Ligule: hairy

DISTRIBUTION:

rolled









WEEDS NEVER SEE THE LIGHT OF DAY.

Lurking just beneath the surface are thousands of tiny weed seeds, threatening to ravage lawns and established ornamentals. Fortunately, **Pendulum® preemergent herbicide** stops more than 40 broadleaf and grassy weeds dead.

Pendulum is a proven performer, offering well over a decade of unsurpassed, season-long control and unmatched value to maximize your profit margins.

It's a combination that's earned Pendulum a higher satisfaction rating from LCOs than any other preemergent.*

THE SEED.





To learn more about how **Pendulum** can make sure weeds never see the light of day, call 1-800-545-9525, ext. T3257 or visit *www.turffacts.com*. Always read and follow label directions.



DOWNY BROME

aka drooping bromegrass

An erect narrow-bladed winter annual

Leaves have dense soft hairs on both surfaces

Seedhead is open with drooping branches

Seed clusters are tufted and look like cultivated wheat or rye



Ligule:

medium

toothed & pointed

STRUCTURAL CHARACTERISTICS:



Leaf in bud: rolled



Collar: narrow bottom pinched

DISTRIBUTION:



FALL PANICUM aka smooth witchgrass

A very wide-bladed mostly prostrate summer annual

Leaves may be hairy on upper surface, are glossy beneath and sharply pointed

Stems branched at nodes and bent upright

Seedhead is open with multiple very slender branches

STRUCTURAL CHARACTERISTICS:



rolled



broad

continuous



Ligule height: hairy





.....

wild oats

An erect wide-bladed annual

Plant often turns brown in summer as seed matures

Collar area has sparse short hairs

Stems are stiff

Seedhead is open with multiple branches carrying many single drooping seeds

STRUCTURAL CHARACTERISTICS:



Leaf in bud:



Collar: narrow bottom pinched

DISTRIBUTION:





Ligule:

tall

toothed

southern crabgrass aka summergrass

A wide-bladed prostrate summer annual

Leaves may be hairy on upper surface

Stems will root at nodes

Collar area has sparse long hairs

Seedhead has 2-9 slender branches

STRUCTURAL CHARACTERISTICS:



rolled



Collar:

broad



Ligule: medium toothed & pointed



DALLISGRASS aka *paspalum*

A warm-season coarse semi-erect spreading perennial

Collar area has hairs on upper leaf surface and at leaf edges

Seedhead has 3-7 rightangled slender branches

Roots may have short rhizomes

STRUCTURAL CHARACTERISTICS:

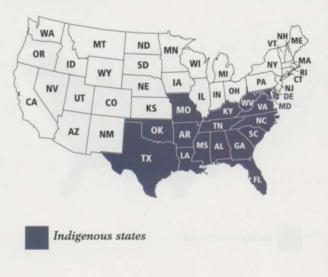


Leaf in bud: rolled



Collar: broad

DISTRIBUTION:





Ligule:

tall

BROOMSEDGE

A very narrow-leafed erect perennial

Collar area has hairs on upper leaf surface and on leaf edges

Seedhead is upright with white feather-like tufts







Collar:

narrow continuous



Ligule: short with hairs

DISTRIBUTION:

folded



QUACKGRASS

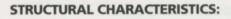
An erect narrow-leafed aggressive perennial

Leaf is rough on upper surface

Collar area has claw-like fleshy appendages (auricles) that clasp stem

Plant develops multiple rhizomes from base of plant

Seedhead is a single slender spike





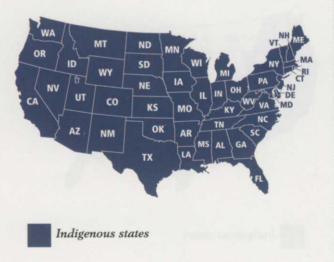
Collar:

broad

continuous

rolled

DISTRIBUTION:





Ligule:

short

JOHNSONGRASS

A very wide-bladed aggressively spreading prostrate perennial

Collar area has short hairs on upper surface near ligule

Spreads by multiple ¼inch-thick rhizomes



STRUCTURAL CHARACTERISTICS:





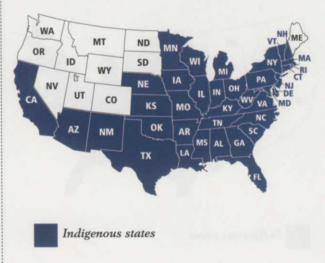
Collar: broad bottom pinched



Ligule: tall with hairs

DISTRIBUTION:

rolled



NIMBLEWILL

A very short-leafed stemmy spreading perennial herb

Leaves are short

Spreads by very slender stolons

On frequently mowed sites, plant often looks stemmy in fall

Turns off-white during winter

Collar area has long hairs at leaf edge

Seedhead has single, very slender spike

STRUCTURAL CHARACTERISTICS:

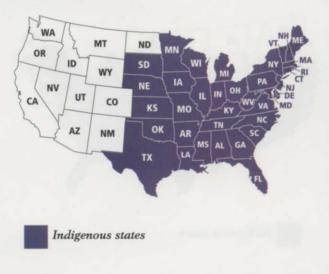


Leaf in bud: rolled



Collar: medium top pinched

DISTRIBUTION:





Ligule:

short

KNOTGRASS

A prostrate spreading perennial

Collar area has short hairs at leaf edges and near ligule

Seedhead has two slender upright branches



STRUCTURAL CHARACTERISTICS:











Ligule: tall rounded

DISTRIBUTION:

rolled



YELLOW NUTSEDGE

aka yellow nutgrass

A very rapidly growing erect perennial herb

Spreads by rhizomes with underground tubers

Leaves are v-shaped with a prominent midrib tapering to a sharp point

Stems are triangular

Seedhead is semi-open, carrying yellow seeds

PURPLE NUTSEDGE aka purple nutgrass

Rapidly growing erect perennial herb

Spreads by rhizomes with underground tubers

Stems are triangular

Leaves are v-shaped, tapering to a sharp point Seedhead is open, carrying dark or purple seeds



DISTRIBUTION:





KIKUYUGRASS

A low growing perennial that creeps with both stolons and rhizomes.

Flat leaf blades on light green leaves

Seedhead has 2 to 4 spikelets in upper sheath

Seeds are dark brown with large scars at the rounded base



TORPEDOGRASS

Aquatic grass with small leaves 1/16- to 1/4-in. wide

Leaves have hairs on top and often roll inward

Stems are stiff; often 1to 3-ft. tall

Grows from underground rhizomes with hard, pointed tips

STRUCTURAL CHARACTERISTICS:



folded



Collar: medium w/ fine hairs



ar: um

Ligule: hairy

STRUCTURAL CHARACTERISTICS:







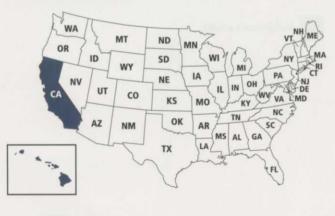
hairy

Leaf in bud: rolled

Collar: narrow (a pale band)

DISTRIBUTION:







DICOTS

DICOT WEEDS

In a universe of hundreds of dicot weeds, a limited number can tolerate repeated mowing of managed turf sites. In order to provide a broader representation of turf weeds, we have included a select number of these dicot weeds. Those presented herein were chosen for their ability to survive in turf, often as a continuing pest. Several of the species can persist even at fairly short mowing heights; others are active in cool weather.

Identifying a dicot weed

Unlike the prototypical size and shape of monocot weeds, the shape and vegetative growth habits of many dicot weed groups are visually unique. Also, the distinctive traits of monocots—seedheads, ligules and collars—are not always present, making visual identification more important. We suggest the following process for identifying dicot weeds:

- Look for a sample flower if available
- Leaves: check for identifying characteristics (size, shape, notches, venation or coloration)
- Stems: check how the leaves are held (opposite or alternate), shape and color
- Flowers: check color, size and composition (single, double or compound)
- Location: take note of the conditions in which the weed is growing (shade, compacted soil, etc.)
- Distribution: confirm that this weed species has been identified in your state

DANDELION

aka common dandelion

A large rosette-type perennial herb

Leaves growing from plant base are long, narrow and deeply notched

Points of leaf lobes point backward toward base of plant

Has large, slightly mounded yellow flowers on hollow stems

Mature seedhead is a round puffball with seeds that are easily dislodged

HENBIT aka *dead-nettle*

A mostly erect winter annual or biennial

Leaves are similar to mint: rounded, toothed, heavily veined with soft hairs on top, held opposite on square stems



Single flowers are trumpetshaped, pale purple and project from ends of stems

Seen primarily in spring, dying with heat

DISTRIBUTION:





DICOTS

KNOTWEED

aka prostrate knotweed

- A persistent lowgrowing summer annual
- Prefers compacted soil of pathways and along drives



• Leaves are blue-green, up to 1 inch long and ¼-inch wide

DISTRIBUTION:

• Small single white to pink flowers are found at the junction of the leaves and the stem

PURSLANE aka common purslane

A prostrate, succulent summer annual

Leaves are shiny green, wedgeshaped, thick and up to 1 inch long

Stems are thick, fleshy and purple to brown in color

Plants are are very drought-resistant

Small, single yellow flowers may appear in the leaf clusters at end of stems



DISTRIBUTION:



Indigenous states

DICOTS

common chickweed aka starwort, winterweed

aka suurwort, witherweed

A low-growing winter annual

Plant prefers shaded moist sites

Opposite small leaves are carried on tender stems

Stems may root at leaf nodes

Small compound flower composed of 5 pairs of two pale purple petals

Plants die back with summer heat, but can survive year round at cool sites

SPOTTED SPURGE

A prostrate fleshy summer annual herb

Leaves are opposite, oblong, and up to ¾-inch long

Upper leaf surface has a purple to brown blotch along center vein



Hairy stems produce a milky-white sap when broken



DISTRIBUTION:



ACKNOWLEDGMENTS

This guide was written and compiled by Chris Sann of Turf Information Group, Inc., Wilmington, Delaware and the editors of Landscape Management and Golfdom. Graphic design, execution and illustrations by graphic designers Lisa Bodnar, Jeff Landis and Dan Beedy.

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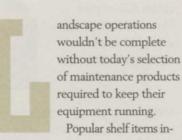




TOOLS OF THE TRADE: EQUIPMENT MAINTENANCE PRODUCTS

BY VICKY POILISEN

Three seasoned landscape contractors talk about how they use equipment maintenance products to keep their operations running smoothly



clude oil, filters, grease, replacement blades, blade sharpeners, belts, hoses and light bulbs — just to name a few.

Many contractors stick with one brand or manufacturer when purchasing various categories of equipment to make their inventories and part replacements simpler. They A PHOTO COURTESY GROUNDMASTERS, INC.

also troubleshoot problems early and call for outside technical assistance when needed.

On a scale of one to 10, contractors give preventative maintenance a 10 when it comes to keeping equipment costs down and service hours up. But they also know when it's time to give up that beloved walkbehind or trimmer.

We decided to ask three readers to give us their views on their own personal maintenance programs. Here is what they had to say:

continued next page

LARGE CONTRACTOR

Name: Mike Rorie Title: President/Owner Company: Groundmasters, Inc. Location: Cincinnati, OH 2000 revenues: \$9 million Business mix: 100% commercial Employees: 125

Company profile: Began business in 1979, servicing primarily residential accounts. By 1982, Rorie's vision was to create a large equipment-intensive business, so the com-



mercial market became the focal point of his operation. Today, his company is completely devoted to commercial accounts, catering to more than 500 sites.

Maintenance services make up the lion's share of the contract work. The business grew throughout the '80s to about \$1 million in revenue. In the '90s, Rorie added a facility in Cincinnati, Dayton and northern Kentucky. Today, the company employs 125 people, and revenues topped \$9 million in 2000.

Equipment arsenal: Over 80 trucks, 30plus trailers and over 400 pieces of additional equipment — everything from tractors to weedeaters.

Maintenance plan: An in-house, five-member fleet department at each branch managed by a fleet manager. "We do all our own preventative maintenance — whether it's a skid loader or a lawnmower." Maintenance/repair work is done the quarter of the year prior to the quarter of production — lawnmowers are fixed in the winter and snowplows in August. The fleet manager determines the standards the company follows when servicing a piece of equipment. "We don't want to underservice or overservice." Will send out the occasional engine overhaul or transmission repair work to an outside mechanic. Maintenance budget (labor and parts): About 2% of total revenue. Company tries to determine the operation costs of a piece of equipment when developing a preventative maintenance budget. "Contractors

tive maintenance budget. "Contractors need to track equipment just like job costs. We put hour meters on everything. It's the easiest way to track usage and determine preventative maintenance."

An inside job: "Hiring a mechanic will depend on the money you've invested in equipment and the money and time involved in going back and forth to get repairs done on the outside. You'll want someone who is readying the equipment as well as repairing and servicing it."

Parts inventory: Company stocks all the routine parts such as belts, hoses, filters, coils, hydraulic fluids, light bulbs, wipers and tires. All of these parts are part of its preventative maintenance checks. "If we need a new alternator or water pump, we'll access that part through one of our

MEDIUM CONTRACTOR

Name: Kris Hjort Title: President/Owner Company: K & H Lawn Services, Inc. Location: Fairfax, VA 2000 revenues: \$1.8 million Business mix: 80% residential, 20% commercial Employees: 10 full-time Company profile: Started business in 1984. About 55% of services are devoted to maintenance, 30% to design and installation, 14% to turf and ornamental and 1% to snow removal.

Equipment arsenal: Three pick-up trucks and four stake body trucks Four of company's five vans are Super Lawn trucks. Other equipment includes 20 backpack blowers, 20 trimmers, seven stick edgers and an array of walk-behind mowers and riders.

Maintenance plan: Company performs minor maintenance such as oil changes on their trucks. Greasing and blade sharpening on other pieces of equipment are performed on a daily basis. Major repairs are sent to an outside mechanic.

Maintenance budget (parts and labor): About 2% of total revenue.

An inside job: Currently uses an outside



mechanic, but company is looking to hire its own part-time mechanic for equipment repair and maintenance work.

Parts inventory: "We used to stock a fair amount of parts but found that it was a waste. Now we only stock oil, grease, mowing blades, maybe one round of oil and air filters and anything that we must have on hand at all times. Replacement parts are purchased from our mechanic. We also try to stick with the same brand whether it's a blower or trimmer."

Cleaning/painting: "We have a hard time doing painting and cleaning because we don't have great access to water to wash equipment and trucks. Still, we try to local suppliers. We buy multiples of a particular brand. For example, we buy the same brand for our walk-behinds, and so on. This is so we can stock a modest amount of inventory that will fit every piece in a particular equipment category."

Cleaning/painting: Cleaning is done in-house on a routine basis. Extensive cleaning, including steam cleaning engines and waxing, is done annually and sometimes bi-annually. Touch-up painting on trailers, mowers, pumps and sprayers is done in the winter months. Complete paint jobs are left to an outside paint specialist.

Equipment life: "Trucks and trailers are rotated between a 7- to 10-year period due to the

wash trucks and equipment on a weekly basis. We do very little if any repainting of equipment."

Equipment life: "We're a little excessive when it comes to equipment — we don't want to go without. We'll try to allocate three spring trimmers to each of our twomen crews so they have a spare if one piece of equipment breaks down. Smaller pieces of equipment last between two and three years, while mowers can last as long as 10 years. We try to low mileage we put on them, while smaller pieces of equipment are replaced every two to three years. We used to keep these smaller pieces of equipment twice as long, but it backed up our shops. Plus, we found it cost us more money to upkeep a piece of used equipment. If we sold this piece of equipment at the optimum time, we could get 50 cents on the dollar that could be used towards the purchase of new equipment. Plus, we could take advantage of technological advances much sooner."

Equipment afterlife: "We'll occasionally go through auctions, but typically advertise and sell to a dealer. There's a large audience of small contractors that will take advantage of the price break."

keep trucks as long as possible — the first truck I ever bought died in the fall of last year at 18 years old."

Equipment afterlife: "Once we're through with a piece of equipment, we'll often give it to charity. If we're still using that brand, we'll take the parts that are useful and keep them. If not, it'll go to the junkyard."



SMALL COMPANY

Name: Greg Bechtold Title: Co-owner with wife, Andee Company: Longhorn Maintenance, Inc. Location: McKinney, TX 2000 revenues: \$1.4 million Business mix: 75% commercial, 25% residential **Employees: 15** Company profile: Entering their 20th year, Longhorn Maintenance, Inc. considers itself a "three-year-old company with 20 years of experience." Three years ago, Longhorn joined ALCA, immediately implementing all of the information it gained from the association. That information helped it increase its gross revenues from \$500,000 in 1997 (with zero profit) to \$1.4 million in 2000.

Equipment arsenal: 21- to 48-in. walk-behind mowers, ZTR mowers, ASV/Dingo, trailers, dump trailers, trucks, and hand tools and back-pack equipment.

Maintenance plan: Company does its own maintenance work such as filter/oil changes and blade sharpening. Anything beyond minor repairs such as carburetor or transmission problems are sent to an outside mechanic.

Maintenance budget (labor and parts): About 2% of company's entire revenue. An inside job: Will be hiring a full-time shop person.

Parts inventory: Company stocks everything needed for routine maintenance: oil, air filters, blades, spark plugs, belts, nuts and bolts, and weedeater heads. "Whenever we use a part, we put it on our inventory list right away. Because of that, those parts are constantly replaced, and we don't get behind." They keep each piece of equipment within the same brand to make parts needs simpler.

Cleaning/painting: Cleaning is done weekly, and minor painting such as freshening up a deck is done as needed.

Equipment life: Their trucks last 10 years. "We stay within a very small radius, so our trucks don't travel great distances." Larger mowers last three to four years, while excavation and mini-loaders last up to five years. Hand-held and light equipment lasts one or two seasons. "We have hour meters on larger pieces of equipment, but we won't dump a piece of equipment just because it has logged a lot of hours. If it's cutting service and requiring more repair, though, it gets dumped."

Equipment afterlife: "We sell most of it to a local dealer and retain the best used equipment for our backups."

TOOLS OF THE TRADE

EQUIPMENT NUMPENANCE 2001

A real seal

Safety Tire Seal Corporation offers the Safety Seal, a self-vulcanizing external repair kit that needs no cement or vulcanizing fluids to make a permanent repair to tubeless tires used on turf equipment such as mowers, skid-steers, tractors, irrigation equipment,

trenchers and bucket loaders, as well as cars, vans, trucks, trailers, pickups and SUVs. Get Safety Seal in its new molded, weather-resistant plastic case with enough material to make 30 repairs. For more information contact Safety Tire Seal Corp. at 800/233-8473 / Circle no. 282

Chock full o' parts

Industrial Specialties Manufacturing Inc.'s new 230-page catalog describes its selection of fittings, tubing, mufflers, manifolds, valves, filters and accessories in a range of sizes. Products are available in materials such as brass. stainless steel and numerous plastic formulations. A full line of plastic tubing is also described, and includes a chemical compatibility chart and an engineering data section. For more information contact Industrial Specialties Mfg. at 303/781-8486 or www.industrialspec.com / Circle no. 283

Air apparent

Northern Tool and Equipment Co.'s new line of professional grade NorthStar air compressors include three gas units as well as two electric models ranging in price from \$599 to \$1,469. Air compressors are manufactured with long-life cast iron sleeve pumps as well as Honda engines. For more information contact Northern Tool and Equipment Co. at 800/556-7885 or <u>www.NorthernTool.com</u> / Circle no. 284

O SAFETY O

Back to the grind

Bernhard and Company's Rota-Master blade grinder features an automatic infeed with auto cutoff which can be left to complete the grinding cycle alone. Features include a quality balancer and automatic traverse with easily adjusted travel stops. With blades held securely in place, both ends can be ground at the same time. The blade grinder is encased and the grinding operation occurs away from the operator. Dust can be vacuumed away using the machine's attachment. For more information contact Bernhard at 888/474-6348 / Circle no. 285

Chain gang

Husqvarna's clamshell packaging for chains as well as bar and chain combinations allows retailer and consumers to match their needs with their specific product at a

glance. Listed on the packaging are easy-to-read "fit-up" specs matching Oregon chains to Husqvarna chain saws. Chains come in both single and double packages. Bar and chain combinations are single-packed. For more information contact Husqvarna at 800/438-7297 or <u>www.husqvarna.com</u> / Circle no. 286

Drip drip

National Spencer Inc.'s new nondrip nozzles offer a new way to track different fluids and offer automatic closure to reduce leakage. They are color-coded, and fully compatible with the entire line of Zee Line lubrication equipment. For more information contact National-Spencer at 316/265-5601 or www.zeeline.com / Circle no. 287

Paint job

Morgan Corporation has a new custom spray paint for repair jobs and touch-up applications. The paint is an exact match for OEM paint used on Morgan truck bodies. An over spray leveler is used as a finish product to smooth and even out paint applications. For more information contact Morgan at 888/545-7278 / Circle no. 288

Mower parts

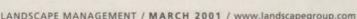
Stens Power Equipment Parts, a subsidiary of Ariens Co., has a 2001 catalog out that features a large selection of drive, rider and pushmower parts. Included are replacement universal throttle controls, shift and clutch cables for Honda, starter solenoids for Ariens, rear end overhaul kit for Snapper and more. For more information contact Stens at 800/457-7444 / Circle no. 289

Motoring along

Briggs & Stratton's new Etek electric motor system, a combination DC motor and electronic controller, is designed to power golf cars and other electric-power utility vehicles. The motor is 50% smaller and over 20 lbs. lighter than others, resulting in an efficient combination of power and torque. For more information log on to <u>www.briggsandstrat-</u> ton.com / Circle no. 290

Clean engines

Kohler's air cleaners for Command and Command Pro 18- to 25-hp engines are lightweight, compact and easy to install. A swirl design collects/ejects trapped dust. The main filter has 1,398 sq. ft. of effective area. An eight micron inner filter protects carburetor. For more information contact Kohler at 800/544-2444 or www.kohlerengines.com / Circle no. 291



IF YOU DIDN'T BUY A SCAG, You paid too much.

When it comes to buying a commercial mower, some less experienced cutters may be tempted by a lower purchase price without realizing the higher operating costs down the road. After all, there are a lot of machines out there that look like a Scag, but none that perform like one.



Scag 3-year deck warranty.



Scag 2-year electric clutch warranty.



Scag 3-year spindle warranty.

That's why Scag owners and operators are so loyal to our brand. They know Scag doesn't cut corners in the design and construction of our commercial mowers. And, they know we stand behind every Scag mower with the industry's strongest warranty and the best-trained dealer organization in America. And that means more money on their bottom line.

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Circle No. 118 on Reader Inquiry Card

00-05

HEADS-UP APPLICATION

It's usually your fault when a herbicide fails to control a weed. A better understanding of herbicides and weeds will help you

BY JOSEPH C. NEAL

ontrary to popular opinion, it's rare for a herbicide to fail to control a weed that it's supposed to control. The "it didn't work" lament is usually the result of either applicator error or environmental conditions beyond our control. An understanding of what makes herbicides fail to work can provide clues to how we can avoid those situations.

Identify the weed correctly

The first task in any pest management program is to correctly identify the pest. Most herbicides are selective — that is, they control some plants and not others. Accurate weed identification provides you with the information you need to make an informed decision.

For example, Dimension (dithiopyr) controls emerged crabgrass but doesn't control emerged goosegrass. Can you tell the difference when these plants have only three or four leaves? Can you accurately identify the broadleaf weeds? Confront (triclopyr + clopyralid) controls buckhorn plantain but doesn't control black-seeded plantain (*Plantago rugellii*). Can you tell the difference between these two weeds?

There are many manuals to help you with weed identification. Table 1 lists some of the manuals I recommend for turfgrass and landscape professionals, but check with your local cooperative extension office for the best manual for your area. If you have internet access, there are several Web sites with weed photographs. Start your search for weed identification guides at the Northeastern Weed Science Society page (http://www.ppws.vt.edu/newss/newss.htm).

Choose the right product

Once you identify your target, you need to select the correct control measure. Just about every cooperative extension office, and most trade journals, provide regular updates on turf herbicide effectiveness on weeds. Charts showing broadleaf weed susceptibility to postemergent herbicides are common. For grass weed control, most preemergence herbicides work well. To determine which pre-emergent herbicide is best for annual broadleaf weeds, however, you'll have to look harder (you might even have to read some labels). Contact your local cooperative extension office for the latest recommendations for your region. For herbicides in landscape beds, I recommend my book, "Weed Control Suggestions in Christmas Trees, Woody Ornamentals and Flowers," Skroch, Derr and Senesac. To order, send \$7.50 (this includes shipping and handling) to Publications, NCSU, Box 7603, Raleigh, NC 27695-7603. Similar publications are also available from Pennsylvania, Ohio State and Cornell (NY) cooperative extensions.

Top 20 reasons why herbicides fail

Apply the herbicide accurately and uniformly

Choosing the right herbicide is much easier than applying it accurately and uniformly. Herbicides are applied with sprayers or granular spreaders to achieve a specified amount on a given area (such as quarts per acre or pounds per 1,000 sq. ft.). The best way to make sure you're applying the right amount of herbicide is to calibrate your sprayers and spreaders. If you're not sure how to do this, contact your local cooperative extension service. Also, pesticide dealers/distributors are often willing to help you calibrate your equipment. Even if you have calibrated your equipment, it's always good to do a second check on the calibration by calculating how much area you're treating and estimating the amount of herbicide (or spray) it should take to treat that area. When you're finished treating, the amount you used should closely match the amount of vour estimate.

Applying the right amount of herbicide per 1,000 sq. ft. is only part of the answer to distributing herbicide uniformly over the area. I recently measured the output of granular spreaders on several job sites by randomly placing 1-sq-ft. pans throughout the treatment area, then weighing the amount of herbicide in each pan. At one site, there was a 250% variability between catchpans with the doses sometimes reaching twice the labeled rate!

- Not reading and/or following label specifications
- 2. Improper weed identification
- 3. Improper herbicide selection
- 4. Improper method of application
- 5. Improper timing of application
- Unfavorable temperature and/or moisture conditions affecting poor weed growth
- Age and growth stage of the weed plant — young vs. mature target weed
- 8. Temperature too hot or too cold
- 9. Skipped area spot treating/poor overlapping resulting in poor coverage
- 10. Foliage not wet product failed to penetrate leaf hairs

- 11. Low concentration of mix not enough active ingredient to manage weed
- 12. High concentration of herbicide killed the top, not the roots
- Wind drift failure to deliver herbicide to the target
- 14. Rain following application washed off treatment
- 15. Product too old deactivated
- 16. Product caked spoiled
- 17. Product separated into layers
- 18. Chemical and/or physical incompatibility
- 19. Alkaline (high pH of water) hydrolysis and herbicide degradation
- 20. Droplet size too large some herbicides perform better if particle size is finer

So how do you improve uniformity? Check your sprayer and spreader output patterns. Make sure your applications are made with the correct overlap. Flood jet spray nozzles should have 100% overlap but flat fan nozzles require 25% to 30% overlap. Granular spreaders are variable; I strive for 100% overlap and treating the entire area twice (1/2 dose per application) in perpendicular directions.

I believe calibrating sprayers and spreaders and paying attention to application uniformity could eliminate 90% of herbicide "failures" and dramatically reduce "call backs."

Timing is everything

Preemergent herbicides are applied before weeds emerge. But do you know when your weeds emerge? Summer annual weeds (like crabgrass) germinate in the spring and early summer; winter annual weeds (like henbit) germinate from late summer through early spring depending on your local weather patterns. Preemergent herbicides must be applied and incorporated by rainfall before weeds germinate. If applied after germination, most preemergent herbicides provide little control. Indicator species such as dogwood bloom or forsythia bloom have been used for years to indicate when the weather is conducive to summer annual weed germination. For winter annual weeds, preemergent herbicide applications should be made by mid- to late-August.

Preemergent herbicides for crabgrass control can be applied earlier, too. Several researchers (Watchke at Pennsylvania State University, Lewis at NC State University and Senesac and I while at Cornell University) tested winter applications of preemergent herbicides and found they worked as well as the "optimum" timing for that region. Weed control longevity is more a function of the herbicide choice than how early it's applied. Dimension (dithiopyr), Barricade (prodiamine) and Pre-M (pendimethalin) provide longer crabgrass control than Balan (benefin) or Team (benefin + trifluralin). Whether or not you need to reapply the preemergent herbicide and when requires an understanding of local conditions.

Post-emergent herbicides are applied after plants emerge, but the timing of those applications have a significant impact on control. Young, actively growing weeds are more easily controlled than older, well-established plants. For example, the recommended rates for Acclaim Extra range from 3.5 oz. per acre to 39 oz. per acre, depending upon crabgrass growth stage (see Figure 1). Corn speedwell (Veronica arvensis) is difficult to control in spring because it's nearing the end of its life cycle and is not growing

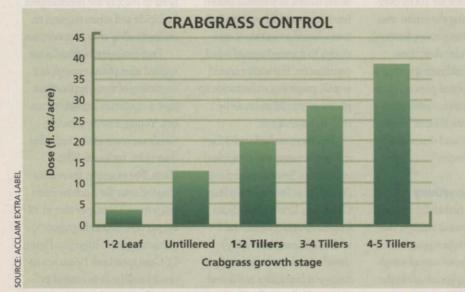
TECH CENTER

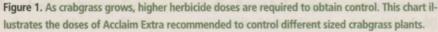


Young, seedling crabgrass plants (such as the 4-leaf seedling on the left) are controlled with low doses of post-emergent herbicides. Tillered plants like those on the right will require higher doses and perhaps multiple herbicide applications.

rapidly, but it's much easier to control in fall when the weed is young and actively growing. To control bermudagrass in plant beds, treat with a post-emergent grass herbicide in spring when the weed has about 6 to 8 in. of new growth; later applications will result in poorer control. The key to optimum timing for most post-emergent herbicides is to apply when weeds are actively growing.

When controlling perennial weeds, the goal is to kill the plant's underground portion. To do that, we use systemic herbicides that move from the foliage to the roots and storage organs. The season and growth stage of the weed can have a tremendous effect on how well the herbicide will translocate. Glyphosate (Roundup Pro and others) controls most weeds, but you'll get better control if you apply when plants are most susceptible. Most deciduous woody vines and rhizomatous perennial weeds (such as mugwort) are controlled by late summer or early fall applications, but spring applications only burn the tops of plants. In contrast, late summer applications won't control the evergreen vine greenbriar (Smilax spp.); spring applications are more effective on such evergreen weeds.





The environment

Much is made of soil type, humidity and temperature effects on weed control, but, in my opinion, the most important environmental factor that affects herbicide performance is water - too much, too little, too soon or too late. Irrigation and rainfall affect both preemergent and post-emergent herbicides but in different ways.

Preemergent herbicides require rainfall for incorporation, but too much of a good thing can be a problem. In saturated soils, many of our common preemergent herbicides decompose rapidly. In as little as two weeks of saturated conditions, many preemergent herbicides have decomposed and are no longer present in concentrations high enough to control weeds. So providing proper soil drainage will not only improve turfgrass growth and reduce weed encroachment but improve preemergent herbicide performance.

Too little rain can affect preemergent herbicides in two ways - lack of incorporation and volatilization. Preemergent herbicides must be incorporated by rainfall or irrigation within a few weeks of application. If this doesn't occur, the herbicide remaining on the surface may volatilize or be degraded by sunlight (or both). A prolonged drought can result in hot, dry soils that promote volatilization of herbicides. Furthermore, if there's soil moisture but no rain or irrigation after herbicontinued on page 59

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Best of 400 Series/4100 Tractor



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Ends April 30

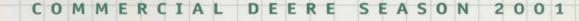
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Ends April 30" Mounted directly to frame, 48 backhoe fits 4300-4700 Tractors and 5105 and 5205 Tractors

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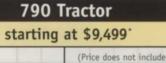
nd July 4, 2001 and are available at participating dealers. Machine prices do not include taxes, freight, set-up and delivery charges. Tractor prices do not include implements as shown. **Offer ends

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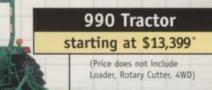
Features: Auto-bleed fuel system. Direct injection diesel. Operator presence system.

5205 Tractor starting at \$16,495

(Price does not include 4WD)

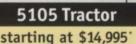
53 hp/45 PTO hp

Features: Auto-bleed fuel system. Direct injection diesel. Operator presence system. Wet disk brakes. Planetary final drives. Fully independent PTO.



40 hp/35 PTO hp

Features: Auto-bleed fuel system. Direct injection diesel. Operator presence system. Wet disk brakes. Planetary final drives.



(Price does not include Loader, Backhoe, 4WD)

48 hp/40 PTO hp

Features: Auto-bleed fuel system. Direct injection diesel. Operator presence system. Wet disk brakes. Planetary final drives. Fully independent PTO.

*, **, 1,11, see inside panel for details

2001



ENDS JULY 4, 2001

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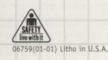
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Resources

TABLE 1. SUGGESTED WEED IDENTIFICATION GUIDESFOR TURF AND LANDSCAPE INDUSTRIES

Weeds of Southern Turfgrass Publication Distributions Center IFAS Building 664 P. O. Box 110011 University of Florida Gainesville, Florida 32611 (904-392-1764) \$8.00 / Particularly useful for weeds of turf and landscapes in the Coastal Plain but appropriate for turf throughout

Southeastern US. Color photographs and brief descriptions of each species.

Weeds of the Northeast Cornell University Press P.O. Box 6525 Ithaca, NY 14851_6525 607-277-2211

\$29.95 (+ shipping) / Appropriate to the Northern tier of the US (south to North Carolina) and southern Canada. About 300 species are covered. Several color photographs and drawings for each species, descriptions, and identification keys.

continued from page 52 cides are applied, weeds may germinate before the remaining herbicide is incorporated.

As previously noted, one key to getting the most out of postemergent herbicides is to make Weeds of the West University of Wyoming U.W. Coop. Extension Service Bulletin Room University of Wyoming PO Box 3313 Laramie WY 82071-3313 \$24.50 / A full color guide focused primarily on weeds of western US agriculture. Multiple color photos of each weed and brief descriptions are included. There is no key.

Weed ID Guide Southern Weed Science Society 1508 West University Ave. Champaign, IL 61821_3133 \$97.00 (includes all six sets of weed sheets, index and a binder) CD_ROM Weeds of the United States is \$120 A 'high-end' and relatively expensive resource, this is available in notebook form (so it can be continually updated) and also a CD_ROM. High quality photographs with brief descriptions. No key is included. Color Atlas of Turfgrass Weeds Ann Arbor Press 310 North Main Street P.O. Box 20 Chelsea Michigan 48118 800-487-2323 \$79.95 (plus shipping) / A color guide to turfgrass weeds. This guide covers weeds of warm-season and cool-season areas. Several photographs of each species and brief descriptions. Control guidelines are included.

NEWSS web site

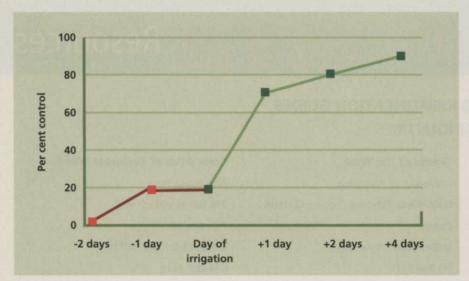
http://www.ppws.vt.edu/newss/newss.ht m The Northeastern Weed Science Society web site has a listing of internet sources for weed identification guides.



applications when weeds are ac-
tively growing. Drought reducesof post-e
tact and sweed growth and consequently
reduces post-emergent herbi-
cide performance. Drought hasgrass pro
foliar appcide performance. Drought has
been shown to reduce the effec-
tiveness of just about every kindto get the
or delay s

of post-emergent herbicide: contact and systemic, broadleaf and grass products, soil-applied and foliar applied. The answer to this problem is to supply water to get the weeds growing again, or delay applications until rain occurs. To increase the effectiveness of most herbicides, make applications about two days after irrigation or rainfall (see Figure 2), and try to keep the soil moist for at least two days after treatment.

TECH CENTER



Rainfall or irrigation too soon after an application can also reduce post-emergent herbicide performance. This is particularly true for glyphosate (Roundup Pro) and glufosinate (Finale). Rain within four hours after treatment can reduce weed control, particularly on weed species with waxy leaves such as oxalis, clover and spurge. In contrast, typical intervals for post-emergent broadleaf herbicides (such as 2,4-D and Confront) are 30 Figure 2. Drought reduces post-emergent herbicide efficacy. During drought, improve post-emergent herbicide efficacy by treating one to two days after irrigation or rainfall. This chart shows how the interval between application and irrigation can affect crabgrass control with Drive (quinclorac). Similar trends can be seen with other post-emergent herbicides.

minutes to one hour. For post-emergent grass herbicides (like Acclaim Extra, Fusilade, Envoy and Vantage), about 20 to 30 minutes after treatment is sufficient for the herbicide to absorb into the foliage. Check herbicide labels for recommended "rain-free intervals" for the products you're using.

continued on page 62



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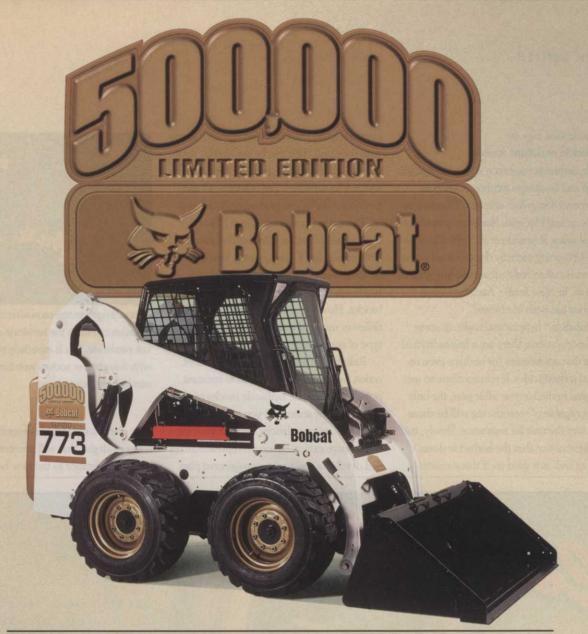
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continued from page 60 Herbicide resistant weeds

While herbicide resistance is not widespread in turf and landscape settings, it has been documented in golf course turf. Simazine resistant annual bluegrass has been around for several years. Researchers at North Carolina State University recently documented a case of dinitroanaline-resistant annual bluegrass in golf turf. In New Jersey, Acclaim-resistant crabgrass has been confirmed.

This didn't happen overnight. In some weed populations, there are a few individual plants that are tolerant (or perhaps even resistant) to herbicides. If you continue to use the same herbicide year after year, the only weeds capable of reproducing will be those that carry the trait for resistance. Slowly, turf managers notice that the herbicide doesn't work as well as it used to. If this scenario continues, the resistant weed type will dominate the stand. This can be avoided by rotating modes of action — rotating herbicides will not be sufficient. For example, all dinitroanaline herbicides (including Balan, Pre-M, Barricade, Surflan and Team) have the same mode of action. Dimension's mode of action is similar. Consequently, the dinitroanaline-resistant annual bluegrass in North Carolina is resistant to all of these herbicides. However, Ronstar (oxadiazon) has a different mode of action and will control this type of annual bluegrass.

Reliance on a single herbicide mode of action for many years will lead to resistant populations. Rotate herbicide modes of action every few seasons. If you suspect you have resistant populations, contact your local cooperative extension service representatives and develop a resistance management plan.



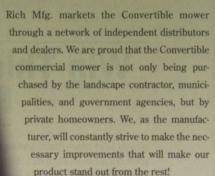
Rain or irrigation too soon after herbicide application can wash the herbicide off before it can penetrate. This is especially true for weeds with waxy leaves such as woodsorrel (Oxalis corniculata) pictured here.

This plan should include several management strategies that will prevent development of resistance to the new herbicide. LM

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The Convertible is a zero turn rider for mowing open areas; and as easy as flipping a lever, you have a hydro walk behind for mowing hillsides and hard-to-reach places.

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Increase your customers' satisfaction

Guarantees and complimentary re-treats are just some of the ways lawn care pros can make customers smile more

> ustomer satisfaction is key in the lawn care industry. While not all lawn care professionals offer written guarantees for their services, most will re-treat at no charge or at least repair

damaged areas.

Depending on the region of the country, certain problems crop up more often than others. In Kansas City, Jon Cundiff, owner of Turf's Up, Inc., Lee's Summit, MO, says weeds cause the most callbacks. "Farther north, crabgrass isn't really a problem, but it's probably our biggest reason for going back to a client's property," Cundiff says. "Dandelions are the second biggest problem, followed by grubs."

While grub control is part of Turf's Up's program, some customers choose not to take it. "It depends on whether the customer wants to be proactive or reactive," Cundiff says. "But if we treat for grubs and you wind up with a problem, we'll come out and fix it. Since we've started using Merit for grub control, we have definitely minimized our return visits."

Because his service doesn't include watering and mowing, Cundiff figures his team does one-third of the work on customers' lawns. "But we're responsible for 100% of the results," he says. "We can't control nature, but customers hold us accountable anyway."

Use service calls wisely

In the Dallas area, Gro-Green, Inc. follows a sevenround program for its residential customers. Owner Gary LaScalea offers a strong guarantee: "If you're on our program and you have a problem, we'll go back and take care of it at no extra charge." He looks at a service call as an opportunity to show his customers

that he cares. "It's a chance for us to resell the account," he says. "I see it as a benefit to us to go out and diagnose the problem. I see it as a good time to communicate with our customers."

LaScalea says there are several advantages to operating in Dallas. With warm-season grasses, his employees can fertilize and treat for weeds even during hot summer months. And most of his customers have built-in sprinkler systems, so when his crews put down an



Darrel Nail, vice president/general manager of Dallas, TXbased GroGreen, Inc., looks at service calls as a way to show care and concern for customers.

application and ask them to water, they usually oblige.

Because most southern landscapes suffer from insect and disease problems, around 70% of LaScalea's customers receive GroGreen's tree and shrub service, too.

"We have different issues in the South, such as fire ants and mole crickets," LaScalea notes. "But it means we're on the property more often, and that gives us more opportunities to please our customers."

GOLF COURSE BEAUTY for lawns

Bayer guarantees Merit

While most lawn care companies guarantee their services, guarantees from the manufacturer to the end-user are not as common. But this year, turf professionals using Merit insecticide from Bayer Corporation for white grub control are eligible for a first-of-itskind guarantee program. Bayer Corporation offers repayment for retreatment if grubs break through the spring/summer Merit treatment.

To participate, turf care professionals must be members of the Bayer Accolades program and enroll in the Merit Guarantee for Grub Control Program anytime between November 1, 2000 and April 27, 2001. This program is not offered in California.

"We are confident that Merit will work properly under normal conditions," says Mike Daly, brand manager, turf and ornamental products. "But unpredictable weather and environmental conditions can reduce the effectiveness of any grub control material." He adds that the guarantee program will cover the lawn care operator when these situations occur.

For more information about the Merit Guarantee for Grub Control Program, contact your local turf product distributor or the Bayer sales representative in your area, or visit the Web site www.accolades.com.

continued on page 66

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You can give your customers Golf Course Beauty with an environmental, organic-based turf fertilizer, ROOTS[®] Turf Food 15-3-8. The first choice among golf superintendents who desire strong, green, healthy turf, ROOTS[®] Turf Food 15-3-8 works better with longer lasting results than other leading brands. Ask your ROOTS[®] distributor, contact us at 800-342-6173 or visit our website, www.rootsinc.com for product particulars.



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Most of the time, people don't really want their money back. They want you to take care of the problem. We do reapplication, put in plants or put in turf. We just try to find a common ground with our customers. Since we have a very low cancellation rate, I think our policy is working." — *Rick Beard, executive VP / Massey Services*

continued from page 65

Show me the money

But sometimes just fixing the problem isn't enough. Many customers demand their money back. Once in a while, every lawn care service runs across someone it just can't please. "If it comes to giving money back, we will," says Ron Jacques, owner of Green Lawns Plus, Inc., Marlboro, MA. "But if we get someone calling us in September about crabgrass, that's where I draw the line. I may refund one application, but not an entire year's program."

In general, commercial accounts are more demanding



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PlightControl[®] is the only product that effectively protects your properties seven days a week, 24 hours a day. FlightControl works like a "Biological Fence", herding geese off the areas where you don't want them. FlightControl is odorless, weather-proof, and does the job without harming humans, vegetation or wildlife.

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Call us: 800-468-6324 or visit: www.flightcontrol.com Environmental Biocontrol, Intl. a division of DCV, Inc. than residential accounts because they usually involve servicing a larger property where the contact person has to work within a budget. As a rule, they want more for less.

"We had one estate account we could never make happy," says Brad Culver of Nitro-Green, Inc., Helena, MT. "I finally agreed to come back two weeks after every application to check on things — but I charged them for the service. They soon switched to another company, and that gave us the out we needed."

Though he doesn't offer a guarantee in writing, Culver states on his invoices that if customers see a problem, they should call back within 21 days.

Communication is key

In Maitland, FL, Massey Services' GreenUp Lawn Service emphasizes customer communications. With 34 service centers throughout the state and three in Georgia, Massey offers lawn and tree/shrub care, residential and commercial pest prevention, and termite protection. The company offers a moneyback guarantee but refunds money in only a few cases.

"Since we have a very low

cancellation rate, I think our policy is working," says Rick Beard, executive vice-president of Massey Services. "The money-back guarantee also holds our employees more accountable for the service they're providing."

The right recipe

Charles King, owner of King Green, Norcross, GA, sends a monthly newsletter to all his lawn care customers. He writes a column called "Charlie's Turf Talk" seven times a year.

He also holds what he calls "manager meets," in which employees visit customers to discuss any problems they might be experiencing. "We try to impress upon customers that you don't buy an application, you buy a program."

Because of his confidence in the program, King guarantees all his company's services. King refunds money as rarely as possible, but he does budget a small amount for re-servicing.

"When you get right down to it, making a repeat application is pretty cheap customer service," King says. LM

Circle 123

WE'LL GIVE YOU THE STANDART OF THE STATE OF



They say good things come in threes. If you're a landscaper, that's true at your Kawasaki dealer. They'll give you \$60 when you trade up to a new Kawasaki String Trimmer, \$60 when you trade up to a new Kawasaki Backpack Blower, and \$20 off the purchase of a new Kawasaki Handheld Edger.* Each product is professionally engineered with industry-leading Kawasaki power, quality and reliability to make light work of even the toughest jobs. One demo is all you'll need. But three great offers don't hurt.

For more information about Kawasaki products, visit **www.kawpowr.com**. To locate a dealer near you, call **1-877-KAW-POWR**.



\$60 Trade Up is good toward purchase of a new Kawasaki string trimmer or backpack blower when you bring in an old gas-powered string trimmer or backpack blower. All offers valid for a limited time at participating dealers. * Handheld edgers not available in California.



Less is more with zero-turns

BY CURT HARLER / CONTRIBUTING EDITOR

Speed. Power. Cutting quality. Durability. Balance. Comfort. Accessibility to maintenance. These are all of the things landscape professionals look for in a zero-turn mower. Manufacturers know what their commercial customers want, and they're constantly improving models that are already at the top of their line. Here are some of the latest and greatest zero-turns out there.

BOB-CAT 414/637-6711

www.ransomes.com

The Bob-Cat ZT-200 Series zeroturn riding mower from Textron, Racine, WI, now includes a 20-hp Yanmar diesel, which provides up to twice the fuel economy of gas engines. The ZT200s come available with 19-hp or 23-hp Kawasaki V-twin engine or 25-hp Kohler Command. Units have lever-type steering that controls independent power to each wheel. Unit can reach speeds up to 8 mph. **Circle no. 257**

CUB CADET 877/835-7841

www.cubcommercial.com

The newest in the Cub Cadet Commercial line is the M60 tank mid-mount zero-turn mower with 25-hp Kohler Command V-twin OHV engine or 23hp Kawasaki V-twin OHV engine and a 60-in. Command Cut System deck. Marbane blades give 1.7-in. overlap for a cleaner cut, especially in tight turns. It's built with 7 gauge skirt with welded steel bars, and 10 gauge top double reinforced at spindle area. The front axle lockouts prevent pivoting and provide greater stability on slopes. Comes with dual 5-gal. fuel tanks. **Circle no. 258**

JOHN DEERE 800/537-8233

www.deere.com

Excellent traction and maneuverability in tight spots are features of the 1400 series mowers from John Deere, Research Triangle Park, NC. The 1400 Series — 1420, 1435 and 1445 — are powered by liquid-cooled Yanmar engines. Units feature hydraulic PTO and 14.5-gal. fuel tanks for productivity. They are made of tubular, heat-treated, nodular-cast steel frames with iron front and rear axles. **Circle no. 259**



Buying questions

- Does unit turn without scuffing turf?
- Do I want diesel or gas power?
- Is fuel-saving fuel injection available?

Is the steering comfortable? (The whole purpose of a zero is making lots of tight turns)



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Drive 75 DF postemergent herbicide is the shortest distance between broadleaf and grassy weed control. From crabgrass and foxtail to clover and dandelion, **Drive** eliminates troublesome weeds in a variety of turf species. In fact, you can even seed or overseed many varieties of turf immediately after application. And **Drive** keeps weeds under control for 30 to 45 days, in some cases for more than 3 months, with a single application. So join the **Drive** for turf protection today. Call 1-800-545-9525 or visit www.turffacts.com. Always read and follow label directions.



Closing the distance between grassy and broadleaf weed control.



Circle No. 122 on Reader Inquiry Card

lm reports

DIXON INDUSTRIES / 800/264-6075

www.dixon-ztr.com

The ZTR-8000 series from Dixon Industries, Coffeyville, KS, offers a 25-hp Kohler Command or 26.5-hp B&S-Daihatsu engine. It has White wheel motors and Hydro-Gear BDU pumps. Fuel capacity is

11.5 gal. and cutting widths are 60 or 72 in. "Big rig" seat suspension and fully adjustable seat reduce fatigue. Broom, grass blower and catcher, snow blade and snow blower attachments mount to mower with automotive-type receiver hitch. Circle no. 260

> ments from 1.5 to 4.75 in. The 61-in. IS3000Z and the 61- or 72-in. IS4000Z come with two suspension options: 4-wheel independent suspension for the IS4000Z and 2-wheel independent suspension for the IS3000Z. **Circle no. 263**

GRAVELY 800/472-8359 www.gravely.com

The 260Z zero-turn mower from Gravely, Brillion, WI, features stay-sharp Tungsten carbidecoated blades and XL Spindles which reduce time spent greasing. Air-Flo deck expels clippings faster using a 21-in. wide discharge tunnel. A 9-gal. fuel tank keeps the mower going all day long.

Circle no. 264

GRAZER 920/582-5000

The Grazer line of zero-turn mowers is available in 18- to 22-hp models. The 52-, 62- and 72-in. side discharge decks are fully floating with a tilt-back feature for easy service. They can be converted to mulching decks with addition of a kit. Other attachments include a grass collector, snow blower, cab and ROPS. Grazer, a division of Ingersoll Equipment, is in Winneconne, WI. **Circle no. 265**

continued on page 75



EXMARK 402/223-4010

www.exmark.com

Cut up to six acres per hour with the 27-hp liquid-cooled LazerZ from Exmark Mfg. Co., Beatrice, NB. Unit has 60- or 72-in. UltraCut deck options. Quick-lift deck assist is standard on the 72-in. model. Electric start Kawasaki V-twin engine runs quieter with less vibration than singlecylinder engines and simplifies on-trailer starts. **Circle no. 261**

THE GRASSHOPPER CO. 316/345-8621

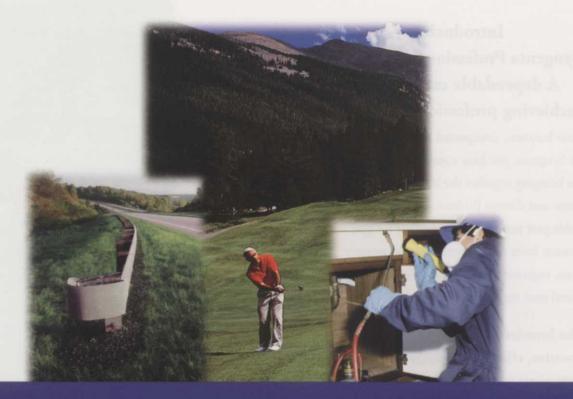
www.grasshoppermower.com

The complete line of true zero-turn power units from Grasshopper, Moundridge, KS, feature horizontal crankshaft OHV engines and 14- to 28-hp, liquid- and air-cooled gas, dual fuel LP/gas or diesel engines. Straightaway mowing speed is 10.5 mph. Extra-deep 5.5-in. DuraMax decks offer even dispersal of high-volume clippings. Out-front mowers have optional SL FlipUp decks that rotate 90 degrees. Cutting widths of 52, 61 or 72 in. are available. **Circle no. 262**

FERRIS INDUSTRIES 800/933-6175

www.ferrisindustries.com

Ferris Industries, Munnsville, NY, has a new line of mid-mount Zs from 48 to 72 inches. The new 1000-Z comes with a 48- or 52-in. deck that adjusts in 1/4-in. incre-



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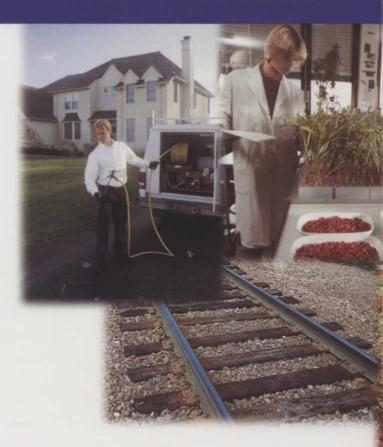
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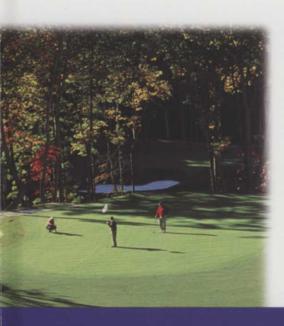
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continued from page 70 GREAT DANE 814/218-7100

Simple design marks the zero-turns from Great Dane, Jeffersonville, IN. The Super Surfer is available in widths of 48, 52, and 61 in., each with either Kawasaki or B&S engines. All models have dual hydrostatic pump and motor, electromagnet cutter blade clutch, 6-gal. fuel tank and dual wheel parking brakes. Floating cutter deck follows contours on rough ground. **Circle no. 266**

HUSQVARNA 704/597-5000

www.husqvarna.com

Increasing the ground speed up to 10 mph and increasing fuel capacity to 11.4 gal. (in two 5.7gal. tanks) greatly increased the productivity of the ZTH6125 from Husqvarna, Charlotte, NC. This unit and all of the new zero-turns feature three engine types: air-cooled, liquid-cooled and fuel injection.

Circle no. 267

KUBOTA 888/4KUBOTA

www.kubota.com

Introduced in February 2001, the 360-degree ZD Series TurfMower from Kubota, Torrance, CA, is built on a unitized chassis that incorporates the transmission as an integral part of the sub-frame. The ZD18 and ZD21 are powered by a liquidcooled 3-cylinder E-TVCS diesel engine. Front suspension uses a pivoting front axle to follow ground contours. Deck lift allows front of mower deck to be raised easily while built-in jack system allows for servicing without removing the mid-mount mower deck. **Circle no. 268**

LASTEC 800/515-6798 www.lastec.com

The Model 412D is an 82-in, wide unit with a 38-

hp, 4-cylinder water-cooled Kubota diesel. This zero-turn from LasTec, Indianapolis, IN, features four 21-in. articulating mower decks. Side discharge mulching plate is standard. Three 21-in. blades (high-lift, low-lift or mulching) work at deck heights from 1 to 4.5 in. Roll bar is standard. **Circle no. 269**

LESCO 800/321-5325

Husqvarna

The latest Viper model from Lesco, Cleveland, OH, is a midmount zero-turn with a 48-in. cutting deck, adding to the current line of 54- and 60-in. mowers. Designed with one-piece welded square tubular steel frame, the newest model is powered by a 19-hp Kawasaki twincylinder OHV power plant. Cut height ranges from 1.5 to 5.5 in., adjustable with a new foot pedal. Each deck has four adjustable wheels and front and back rollers to prevent scalping. **Circle no. 270**

HOWARD PRICE TURF EQUIPMENT 636/532-7000

The Blazer 360Z leads the line of zero-turns from Howard Price, Chesterfield, MO. Units are available with 52-, 60- and 72-in. cuts, and decks are offset to the left for better trimming around trees. Extra-wide throat allows even grass discharge. Floating front axle provides superb cutting flotation, operator comfort and reduced frame breakage. Units are powered with either a 22- or 25-hp Kohler engine or 23-hp Kawasaki engine. **Circle no. 271**

RICH MFG. 765/436-2744

www.convertiblemower.com

Whether you want to walk or ride, the Convertible is one machine that lets you do both. This hydro walk-behind from Rich Mfg., Thorntown, IN, converts to a zero-turn rider just by *continued on page* 76



HUSTLER 800/395-4757

www.excelhustler.com

The new Hustler Z from Excel Industries, Hesston, KS, offers a wide stance with low center of gravity and outstanding machine balance. The 23-hp Kawasaki engine powers a 60-in. deck. Unit has integral park-brake system incorporated into the steering system. Foot-operated, spring-assisted deck lift makes trailering and height changes simple. Optional mulching kit available.



PT-400 Series Trailer Package

Circle 127





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lm reports

continued from page 75

pulling a pin. It comes with 48-, 52- or 61-in. deck and choice of Kawasaki or Kohler engines. Grass catcher, sprayer, aerator, thatcher or Convert-A-Barrow options are available. **Circle no. 273**

SCAG 920/387-0100

www.scag.com

The Tiger Cub, the latest from Scag, Mayville, WI, is as tough as its big brother the Turf Tiger, but more compact. Decks range from 40 to 52 in. At 10 mph and with a choice of five engines, the newest Tiger can cut up to 23 acres a day. Company offers a three year warranty on the decks and spindles and two years on engines, hydraulic drive systems and electric clutches. Circle no. 274

SNAPPER 888/SNAPPER

www.snapper.com The Pro Cruiser line from Snapper, McDonough, GA, has three options. The ZMT2500KH lets those who prefer twinstick steering over a single joystick find a comfortable option in a zero-turn machine. Its brother, the MZM2200KH, has single joystick steering. Comes



with a 52- or 61-in. mid-mount cutting deck. They're available with a 22- or 24-hp Kohler Pro Command engine. Company's "no tools" belt change and field-serviceable spindle assemblies keep these units on the job. Options for all three models include covered grass catcher, ROPS and Ninja mulching system. **Circle no. 275**

Circle 128

Want a new source for pest information?



www.pestfacts.org

Termites, cockroaches, rodents, even poison ivy and other nasty weeds. They're all pests, which means they can cause real problems that pose health and safety risks to children and adults. The good news is now you've got the Pest Facts Information Center at www.pestfacts.org. It's a handy resource discussing the problems caused by pests, as well as the safe and responsible use of urban pesticides and related issues. So don't just sit there...log on.



lm reports

THE TORO COMPANY 612/888-8801

www.toro.com

The Z-Master Compact Mid-Mount Z286E, with electronic fuel injection from Toro, Bloomington, MN, clips along at 10 mph. Like all Z200 zero-turns, the machine boasts the Z Stand Lift, allowing landscapers to raise the deck without additional tools. Features Super Flow System decks which use blade-generated airflow to transport clippings to the discharge chute without clumping. All models are backed by a 1-year limited, 2-year engine and hydro system and 3-year spindle assembly warranty. Circle no. 276

WALKER MOWERS 970/221-5614

The Walker Mower 2000 Model MT is available

with a Kohler 26-

hp electronic fuel

injection engine

option. Designed



by Walker, Fort Collins, CO, the injection offers fuel savings of 30 to 40% over the 25-hp model with carburetored engine. New engine package also offers easier starting over a wide temperature range, less maintenance and improved throttle response. Troubleshooting is easy with built-in, automotivetype diagnostics.

Circle no. 277



WOODS EQUIPMENT / 815/732-2141 www.woodsonline.com

Operator comfort, maintenance-free components and a grass collection system are among the features of the M-series Mow'n Machine line from Woods Equipment Co., Rockford, IL. The M2250 has a 22-hp Kohler engine and a 50-in. deck; and the M2560 has a 25-hp Kohler engine and an offset 60-in. deck. Both offer adjustablesuspension seat, ergonomically designed hand controls for single-handed steering and a variety of positions to reduce operator fatigue. Extended-life spindles are guaranteed to not need lubrication or replacement for two years. Tungsten carbide-coated blades stay sharp longer. Circle no. 278

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BY BALAKRISHNA RAO

Ailing spruce

What can I do to improve the health of one of my customer's evergreens?

- MI

The following factors can lead to a spruce being in bad health:

- Improper planting too deep or too high
- Excess moisture drowning the root system and corresponding top growth
- Excess fertilizer burning the absorbing roots
- No post-planting care, particularly proper watering — too much or too little can affect overall health
- Site related problem affecting establishment of newly planted tree
- Transplant shock
- Girdling from rope or thread at base of plant
- Mite and/or fungal disease like cytospora canker and/or rhizosphaera needle cast

Study the plant on site for these possible causes and provide their corrections as needed. Also, consider sending samples to state or private labs for further diagnosis.

Dursban alternatives

We want to use Dursban for borers. How much longer will we be able to buy and use it, and what are some alternatives? — IL

According to the EPA, the Revised Risk Assessment and Agreement with Registrants for home lawns and most other outdoor uses concerning Dursban (chlorpyrifos) is as follows: stop formulation 12-01-00; formulators stop sale 02-01-01; retailers stop sale 12-31-01.

A Dow AgroScience representative said that Dursban can be purchased and used

until the end of 2001. After that date, only the inventory can be used until everything is gone. This doesn't mean that you can purchase a large quantity of Dursban to use for an extended period of time because we don't know how long Dow Agro-Science, Dursban's manufacturer, will continue the registration for landscape ornamental use. As long as Dursban is registered by Dow AgroSciences, the inventory can be used up.

In the meantime, you should become familiar with insecticides such as Astro, Merit or other pyrethroids. Pay attention to the pests being managed with the particular rates and methodologies that need to be followed. You need to become familiar with the life cycle of specific borers and their number of generations to develop a borer management program.

Consider that, for borers, Astro is applied on trunks and branches, while Merit is applied to the soil. Water after treating with Merit to move the insecticide to the root zone.

Dimension vs. Dimension Ultra

What is the difference between Dimension and Dimension Ultra?

- OH

Dimension 1 EC and Dimension Ultra are formulated differently. Dimension 1EC is a liquid with a solvent-based formulation that has a warning label due to its potential volatility in the field when applied. It can be stored at below 32°F and has a slightly shorter shelf life than Dimension Ultra.

Dimension Ultra is a powder formulation in water soluble bags. It has a caution label,

but it's safer than Dimension 1 EC. Also, it has a longer shelf life and doesn't volatilize. Therefore, less active ingredient (25% less) can be used per acre than Dimension 1 EC. Dimension Ultra will cost less per acre treated. It shouldn't be stored below 32°F because it may cake. Because of the powder formulation in water soluble packets, Dimension Ultra needs to be agitated while it's being mixed, so it can't be used in backpacks.

In your situation, you may want to have both formulations in your inventory. For mixing smaller quantities without agitation, such as for backpacks or pump sprayers, Dimension 1 EC is the one to use. Dimension Ultra WSP is better for treating larger areas because of its caution label, need for agitation while tank mixing, 25% less active ingredients/acre and lower cost.

As far as the efficacy, both formulations will perform the same. The requirement to wait eight weeks to seed after application is the same for both. Both will have similar broadleaf activity on weeds such as oxalis, spurge, knotweed, henbit, purslane and buttercrest.

As far as which one is easier to use, it depends on the equipment and your operational needs. Perhaps the water-soluble bags would be easier than 1 EC formulations because they offer less exposure and eliminate the need for measurement. However, you still need to get the correct calculation of herbicide needed to make the proper treatment

mix. If you don't have an agitation system in your application unit, then 1 EC would be easier to use.

Manager of Research and Technical Development for the Davey Tree Expert Co., Kent, Ohio SEND YOUR QUESTIONS TO: "Ask the Expert" Landscape Management; 7500 Old Oak Blvd.; Cleveland, OH 44130, or email: sgibson@advanstar.com. Please allow two to three months for an answer to appear. Professional Grounds Management Society CATE

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product focus

Hardscape made easy

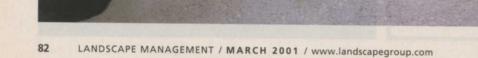
Oly-Ola Sales says its Super-Edg landscape edging product provides a nearly invisible landscape edging border and can be used to form and contain creatively shaped logos and patterns. It's constructed of black vinyl, and its 6-in. depth inhibits landscape growth and keeps animals from digging under fences. Edging is secured with steel anchoring stakes with tapered points that slide through pre-cut slots. For more information contact Olv-Ola at 800/334-4647 or www.olyola.com or circle no. 279





Stow Manufacturing says its TP-10 tile/paver saw is capable of ripping a 24-in. tile in a single pass or cutting an 18-in. tile diagonally. Powered by a totally enclosed, non-vented 1.5-hp electric motor, its blades range from 7 to 10 in. A 10-in. blade is standard, and additional blades and profiling wheels are also available. For more information contact BOMAG Light Equipment Division at 800/235-0008 or www.stowmfg.com or circle no. 280

Aquabond's hand-held dispensing and mixing system for its two-component, concrete repair compound dispenses compound for custom threaded mounting and fastening. The compound is dispensed around a lubed bolt and then allowed to dry. The bolt is then unscrewed, creating a custom thread for easy removal. For more information contact Aquabond at 714/685-4922 or circle no. 281



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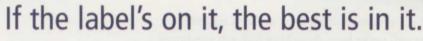
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Landscane	NAME (please print) TITLE																			
MANAGEMENT	FIRM																			
March 2001	ADDRESS*	-		-										_	-		-	-		
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I would like to receive (continue receiving) LANDSCAPE MANAGEMENT free each month:	E-MAIL ADDRESS																			
○Yes ○ no	Signature:						-	-					Date:	-	111	-	-	-		-
My primary business at this location is: (fill in ONE only) CONTRACTORS/SERVICE COMPANIES 02 \255 Landscape Contractors (Installation & Maintenance) 03 \260 Lawn Care Service Companies & Custom Chemical Applicators (ground & air) 04 \285 Irrigation Contractors & Consultants \(\circ) Other Contractors/Service Companies (please specify) \)				3. SERVICES PERFORMED (fill in ALL that apply) 17 A Mowing 22 F Turf Fertilization 27 K Paving, Deck & Patio Insta 18 B Turf Insect Control 23 G Turf Insect Control 28 L Pond/Lake Care 19 C Tree Care 24 H Ornamental Care 29 M Landscape Installation 20 D Turf Aeration 25 L Landscape Design 30 N Snow Removal 21 E Irrigation Services 26 J Turf Weed Control 31 0 O ther (please specify) 4a. Do you specify, purchase or influence the selection of landscape products?											1	Illation				
LANDSCAPING/GROUNDS CARE FACILITIES 05 0 290 Sports Complexes 06 0 295 Parks 07 0 305 Schools, Colleges & Universities 07 Other Grounds Care Facilities (specify)				58 Yes 59 No 4b. If yes, indicate which products you buy or specify: (fill in ALL that apply) 32 1 Aerators 39 8 Herbicides 46 15 Sw 32 2 I Aerators 39 8 Herbicides 46 15 Sw 33 2 Blowers 40 9 nsecticides 47 16 Tra) weepers ractors ruck Trailers/Attachments							
SUPPLIERS AND CONSULTANTS 08 355 Extension Agents/Consultants for Horticulture 09 360 Sod Growers, Turf Seed Growers & Nurseries 10 365 Dealers, Distributors, Formulators & Brokers 11 370 Manufacturers Other (please specify)				35 4 Chipper-Shredders 42 11 Mowers 49 18 In 36 5 De-icers 43 12 Show Removal Equipment 50 19 Ti 37 6 Fertilizers 44 13 Sprayers 51 20 U 38 7 Fungicides 45 14 Spreaders 51 20 U 5. Do you have Internet access? 52 A Yes 53 B No 5A. If so, how often do you use it? 12 12 12									19 Tu							
2. Which of the following best describes your title? (fill in ON	E only)				55 C				00	Month	nly	57 C	DO	casion	ally					
12 10 Executive/Administrator - President, Owner, Partner, Board, Purchasing Agent, Director of Physical Plant 13 20 Manager/Superintendent - Arborist, Architect, Lands		102	114	126	138	150	162	174	186	198	210	222	234	245 246 247	258	270	282	293 294 205	305 306 307	
Foreman, Supervisor 14 (30 Government Official - Government Commissioner, Ar 15 (40 Specialist - Forester, Consultant, Agronomist, Pilot, I Certified Specialist		104 105	116 117	128 129	140 141	152 153	164 165	176 177	188 189	200 201	212	224 225	236	248 249	260 261	272	284	296	308 309	
16 50 Other Titled and Non-Titled Personnel (please specif	y) 1 A	_107 108	119 120	131 132	143 144	155 156	167 168	179 180	191 192	203 204	215 216	227 228	239 240	251 252 253	263 264	275 276	287 288	299 300	311 312	
Save TIME and fax it: 413-637-4343		110	122	134	146	158	170	182	194	206	218	230	242	253 254 255	266	278	290	301 302 303	313 314 315	
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Landscape March 2001 This card is void after May 15, 2001	NAME (please print)	is C	No							STA	TE _				ZIP_				
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 12 0 10 Executive/Administrator - President, Owner, Partner, Board, Purchasing Agent, Director of Physical Plant 13 0 20 Manager/Supervisor 14 0 30 Government Official - Government Commissioner, A 15 040 Specialist - Forester, Consultant, Agronomist, Pilot, Certified Specialist 16 0 50 Other Titled and Non-Titled Personnel (please speci 	cape/Grounds Manager, Superintendent, gent, Other Government Official Instructor, Researcher, Horticulturist,	102 103 104 105 106 107	114 115 116 117 118 119	126 127 128 129 130 131	138 139 140 141 142 143	150 151 152 153 154 155	162 163 164 165 166 167	173 174 175 176 177 178 179	186 187 188 189 190 191	198 199 200 201 202 203	210 211 212 213 214 215	222 223 224 225 226 227	234 235 236 237 238 239	246 247 248 249 250 251	258 259 260 261 262 263	270 271 272 273 274 275	282 283 284 285 286 287	294 295 296 297 298 299	306 307 308 309 310 311
Save TIME and fax it: 413-637-4343	AN ADVANSTAR * PUBLICATION *2000 Advantar Communications Inc. At rights reserved.	109 110 111	121 122 123	133 134 135	145 146 147	157 158 159	169 170 171	180 181 182 183 184	193 194 195	205 206 207	217 218 219	229 230 231	241 242 243	253 254 255	265 266 267	277 278 279	289 290 291	301 302 303	313



Clean sweep

The M-B Companies' hydraulic drive SHL angle broom has a hitch so it can connect to the Jacobsen HR-9016 turbo wide-area and the HR-5111 rotary mowers. Capable of snow sweeping, pavement clearing, grass thatching and leaf raking, brush speed can reach 150



rpm. The broom has a sweeping path of 52 in. when angled 30 degrees left or right, while the rotary brush heads measure 25 in. in diameter and vary in lengths up to 60 in. Wire, polypropylene or 50-50 wire-polypropylene broom head options are available. For more information contact M-B Companies at 800/558-5800 or www.m-bco.com / circle no. 250

Stop those suckers

Want to stop suckers and sprouts that come up from the base of trees in spring? Monterey Chemical Company says its Sucker Stopper Concentrate can do just that. Just mix with water and spray at the base of trees when suckers appear in spring or prune off and spray immediately for three months of suppression. It can also be mixed with latex paint and painted on the tree surface.

For more information contact Monterey at 559/499-2100 or

www.montereychemical.com / circle no. 251

Super sprinkler

Hunter Industries' new Pro-Spray sprinkler features a factory-installed directional flush cap with a "pull-up ring" which prevents spraying onto



ings during system flushing. Once lines are flushed, a self-sealing flapper closes the flush cap. Another feature is a pressure-activated, multi-function wiper

walkways and build-

seal that minimizes "flow-by" and allows more spray heads to be installed in same zone. An extra thick body provides durability, and it's available as a 4, 6 or 12-in. pop up.

For more information contact Hunter at 800/733-2823 or <u>www.hunterindustries.com</u> / circle no. 252

Feed your turf

ROOTSinc. says its organic-based 15-3-8 coarse turf food keeps lawns beautiful because it has 15% nitrogen (90% of which is slow release) to provide nutrition and the long-term environmental benefits of the organic base. It can be safely used throughout the season. One treatment can last two months.

For more information contact ROOTS at 800/342-6173 / circle no. 253

800/342-6175 / Circle no. 253

Tame terrain

The BCS brush mower attachment for the BCS tiller mows down tall weeds along fences, in drainage ditches and on steep hillsides. Tractorstyle tires allow it to go anywhere, and 1/4-in. thick flails feature a swinging tip design that speeds through tall weeds but gives when it encounters a solid object. Adjustable skids glide along the ground at 1 to 3 in. The primary discharge chute in front directs cut weeds away from operator.

For more information contact BCS at 800/227-8791 or <u>www.bcs-america.com</u> / circle no. 254

Strengthen soil

Natural Industries says its Actino-Iron biological soil additive creates an optimum environment for plants to grow and thrive. Composed of humates and naturally chelated iron and inoculated with a beneficial organism called Streptomyces lydicus strain WYEC 108, it creates a defensive barrier around plants' root systems, creates a more robust root system and increases plant size.

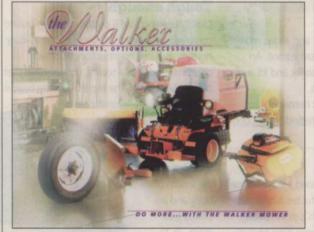
For more information contact Natural Industries at 888/261-4731 / circle no. 255

Tough enough

Quality Lighting's WFB outdoor lighting bollard combines an aesthetic design with heavy-duty housing and lens construction. Its broad, columnar body has a sealed, domed head that deflects vandalism. The top third of the head is solid metal and is secured integrally with the base of the unit by three 3/4-in. thick hidden steel rods that extend the length of the body and are bolted into place. 35 to 100-watt metal-halide lamps provide crisp, white illumination. For more information contact Quality Lighting at 847/451-0040 or www.qualitylighting.com / circle no. 256



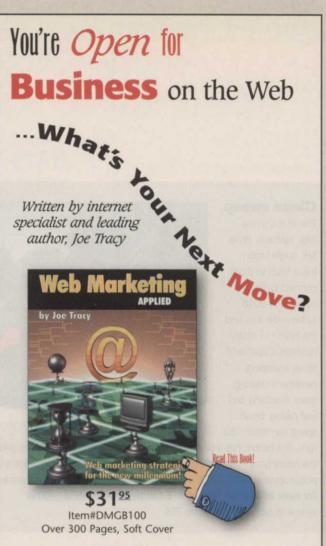
MART



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A new twenty-page catalog (P/N 6895-17) is now available for Walker Mowers "Attachments, Options and Accessories." For Walker owners and prospective owners, the catalog highlights the versatility of the Walker product line—showing many ways to make the Walker do more, work better on the job and fit the individual owner. Also available is a companion, thirteen-minute video showing many of the accessory items in action (Order P/N 6895-15).





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Circle 145 on Reader Service Card

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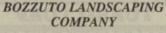
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READY FOR A CHANGE? Come join one of the Largest Vegetation Management Companies in the United States. **DeANGELO BROTHERS, INC.** is experiencing tremendous growth in all of our divisions and has immediate openings for the following positions: •FOREMEN: Qualified candidates must have proven leadership, communications and interpersonal skills. Industry related background preferred, but willing to train the right individuals. •TECHNICIANS: Candidates must be responsible, reasonable persons willing to work on weed and brush control crews. Positions involve driving trucks and operating spray and/or trimming equipment. **•TREE TRIMMERS/BUCKET OPERATORS: We** are seeking tree trimmers with railroad and/or utility line clearance experience. Climbing and bucket operations experience is preferred. •HI-RAIL **OPERATORS:** Qualified candidates must have CDL & drivers license with Tank & Hazmat endorsement, be willing to travel away from home for extended periods of time and possess good mechanical abilities. We offer a good starting salary, benefits, training, advancement and a drug free work place. Must enjoy moderate travel and overnight stays. A valid drivers license is required. For a career opportunity and confidential considera-tion, contact our 24 hour, 7 day a week Employment Hotline at Phone: 800-355-5266 or send resume to: DeAngelo Brothers, Inc., Attn: H.R. Dept., 100 North Conahan Drive, Hazelton, PA 18201. Fax: 570-459-0321 EOE/APP/M-F 4/01

FLORAPERSONNEL, INC. In our second decade of performing confidential key employee searches for the landscape/horticulture industry and allied trades worldwide. Retained basis only. Candidate contact welcome, confidential, and always free. 1740 Lake Markham Road, Sanford, FL 32771. PHONE 407-320-8177. FAX 407-320-8083 Email: Hortsearch@aol.com Website Website: http://www.florapersonnel.com 12/01

Long Island golf course and athletic field construction firm seeks highly motivated salesper-son to sell sports field construction and maintenance throughout the tri-state region. Must be self-starter and ambitious. Excellent career oppotunity to work for fast-growing, fast-paced company. Excellent salary, commission and benefits. Fax resume to The LandTek Group, Inc: 631-691-2392. 3/01



11730 Wadsworth Blvd., Broomfield, CO 80020

cleanup crew THIS AND THAT

And the winner

e received many crazy on-the-job stories in response to our January golf shirt giveaway, including one about accidentally digging up human remains and another about an irate customer who, when told the weed on her lawn was knotweed, responded, "What do you mean that's not a weed?" The one that busted our gut the most, however, was the story about the danger of high water sent in by Mike Fresh of Mike's Lawn Service, Blackfoot, ID. Apparently, one of Fresh's employees drove his zero-turn rider too close to the Snake River, which had overflowed onto a customer's lawn. When he got stuck in the mud, he tried to get out by going forward. When the tire on the upslope suddenly gained traction, the mower spun into the river. The employee had the good sense to jump off the mower, but the mower was lost for good. "Too bad mowers don't float," Fresh said.

Another month, another shirt

We've got plenty more shirts to give away, and this time you need to tell us (in 200 words or less) what the most productive day you ever had was and why. We'll pick the best story, and you might even see it in print if you win. Entries are due by April 15, 2001. Send your submissions via e-mail to jstahl@advanstar.com or snail mail to: Landscape Management, 7500 Old Oak Blvd., Middleburg Heights, OH 44130.

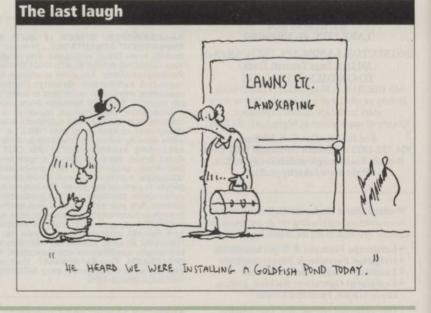
Separated at birth?

J.R. LandCare Group president Rob Diaz

Food Network show host and master chef **Emeril Lagasse**

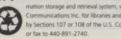


Even though Rob Diaz looks like Emeril Lagasse, he doesn't claim to have any great culinary talents. He spends his time cooking up landscapes. In fact, his Las Vegas, NV-based company recently won first place from the Southern Nevada Water Authority in the category of commercial maintenance for designing a landscape that was judged to be both beautiful and water efficient.



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