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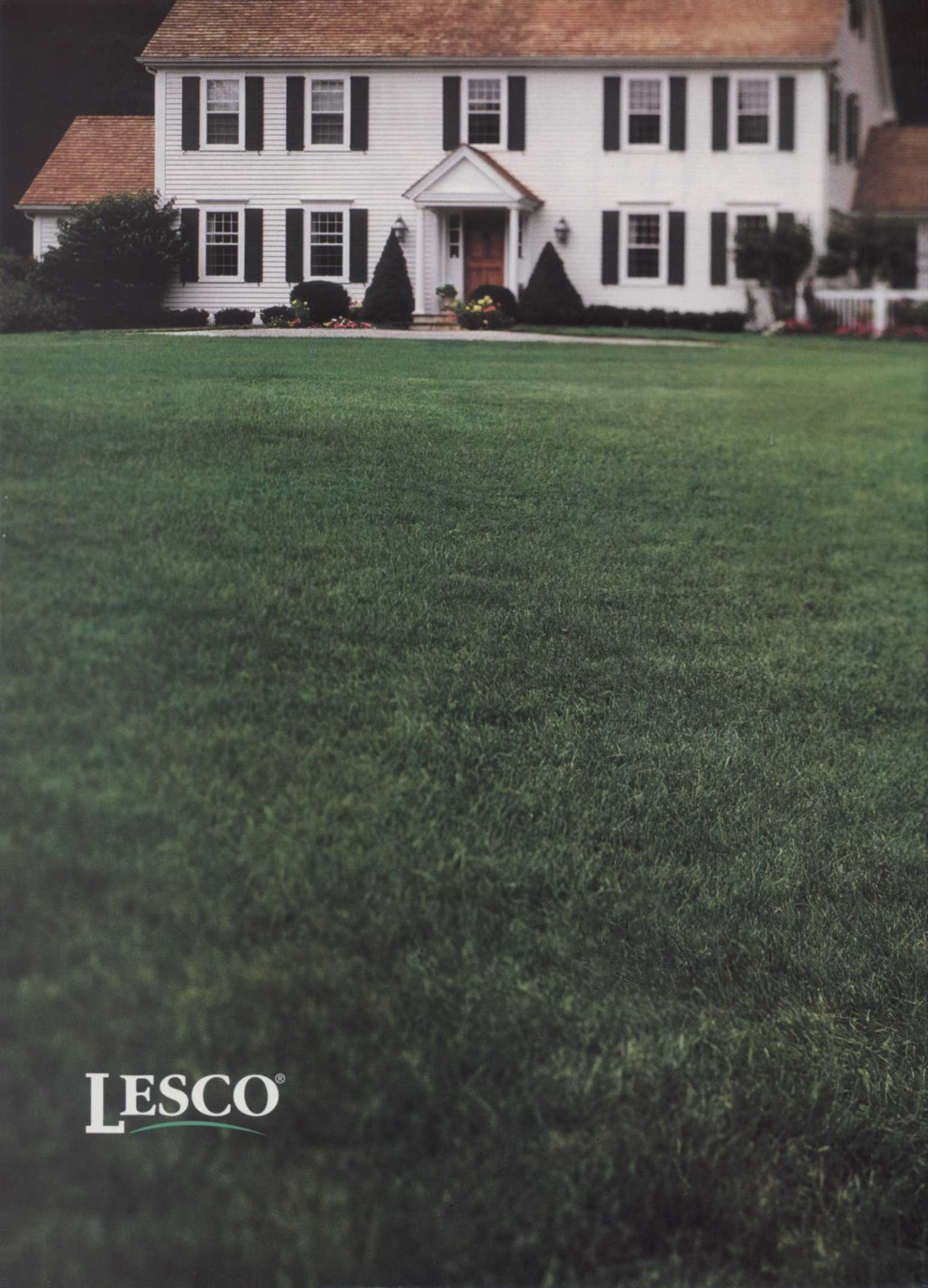
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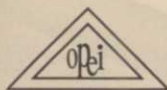
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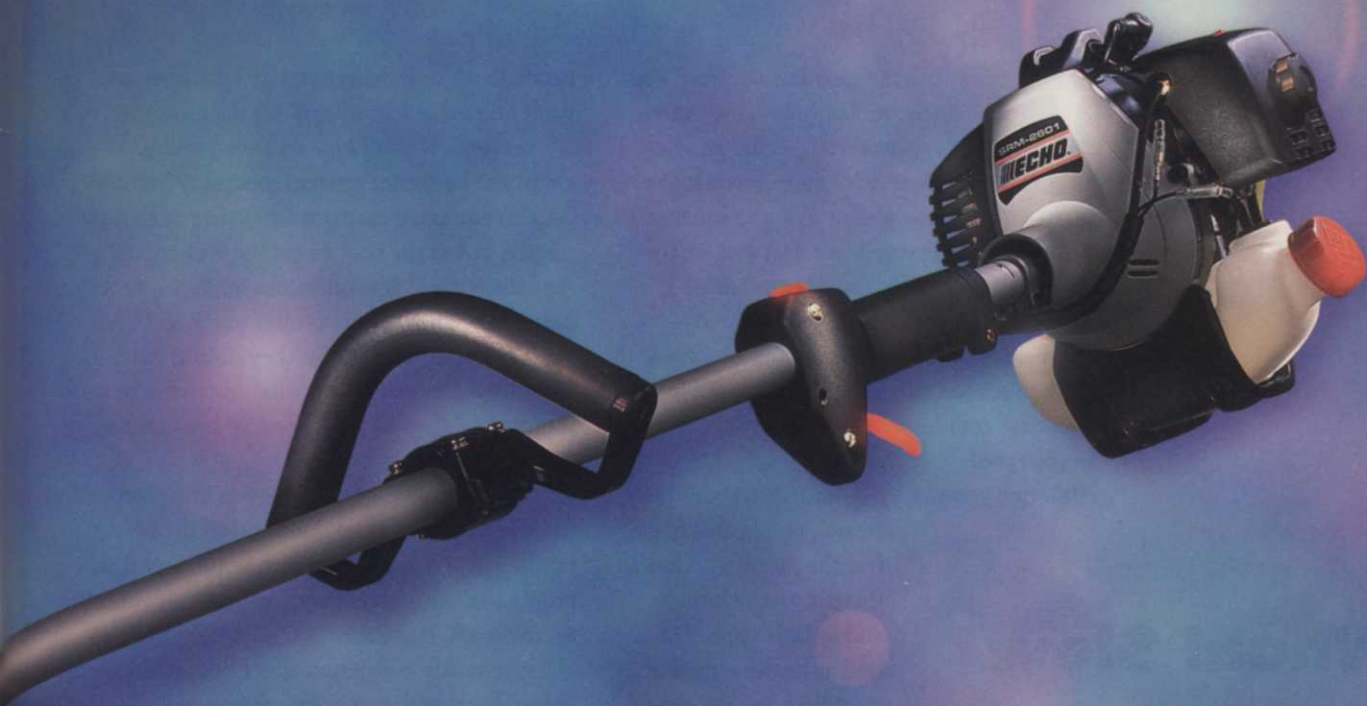
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We haven't heard much from you lately, probably because you're too busy to talk as the growing season gets into full swing. We know you're trying to squeeze 10 hours of work into every work day, and we understand you don't have much extra time.

That's OK. We have a busy season too — those weeks between Halloween and the New Year when several industry events, special issues and holidays collide.

Keep your cool

Although you may have anticipated this busy season, you probably still feel the pressure. After all, there is so much to do and so little time. But now is just exactly the right time to slow down and make sure your operation works right and is not getting out of kilter. Two things can easily get out of whack when everything hits the fan: customer service and your own work-life balance. Here's an example:

I got a call the other day from a well-known green industry consultant who had just been jerked around by his lawn care company. Seems they provide continuous service year to year, and to maximize the season for themselves, made the first application up here in the north in February (way before it would be useful in this climate), which also happened to be before they mailed the annual renewal notice to customers.

What's going on here?

This might suit them fine, but if you're a customer who does not want to renew, you're already stuck for the cost of the first treatment. In this case, our consultant was billed, then quickly received a rapid-fire, nasty collection letter from a California firm. After several contentious calls to the lawn care firm, plus calls to the collection firm (at his expense), he is clearly fed up. The at-

titude that 'we'll deliver service whenever we want and make life difficult for the customer' really set him off. And I haven't even told you about the customer service "specialist's" attitude.

This company may provide a decent enough service, but in the rush to get the work done, get the bills out and get collections in, they forgot the customer. They forgot to offer quick and thorough explanations of what they do and why. They forgot to make it easy for customers to respond. And they forgot to be nice because they're in a hurry.

This time of year can make you crazy with all the work that has to be done and all the new business you'd like to add. Just remember if you promise to see a potential client, do it. If you take on the work, make sure you do it right. If you claim to satisfy customers, don't disappoint them because you and your team are frazzled.

Don't forget the family

It's a delicate balance — maximizing work and your company's sanity. Which brings me to my last point. Don't forget about your own balance. It's easy to devote 90% of your waking hours to your operations this time of year. It's easy to promise you'll make up the time later. But too often, you miss those opportunities and suddenly, it's next spring's cycle again.

Slow down a little! Too much work isn't bad for you if you happily embrace it, but be sure to balance it with alternatives that relax or energize you. Make them "quality" breaks and you won't need a six-month vacation next year to feel rested. Then you can get back into work with more energy for the next 10-hour day. **LM**

Whoa! Slow down a little



Sue Gibson

SUE GIBSON
Executive Editor

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Planting trees is time-consuming work when properly done, and can also be costly if the trees die while under guarantee. Enhancing tree survival is a priority, so the actual planting method, as well as how the plant is handled, is important to do properly.

Retaining roots and promoting root growth is essential in establishing a tree. Root loss is a stressful situation for any plant and it is compounded by poor handling practices.

▶ A bare-root tree does not have many of the nonwoody or absorbing roots needed in good number to help establish the plant. The root hairs and associated mycorrhiza fungi access water and soil elements. Bare-root plants are susceptible to their roots drying out and dying due to improper handling.

▶ A balled-and-burlapped tree also loses many roots when dug up from nursery soil, which can put the plant at a disadvantage in a landscape where post-planting care is limited. Rough handling tears and breaks roots. Excessive drying of

the soil ball results in dead and dying roots. Lifting and dropping the tree for positioning in the planting hole, or using the stem to leverage a tree, can break and damage more roots.

▶ A container tree has an advantage in that the entire root system is transplanted. One concern, however, is the likelihood that circling roots growing in the container will cause long-term problems.

Always check the condition of the roots of any tree you buy or plant. Keep the roots of bare-rooted plants moist and covered. Ensure B&B root ball burlap is at least damp, all roots are covered with soil and the root ball doesn't have large cracks. Container plants should be free from potential girdling roots, so check the outside and the top of the root ball. Look for evidence that transplanting

to larger size pots was delayed and a series of circling roots exists.

Another transplanting option is trees grown in fabric containers. Root control bags are placed in the ground so that tree roots will grow in native soil, which is usually heavier and more likely to be compatible with the customer's site than potted material. The bags act like a container in that root growth is restricted to within the bag. The bags are made of a heavy cloth-like material which does not degrade and must be removed at transplanting.

Unlike a container, the roots do not merely circle the container but grow through the fabric where their growth is constricted. This method has two results: one, the initiation of more fine roots inside the fabric container; and two, energy is stored at the swollen nodes, where constriction occurs, ready to initiate new roots upon transplanting.

This type of root pruning is quite effective, both for controlling root extension and for limiting the impact and loss of roots when the tree is removed from the nursery. At transplant, about 95% of the tree's roots go into the ground with the tree, as opposed to low percentages of B&B stock. For species difficult to transplant, root control bags may be a reasonable choice to increase survival rates.

There is debate over whether the use of root control bags results in more and faster top growth. This seems to vary among species and there may be a need for higher, short-term irrigation for some species.

The type of planting stock you choose should take into account how you will be handling it, what level of post-planting care can be expected and the handling and care of the trees at the nursery. Select your nursery and planting stock supplier with care, not just based on price or convenience, but also on quality and commitment. **LM**

What do you know about your roots?



Nancy Stairs

NANCY STAIRS
Technical Editor

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Dallisgrass control

I have noticed a lot of dallisgrass coming in lawns. Where does this grass come from? What product do you know that might kill the seed and the plant?

—WEST VIRGINIA

Reportedly an introduced grass native to Uruguay and Argentina, dallisgrass (*Paspalum dilatatum*) may be coming from nearby lawns, pastures, roadsides or ditchbanks.

Dallisgrass is a tufted, summer-growing perennial grass that grows from a hardy crown. It can rapidly produce flower heads over nicely mowed lawns.

Consider using herbicides such as Roundup, Finale, DSMA or MSMA. You may also want to overseed with desirable turfgrass seeds after spot treating with herbicides. However, damage to untreated areas may occur if you walk from treated turf onto untreated turf.

Many of the pre-emergent herbicides used for crabgrass control also will help manage dallisgrass. In the pasture areas either rotate with cultivated crops, dig the plant or spot treat with Roundup or Finale. Re-seed the areas with desirable plants.

The root of the problem

We have an extensive population of Northwest poplars and elms. Surface roots are damaging our mowers. To what extent can these roots be lowered or even eliminated without causing a great deal of damage to the trees?

— ALBERTA, CANADA

Generally I would not advise anyone to prune surface roots as this may not help alleviate the surface rooting problem. This practice will damage the tree and may cause it to die.

While some tree species are more prone to having shallow roots, trees will produce surface roots if the growing conditions are not favorable for proper root development. Waterlogged, heavy clay or compacted soils may be causes.

Tree roots require sufficient amounts of oxygen and water so the roots grow where the soil has the conditions necessary for growth and, in these situations, that is at the soil surface.

You can consider adding a small amount of topsoil (1 to 1.5 inches) and a small amount of mulch (another 1 to 2 inches), and keep it from touching the base of the tree. This will reduce the severity of the visual problem and mowing will no longer be required near the tree trunks thus reducing damage to your mowers.

One final note, having damaged your mowers in this situation, it is possible that the trees have been damaged. Root rot and decay in the roots affect tree stability and increase the possibility of breakage in high loading situations. Trees that have had repeated severe damage to their roots should be inspected by a professional arborist familiar with hazard tree identification to evaluate their condition with respect to the potential targets.

Herbicide movement

Can lawn-applied broadleaf herbicides and pre-emergent crabgrass herbicide leach in the soil?

—PENNSYLVANIA

There are several factors that dictate or determine the leaching of herbicides. These include soil texture, how well the herbicide dissolves in water, attraction of ions or molecules of herbicides to soil colloids (a process called adsorption) and the amount of available water.

Herbicides, such as salt forms of 2,4-D which adsorb less to soil colloids, have a tendency to leach readily in sandy or silt-loam soils. The dinitro-aniline herbicides and many pre-emergent herbicides can readily adsorb to soil colloids and thus resist leaching. Reports indicate that the pre-emergent herbicide Dacthal can leach slightly in soil.

Many herbicides bind to the organic matter and clay in soils. Adsorption is poor if the soil contains too much sand or silt. Increase organic matter in the soil to increase adsorption and decrease leaching.

Herbicide leaching is usually not a concern if the applications were made per label specifications and guidelines, particularly in lawns with good organic matter. Often a herbicide-treated and an untreated lawn can be side by side without any weeds in the treated side and many weeds on the untreated side. This suggests that the herbicides did not move or leach laterally to the untreated area. **LM**



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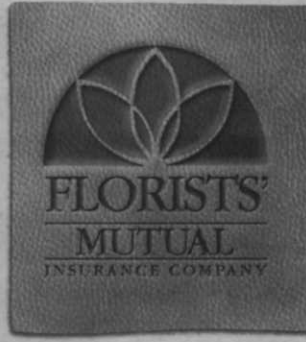
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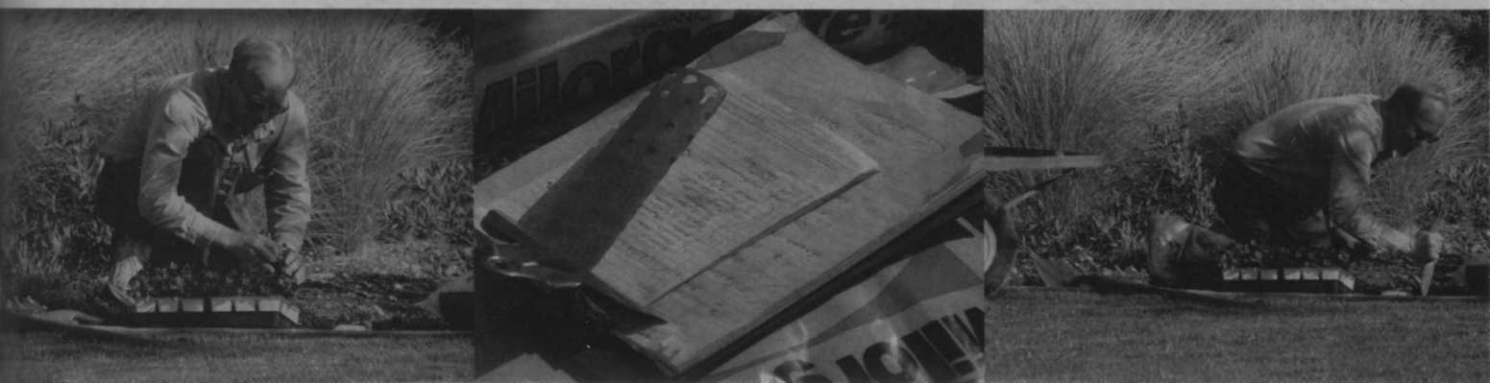
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Landscape Management, Athletic Turf win 9 TOCA Awards

ORLANDO, FL — For the third straight year, *Landscape Management* scooped up a winner's share of writing and design awards, presented at the annual meeting of the Turf and Ornamental Communicators Association, held in Orlando earlier this month.

TOCA members include editors and designers of many green industry publications, public relations and marketing directors for landscape and supplier firms, industry association representatives and advertising agency account supervisors.

This year's contest was hotly contested, with a record 160 entries in writing, design and photography.

Managing Editor Ron Hall won big with a first place award for his ornamentals feature article in November, 1998, "Disney's Grand Green Experiment." He also won three merit awards for writing (including one for *Landscape Management's* sister publication, *Athletic Turf Maintenance & Technology*), and Executive Editor Sue Gibson also won a merit award for writing.

Graphic Designer Lisa Bodnar again made a strong showing with three first place design awards: "June 1998 Table of Contents" (Single Page Design), and "Weed ID Guide," which tied with "Turf Manager's Guide to Insect ID" (Two-Plus Page Design). She also won two merit awards for design.

Coincidentally, Hall's Disney feature was awarded just a day after the group toured the new Disney Animal Kingdom and the Wide World of Sports. Disney horticulturists and sports field managers conducted TOCA on behind-the-scenes tours of both facilities, de-

tailoring the extensive landscape and field design, installation and maintenance practices.

"This year's strong showing confirms our efforts to provide the most informative, useful and easy-to-read magazine in the industry," said Sue Gibson. "Both Ron and Lisa are enormously talented people who bring a rare enthusiasm to *Landscape Management*. This shows through year after year because the judges keep changing, yet they recognize Ron and Lisa's excellence in writing and design."

"Ron's articles always cut right to the meat of the topic, yet continue to be fun and interesting to read," she continued. "Lisa's elegant designs for our contents page and both Weed and Insect ID Guides makes it so easy to find the information you need in the field. Personally, I'm honored that the judges recognized the first editorial I wrote for *Landscape Management*."

Look for more TOCA presence at upcoming industry events this year. TOCA will assist with RISE communication efforts. TOCA also sponsors a roundtable discussion of critical green industry issues during the Green Industry Expo; it is open to anyone attending the GIE.



Leadership transition at Exmark

BLOOMINGTON, MN —Toro announced that H. John Smith, president of Exmark, and Roger Smith, executive vice president of sales and marketing, stated that they will leave their current positions effective Oct. 31, 1999, and Nov. 30, 1999, respectively.

Dennis Himan, vice president and general manager of Toro's landscape contractor businesses, will be responsible for day-to-day operations at Exmark and will direct the effort to identify the long-term leadership plan for the company. Himan was instrumental in Toro's November 1997 acquisition of Exmark, an important element in Toro's dual-brand, dual-distribution strategy for the fast-growing landscape contractor market.

Deere cuts emissions in two-cycle engines

RALEIGH, NC — Two-cycle engines using a new John Deere-developed technology could cut emissions by 75% compared with current engines, the company claims. And since less fuel is lost into the exhaust and more of it is cap-

tured for combustion, fuel consumption is decreased by about 30%.

Steve Peace, director, advertising and marketing support services consumer products for the Worldwide Commercial and Consumer Equipment Division

of John Deere, told *LM* that the engine "is based on a simpler design, very basic components, better emission performance results and is less expensive to manufacture." The engines will be available starting in 2000, he said.

Insure that valuable tree

HARTFORD, CT — Insure a specimen tree that you maintain? You bet.

Gulf Insurance Group, a member of Travelers Property Casualty Corp., offers this new program to provide insurance coverage specifically for trees and landscaping-related personal property. But your insurance agent can obtain it for you too, says Lester Edelman, of AFG Partners, the New York-based wholesale broker and program administrator of the program.

Here's how the process works: You've got a stand of stately oak trees on the college quadrangle and you'd like to insure these trees. You contact your insurance agent, who contacts AFG Partners and provides some bare-bones information about the trees. AFG determines a preliminary price to insure the trees. You then hire a certified arborist to measure, inspect and determine the specific value of each tree. With this information, AFG can set the premium.

The insurance covers trees against death or serious damage due to fire, lightning, wind, the weight of ice and snow and, in some regions, floods and earthquakes. Death caused by insects or disease is not covered. Insurance can be written to cover replacement costs, including installation, or full value.

You may not want to insure just any tree though. The minimum premium is \$5,000.

—Ron Hall

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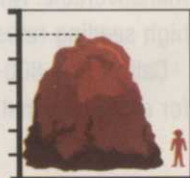
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What's all the racket about?

Watch out for cicadas this spring! Sometimes incorrectly called the "17-year locust," cicadas can be found somewhere in the eastern United States nearly every summer, with different groups (broods)

hatching each year. There are 15 broods: 12 hatch every 17 years (primarily northern states) and three hatch every 13 years (primarily southern states). In the next 23 years, 19 broods will hatch.

This year's activity (Brood V) will hatch in eastern Ohio, western Pennsylvania, much of West Virginia and a small, northern portion of Virginia.

Mother of a bug

Cicadas neither bite nor sting, but their large size (1.25 to 1.75 in. long) and large red eyes are unnerving.

For most of their lives, cicadas live underground as nymphs, feeding on the sap of roots. Their feeding activities are not particularly harmful.

The most significant damage is from laying eggs in slits cut into twigs (usually 0.25 to 0.5 inches in diameter). The subsequent dieback and breakage is unattractive, but not serious. Small and newly planted trees may be affected and



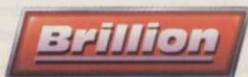
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Periodical cicada adult

may even die if used heavily for egg laying, since many of their branches may be the desirable size for egg laying.

Control tactics

The Ohio State University Extension recommends ways to reduce damage:

- delay tree planting until after the cicadas die, to avoid damage to newly planted trees;
- prevent egg laying by covering trees, starting when the males begin to sing until the singing stops. Tie the small gauge nylon netting or cheesecloth to the trunk beneath the lower branches;
- use chemical controls; labeled insecticides carbaryl (Sevin) and chlorpyrifos (Dursban) can be applied once a week. Avoid blooming plants to preserve honeybees and other pollinating insects.

—Nancy Stairs

Circle 142

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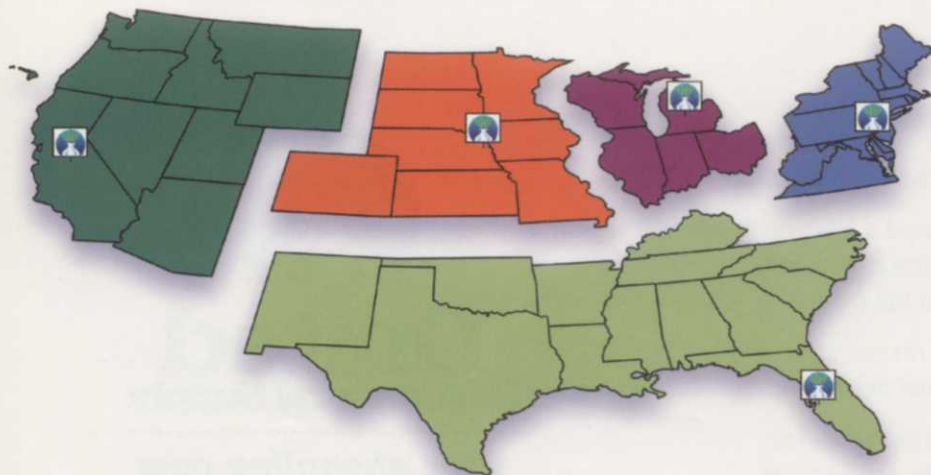
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Lesco acquires new fertilizer technology

CLEVELAND, OH — Lesco, Inc. recently acquired exclusive worldwide rights to a new matrix technology for controlled-release fertilizers that will compete in the turf market with other coated and premium fertilizers.

"We are very excited about the technology," Ken Sekley, vice president marketing at Lesco, told *LM*. "It is a homogenous structure that has unique controlled-release properties. In addition, the nutrients in the matrix will be very efficiently used by the turf or other targeted plants."

The patented technology was licensed from the Agri Nutrients Technology Group of Disputanta, VA. At one time, Vigoro had rights to the technology, but, in the course of corporate restructuring, the rights reverted back to Agri Nutrients. Lesco moved swiftly and snagged the exclusive worldwide rights.

"After we finalized the deal, we did get some calls from the other companies who were interested in the technology. There was interest expressed in working with us," Sekley says. He didn't rule out that possibility.

Product in limited quantities will be available later this year. Lesco is reportedly focusing on formulations for golf turf first, then other turf and ornamental applications.

Turf experts learn new fungicide awaits registration

MELBOURNE, FL—In March, turfgrass scientists met here for a two-day conference and learned of a new turf fungicide awaiting EPA registration. Compass, from Novartis, is a broad-spectrum fungicide that combines contact and systemic properties, termed "mesostemic."

Dr. Mike Agnew tells *LM* that this "reduced risk" compound is highly effective on fungal diseases which attack through leaf tissues, like brown patch and anthracnose. Compass also shows good control of gray leaf spot, red



Joanne Hodge of Novartis talking to: (L to R) Dr. Larry Stowell, Pace Consulting; Dr. Bruce Clarke, Rutgers University; and Dr. Houston Couch, Virginia Polytechnic Institute, at the Novartis Vero Beach Research Station.

thread, rust and leaf spot. However, the low application rates (0.1 to 0.25 ounces) means that it is less effective on pythium, nor will the application rates be effective on dollar spot.

Compass uses the same chemistry, but different mode of action, as Heritage by Zeneca, Novartis says.

Terra selling service centers

SIoux CITY, IA — Terra Industries Inc., headquartered here, is selling its distribution business to Cenex/Land O'Lakes Agronomy Company for \$361 million. The sale is expected to close this summer. Included in the sale are Terra's 400 retail farm service centers in the U.S. and Canada. Terra's distribution business, basically agricultural but some turf and ornamental, reported 1998 revenues of \$1.73 billion and employed 2,600.

[CLIPPINGS]

Grand jury slams blowers

ORANGE COUNTY, CA — A grand jury here this spring recommended that local governments have maintenance workers use rakes and brooms rather than gas-powered leaf blowers. A news report in the *Orange County Register* said that members of the grand jury labeled blowers "noisy and polluting," based on California Air Resources Board estimates that 2.11 tons of combustion pollutants are put into the county's air each day by blowers.

We're not sure how CARB can measure one county's air vs. another's, but the bigger question: Why is a grand jury ruling on this?

Rohm and Haas acquires Morton

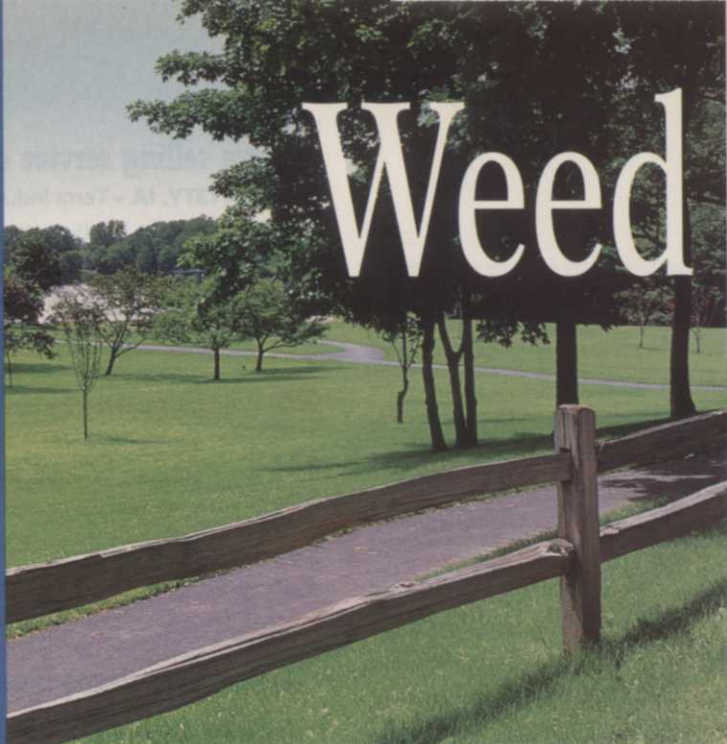
PHILADELPHIA — Rohm and Haas Company is acquiring Morton International, Inc. Rohm and Haas, a speciality chemical company, had nearly \$4 billion in sales in 1998. Morton is a marker of speciality chemicals and salt products with sales of about \$2.5 billion last year. Rohm and Haas received all the regulatory approvals required to complete the transaction in late April.

Dow boosts spinosad production

INDIANAPOLIS, IN — Dow AgroSciences LLC is going to be able to spin out more spinosad, the key chemical component of Conserve insecticide, because of a recent agreement with Integrated Genomics Inc., Chicago.

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Supplier moves shake up marketplace

Are consolidations good for the customer? Not if they raise prices, limit product availability or limit your buying options

By ANGELA BENDORF

When your favorite dealer closes up shop or your favorite brand of seed, fertilizer or equipment isn't available anymore from your distributor, remember that this is the fallout from consolidation.

Mergers, consolidations and acquisitions among manufacturers and suppliers in the professional landscape market continue at a rapid pace. This trend is likely to go on as long as the economy is strong and interest rates remain low. From consumer products and services to industrial components, the urge to merge seems contagious.

"During 1998, the mergers and acquisitions market surpassed all previous records with approximately 4,000 transactions valued at over \$770 billion," explains Scott Adelson, managing director of Houlihan Lokey's Mergerstat, a merger tracking firm.

Today's belief that consolidation creates

value leads to two common scenarios:

▶ Large companies acquire small companies because it's the best avenue for growth and sometimes the only way to grow at the rate investors want.

▶ Midsize companies acquire and merge to be stronger competitors in their marketplace.

The search for 'synergies'

"Ultimately, companies are looking for synergies," explains Gene Hintze, director of Novartis Turf & Ornamental Business. "Research and development is so expensive. Small companies may not have the dollars they need to assure a strong future through the development of new products."

Novartis is the result of a 1996 merger that brought together R&D efforts, as well as complementary product lines of Sandoz and Ciba, two Switzerland-based life science companies. That merger is just one of many affecting the landscape and grounds management industry in the past few years. One industry source counted more than 20 chemical industry mergers and acquisitions this decade. Others have occurred among manufacturers and distributors of fertilizers, seeds, equipment and

other green industry products. Key recent mergers and acquisitions on the chemical side alone include:

▶ Rhone-Poulenc, maker of Chipco brands, joined forces with Hoechst to form a new global company called Aventis. Financial funding for research and development is reported to be more than \$400 million per year.

▶ The Scotts Company acquired the non-Roundup consumer lawn and garden business (including the Ortho product line) from Monsanto; Sanford Scientific, a plant genetics research company for the professional turf market; and formed strategic biotech alliances with Monsanto and Rutgers University.

▶ Rohm and Haas, maker of Dimension herbicide, signed a merger agreement with Morton International, maker of specialty chemicals and salt products. The transaction is valued at \$4.9 billion.

Competitors unite

Merger activity often brings together two companies that were once fierce competitors. Such was the case when Textron, parent company of Jacobsen, acquired Ransomes.

Phil Tralies, president of Textron Turf Care and Spe-



Gene Hintze

cialty Products Americas, says the company is rapidly developing a new corporate culture. "I'm extremely pleased, given the fact two strong competitors have come together in a market that wasn't very large to begin with," says Tralies.

Textron established sales and marketing programs and achieved ISO 9001 certification in all of its manufacturing plants in the year since the acquisition, a major accomplishment considering the size and complexity of the merger.

The company's distribution channel made up of over 400 distributors and dealers for the Bobcat, Bunton and Ryan brands will not change. "Our distributors and dealers offer the service and support for this equipment and are a key ingredient to our success," he says.

Reach out for contractors

As landscape and lawn care companies consolidate, become bigger and spread out geographically, distributors are finding innovative ways to service them. Terra Industries has upgraded its web site (www.terrainindustries.com) and uses it to provide detailed information to customers.

Jeff Moberly, turf market manager for Terra, says customers in the future will be able to order products on-line. The site currently offers product labels, MSDS, DOT and worker protection information and features a dealer locator.

Leveraging for lower prices?

Do bigger landscape companies carry more weight and have the ability to leverage suppliers into giving them better prices?

"Any time there's consolidation, you start to envision a monster carrying a big stick. We really haven't seen our larger customers try to leverage us unreasonably for better prices," says Mark Barbera, vice president of sales and marketing for Nu-Gro, a supplier of slow-release nitrogen.

He says the reason is well-established relationships with customers who know they're getting quality material and service.

"If you continually beat the daylights out of a supplier for the best price, somewhere down the road you'll have problems," he adds.

Despite some consolidation among Nu-Gro's customers who buy and formulate the raw material, the company had increased sales of \$30 million in 1998 — up 50% from the previous year.

Steve Wood, director of corporate business development, Husqvarna Forest & Garden Co., Charlotte, NC, says in the future, bigger companies may not leverage

companies for better prices, but will demand better service. "The business will go to suppliers who offer more than just a product," Wood says.

"Manufacturers will need to provide quality service through their dealers, training to companies that service their own equipment and replacement parts more quickly," he adds. "Manufacturers will need to do more than say, 'Hi, let me sell you some equipment.'"

Is big always better?

Bill Culpepper, president of SePRO

Mergers change irrigation landscape

Mergers, acquisitions and consolidation are changing the face of landscape irrigation in the United States. Rather than just taking advantage of economies of scale, contractors have increased the likelihood of some direct purchasing of irrigation components.

Expect significant changes in the relationship between large contractors and irrigation manufacturers in the coming months. ServiceMaster, the force behind TruGreen-Chemlawn, has spent many years paring down two-step distribution for its other national businesses. Its acquisition of Ruppert Landscape, a significant irrigation force in the mid-Atlantic states, has injected TGCL with considerable irrigation expertise and interest. If TGCL makes a major play into irrigation, its competitors will follow quickly (regionally if not nationally).

Distributors, in response, have rallied with consolidation efforts of their own. Century Rain Aid and Ewing Irrigation, who discarded the idea of using the Mississippi River as a territory boundary, have been joined in the growth war by expanding regionals, such as United Greenmark and Horizon in the West, as well as McGinnis Farms and Hughes Supply in the Southeast. Florida and Texas are ripe for major mergers. Moves have been made in areas not generally considered irrigation hot spots, such as Outdoor in Missouri and Boston Irrigation in Massachusetts.

On top of concern over large contractors going direct, distributors face the assault by the large hardware chains, including Lowes, Home Depot and Home Base. Contractor purchasing and financing programs are being established by certain branches.

We have yet to notice the impact of direct purchasing by large contractors, although relationships currently exist. Such relationships provide an opportunity for mid-size manufacturers to gain on the "Big Three." However, it is these same mid-sized manufacturers who provide unique products for the small irrigation distributor. They can also provide a unique product for contractors. And, if you think the big three are going to give up on opportunities that make financial sense, even though they virtually control irrigation distribution, you'd be wrong. They have stockholders too.

— Bruce. F. Shank owns and operates BioCOM, Palmdale, CA. He can be reached at 800/455-4320.

LM'S TAKE ON IRRIGATION:

- ▶ *Look for more consolidation both regionally and nationally in distribution.*
- ▶ *Expect invitations from mass merchandisers to try their special contractor programs.*
- ▶ *Keep an eye out for unique irrigation products from both distributors and large contractors in the coming months.*



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Downsized associations learn to adapt to change

Professional associations are feeling the impact of the consolidation trend.

► **PLCAA:** "We've lost over \$50,000 in dues since this trend started," says Tom Delaney, executive vice president of the Professional Lawn Care Association of America (PLCAA). He believes the trend is both cyclical and a sign of a maturing market. "The professional lawn and landscape market is mature and there are fewer customers. Businesses are finding other companies with a similar customer base and buying them. It's not new technology that's driving consolidation in the green industry, just innovative thinking."

Despite the flurry of consolidations, PLCAA had a good year in 1998. "It was one of the most profitable years PLCAA has had in terms of revenues and expenses," Delaney says. He credits a strong economy and a strategy to diversify the membership base.

► **RISE:** While the financial impact is minimal, RISE (Responsible Industry for a Sound Environment) Executive Director Allen James says the biggest loss is in member volunteers. "Rarely are all employees retained in a merged company," James says. "As a result, several key association volunteers are lost. The remaining employees face increased work responsibilities and may not have as much time to be involved."

► **ITODA:** The Independent Turf & Ornamental Distributors Association responded to consolidation among its members by creating a new category of membership. The association of independent distributors has over 100 members. Executive Secretary Erin Bruzewski says 10 companies have dropped or changed their membership since July.

"You've got to roll with the changes and adjust," she says. "ITODA adjusted by creating a new 'Special Membership' category." The category is for distributor executives who were independent owners, but through acquisitions, consolidations and mergers are now part of a company that

isn't independently owned. Bruzewski says AgriBioTech, a seed company focused on consolidating the turf seed industry, is in ITODA's Special Membership category.

Will independent distributors remain strong through the green industry's acquisition frenzy? "Big companies will always buy the independents, but some will remain independent distributors because they provide good quality service, opposed to just a better price," Bruzewski says.

► **OPEI:** "The impact on any association is tremendous, because where you got \$2 in member dues and two people attending meetings, you've then got \$1 and one person attending meetings of two merged companies," explains Dennis Dix, president and CEO of the Outdoor Power Equipment Institute. He also says consolidation:

- makes the budgeting process much more difficult;
- makes allocating association resources very delicate, considering OPEI's investment in supporting the industry on emissions and noise issues;
- takes key companies who provide active association support out of the system.

► **ALCA:** When the first landscape consolidations appeared on the horizon, the Associated Landscape Contractors of America established a task force to discuss how it would affect the association, reports Debra Holder, executive vice president. "One of our primary goals was to determine how we can try to lessen the impact (of these mergers) on ALCA, if it would be negative," she notes.

Earlier changes in the dues structure, governance and efforts to involve more supplier members left ALCA in a good position. And industry consolidation also has its positive side, Holder relates: "The consolidations and acquisitions have helped put landscape on a higher level in the public's eye."

— Angela Bendorf, Mike Perrault,
Sue Gibson

Corporation, struggles with the recent consolidation trend. "Is big always better?" he asks. "I'm not sure there's a tremendous amount of value in all mergers and acquisitions. Good things don't always come out of big shops. Look at the high-tech industry. Big ideas have come from small shops and then were sold to bigger companies."

SePRO was formed in 1994 after Culpepper acquired the business from Dow AgroSciences, after Dow formed a joint venture with Elanco. The new company sold off some of its smaller, niche market products rather than abandoning them.

"There's a rule in business that no product should be less than two percent of your total sales. After a merger, smaller products can become less important," Culpepper explains. "But at SePRO, we treat small products the way large companies treat large products, and the customer benefits from that approach."

What's in it for you?

"Over time, we'll see fewer but larger basic manufacturers and distributors because of acquisitions," predicts Allen James, executive director of RISE (Responsible Industry for a Sound Environment).

Consolidation among manufacturers and suppliers has had little negative impact yet on the industry — often, more products are offered and distribution changes very little. And historically, consolidation hasn't resulted in higher prices.

As we reach mid-year, the trend does not show any signs of letting up. Adelson from Mergerstat says, "We're in the eighth year of an up cycle and I don't see it ending anytime."

— The author owns Communicopia Marketing Services Inc. in Raleigh, NC, and has experienced a few company mergers and acquisitions during her career. She can be reached at 919/212-1088.



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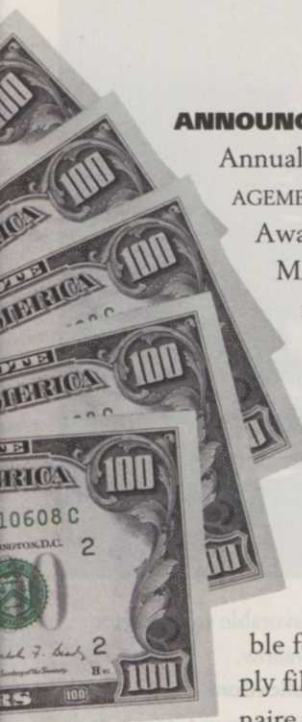
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ANNOUNCING: The Third Annual LANDSCAPE MANAGEMENT "Emerald Awards." LANDSCAPE MANAGEMENT magazine is offering a \$500 first prize to the winner of a random drawing to be held on July 1, 1999. Second prize is \$300 and third prize is \$200 in cash. To be eligible for the drawing, simply fill out the questionnaire at right and return it to our editorial offices.

Answers to the questions will determine our "1999 Emerald Awards" winners, to be revealed—along with the contest winner—in our August issue.

CONTEST REQUIREMENTS: Contestants must be owners or employees of landscape maintenance companies, lawn care companies or landscape contracting firms; or an athletic field manager or member of an athletic field maintenance crew; or manager or member of a facility landscape management crew. Product selections must be currently used by entrant.

Employees of Advanstar Communications or their families not eligible.

All questions on this entry form must be completed, and all blanks filled. One entry per person. No more than five entries from any one employer will be allowed. Entry forms will appear in the February through June, 1999 issues of LANDSCAPE MANAGEMENT.

Completed questionnaires should be mailed to: Emerald Awards, LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, OH 44130. They must be received by noon, July 1, 1999.

A random drawing of all eligible entry forms will be held July 1, 1999. Winners will be notified within 24 hours.

1999 EMERALD AWARDS

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- plant growth regulator?
- compact tractor?
- turf aerator?
- pick-up truck?
- leaf blower?
- line trimmer?
- chain saw?
- Kentucky bluegrass?
- perennial ryegrass?
- turf-type tall fescue?
- turfgrass mix or blend?
- biological control product?

NAME:

EMPLOYER:

CITY/STATE:

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()



The revolution in distribution

Equipment dealers and distributors have one eye on the fallout from consolidated customers and another on new commercial, consumer niche opportunities

LM Staff Report

Lawn care equipment dealer Jerrell Green once considered Home Depot's orange-decked warehouse stores as little more than indirect competition from an up-and-coming home-improvement retailer.

A lot has happened since then, says Green, owner of Cook's Mower Sales & Service in Orlando, FL. "Like it or not, I've had to change my business strategy and go after the mass merchant service business," he says.

Driving forces spurring Green's shift in business philosophy include recent mergers and acquisitions among major landscape contractors, some of whom have the newfound clout to buy equipment and supplies via national purchasing accounts. That, coupled with a move by some outdoor equipment manufacturers to sell through Home Depot and other mass merchandisers, has caused Green's mower and big-ticket equipment sales to plummet.

Green responded by aggressively selling more parts and servicing more equipment. He's even pursuing service business in an unlikely venue — from mass merchandisers, his formidable sales competitors. It's a reluctant approach that Green and other dealers are taking, however, because the economics of servicing but not selling



equipment are unfavorable and hard for proud dealers to swallow.

Industry wide implications

Beyond the microcosm of Green's dealership world in Orlando, more far-reaching and complex economic forces are altering the way many lawn care equipment manufacturers, suppliers, distributors and dealers do business.

Consider one example. TruGreen-ChemLawn's Landscaping Division acquired more than two dozen major independent companies in 15 states last year, then purchased LandCare USA Inc. When the dust settled, TGCL was the nation's largest landscaping company, with more than 100 locations.

Manufacturers see good reasons to deal directly with national companies: increased unit sales, the potential to expand into other markets and the prospect of additional market share. With a partnership with a growing landscape contractor, a manufacturer works through central pur-

chasing agents to project seasonal needs, then ships products to exact locations.

Can't have it both ways

Yet some manufacturers such as Walker Manufacturing Co. are "staying the course," opting to exclusively sell through distributors and dealers who they believe supply important aftermarket service, says Bob Walker. For his company, industry consolidation has forced a "fork-in-the-road" decision.



Bob Walker

"It doesn't seem possible to have it both ways — sell direct to big customers (large landscape companies) and also sell through dealers, although some manufacturers will probably try to

straddle the fence and say they can do both," Walker says.

It's not that Walker is eager to turn down business from national landscape companies. He hopes they do purchase Walker mowers.

"But if they do, they will be buying from a Walker dealer — not buying because it is the lowest fleet price available," he says. "Business strategy comes down to deciding who is your backbone or core customer. At Walker, we believe our biggest opportunity and fortune rests with customers who need dealer service. Therefore, we have made the decision not to sell direct to national accounts."

They need us

Ron Kujawa, who is in the unique position of heading both a major landscape company and an equipment dealership, says manufacturers aren't about to abandon their dealers; they can't afford to.

"No matter how large the (landscape

companies are that are a result of mergers and acquisitions, they're still an insignificant part of the overall industry," says Kujawa, whose Milwaukee-area landscape business is one of the largest in Wisconsin and who is also the exclusive dealer for Excel Hustler in the state. "There are so many contractors out there it is incredible. Every year, there is a number that comes into the business and a number that go out."

It's these new contractors that a local dealer has a better chance of discovering and converting into customers. Manufacturers don't have the resources to find and sell to them.

"Everybody knows who the big contractors are, the municipalities and the other big buyers. Everybody is knocking on their doors," Kujawa says.

Another factor weighing in a dealer's favor is parts and service. Kujawa concedes that it's possible for a manufacturer to ship parts directly to end-users, but most landscapers, particularly start-ups and small companies, still don't have the expertise or facilities to do their own equipment repairs and service.

Kujawa concedes that manufacturers will chase the business of the consolidated landscape companies by offering them better prices than they offer small contractors,

Dance with who 'brung ya'

As landscape contractors, manufacturers, distributors and dealers work to find their place in the evolving distribution network, it behooves them to respect what each brings to the table, says Tom Walker, president of Outdoor Equipment Co. in Chesterfield, Mo.

"All must recognize each other's needs and jointly craft their roles in each other's successes," Tom Walker believes. "I think it's time for some basic banners:

- Manufacturer's motto: We'll dance with who brung us.
- Distribution's motto: We only service what we sell.
- Landscape contractor's motto: We profit from running equipment, not buying it."

Keep options open with suppliers

Bob Andrews might be like a lot you—he wants to maintain strong relationships with several suppliers. That way, if one is bought out or consolidated with another, he still has a source for products.

"We try dividing our purchases to a variety of suppliers," says Andrews, operator of The Greenskeeper with locations in Indianapolis and southern Indiana. "We buy some fertilizer from Lesco, some from The Andersons and some from Knox. The same goes for pesticides."

Nevertheless, Andrews says he's concerned that as the lawn/landscape industry continues to consolidate that product distribution will also consolidate.

"Different distributors traditionally have different lines, and as they consolidate there are fewer distributors and less access to certain lines," he says. "It impacts how we buy, our choices and our available selection. We've noticed a smaller selection of materials already."



Bob Andrews

so what's new? Most dealers routinely sweeten offers to their largest and most loyal clients anyway. Are these savings significant enough to give the big buyer that much of a competitive advantage over another well-established but smaller company? Not really, Kujawa believes.



Ron Kujawa

'Instant customers'

Echo, the maker of commercial hand-held power equipment in Lake Zurich, IL, is not unlike any other equipment, chemical or seed supplier that's eager to establish relationships with the management teams of the consolidated landscape companies.

"Even though we estimate that the consolidations involve only a small percent of the industry, they represent huge customers," a spokesperson at Echo tells *LM*. "We'll hear about a giant merger (the creation of which we call a 'superscaper') and they become a huge customer instantly."

But, consolidation alone won't be enough to cause Echo to change the way it distributes its products.

"Echo is committed to the dealers or distributors who have been loyal for a long time," the spokesman adds. For one thing, smaller firms continue to be the core of Echo's sales. "Also, the local dealer is more ideally equipped to handle a problem in 24 hours than a company working from corporate direct sales," he says.

Yet distributors and dealers note that consolidation among landscape contractors is but one piece of a rapidly evolving industry puzzle. Some frustrated distributors and dealers say they're more concerned about being limited by demands for large inventories and by shrinking margins.

More important, some manufacturers

How strong is your dealer's future?

As equipment dealers brace for change, they're carefully studying market niches and positioning themselves to provide unique services and solutions to commercial and consumer customers. Is your dealer or distributor making any of these moves?

- ▶ Getting away from expensive, high-volume, drive-by locations
- ▶ Setting up multiple locations and superstores to reach a wider variety of customers
- ▶ Aggressively acquiring neighboring dealers to gain much-needed purchasing clout and qualify for various manufacturer programs
- ▶ Taking on more commercial business because most landscape contractors depend on after-sale service
 - ▶ Adding more trucks and trailers to pick up and deliver equipment
 - ▶ Maintaining backup inventories for equipment loaners and rentals to eliminate customer downtime
 - ▶ Extending evening service hours or even considering a night shift to ensure overnight turnaround
 - ▶ Marketing themselves better and/or adding outside sales representatives
 - ▶ Examining ways to hold down operating costs and gain economies of scale
 - ▶ Banding together to form trading associations or co-ops to purchase equipment and materials at prices that rival the nationals

have downplayed the significance of dealer-based networks for the siren song of the mass merchants. In fact, several manufacturers have opted to disregard their dealer and distributor structure and sell to the newly consolidated companies on a direct basis.

Changing distribution landscape

At least one competing retailer — Home Depot — is testing its own in-store service centers, marking the first time it will compete head-to-head against lawn care dealers for service, not just equipment. If the Atlanta-based giant goes national with its service strategy, smaller, consumer-oriented lawn equipment dealers fear it will drive them out of business. They claim that Home Depot doesn't even have to be profitable; just stay in business long enough to eliminate competitors.

Such changes have dealers who depend on consumer business moving into the commercial market, particularly small and medium size contractors who depend on after-sale service and warranty work.

Companies such as Van Water & Rogers Inc., Austin, TX, a leading distributor of professional pest control products, is pushing to become a national presence among a handful of distributors such as Lesco, United Horticultural Supply, Terra and Helena. Meanwhile, regional distributors such as Turf Partners are acquiring companies, and local distributors are gobbling up market share by offering service solutions to customers.

Will your dealer survive?

What's clear is that a smaller network of dealers will be around in a few years, industry experts say. Those that survive will need to educate themselves to understand everything from the dynamics of profit to quality performance in order to stay competitive, says Maynard Helgaas, president of the Equipment Dealers Foundation located in St. Louis. **LM**

—Mike Perrault, Susan Gibson and Ron Hall

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Landscapes 'go native'

Thoughtful design, proper plant selection and careful installation will give your clients a natural landscape that's pleasing to the eye and easy to maintain

By JOHN C. FECH, Ph.D.

As attractive as wildflowers can be, they are not the only choice (or even the most appropriate choice) for naturalizing a landscape.

As maintenance dollars become scarce, landscape owners and managers are looking at the alternatives. You might convince the owner of the site to increase the maintenance budget. You could prioritize sections of the landscape, reclassifying them as low, medium and high maintenance, instead of treating all parts similarly. Or you could create a partially or completely naturalized landscape.

Going wild?

You may picture a naturalized landscape as a house surrounded by a field of wildflowers or the removal of all improved or ornamental cultivars of shrubs, grasses and trees, allowing the seeds in the soil to take over. This is far from the truth and quite different from the actual realities of a well planned naturalized landscape.

A naturalized landscape begins with sound, sustainable landscape design principles. It blends aesthetics, function and maintenance within existing land forms. It contains native, low-input plants and a framework for low maintenance when finished, including reduced chemical and water usage. It will provide habitat for wildlife and is an attractive alternative where low maintenance and subtle beauty are desired.

Lots of benefits

- ▶ Native plantings can be beautiful, offering color and texture not seen in exotic species.
- ▶ They contribute to diversity in the landscape, which is crucial in this age of "cookie-cutter landscape design."
- ▶ Native plants offer food and shelter to wildlife.



► Native plants can highlight local and regional "best kept secrets."

► They normally require low inputs of pesticides, fertilizers and water.

► Native plants, in a natural landscape, generally don't require much maintenance — pruning, transplanting, staking, etc.

Right plant, right place

Naturalizing a landscape usually results from of a change in the plan for the site. In some cases, the owners or stakeholders of a landscape space noticed an attractive naturalized landscape on a recent trip or even in another part of their neighborhood.

A common mistake is to skip the design process and implement a quick and easy solution. For example, spraying the existing plants with Roundup and reseeding the entire landscape to native grasses would be a huge mistake. Besides the drastic impact



Properly used native plants can add variety to a landscape, as well as providing food and shelter to wildlife.

of such an approach, imagine the reactions of the neighboring property owners. It's crucial that you educate the owners about the importance of careful planning for effect and impact.

Education must also take into account the actual site and the environmental factors. In all cases, the phrase, "right plant,

right place" applies. Consider factors such as shade, sun, wind, views, soil pH and slope. Would you plant mountain wildflowers in Dallas? Or install a xeric landscape in Seattle? Of course not. Know the hardiness, color and textural features of each plant, as well as invasive qualities.

Ideally, the overall design concept of a naturalized landscape will dictate a program. A typical program statement for a naturalized design may include minimized turf areas, creation of ornamental beds containing native plants and screening with native trees, among others. Specific plants are chosen at the *end* of the design process, not at the beginning.

Make the site right

Site preparation is just as important in a redesign as in the initial installation. Eliminate existing undesirable plants. Use herbicides like Roundup, Reward or Finale to remove such plants without preventing installation of desirable plants soon after the application. In some cases, a rope wick-type applicator is the best tool to use, as it limits spray drift to desirable native plants.

The soils must drain well and be fertile. Add compost before planting grass and wildflowers to refresh nutrients and aid plant rooting. Once the site is prepared, the plants can be installed. The key concept is to create a rooting area that allows for lateral expansion of the root system, aiding establishment.

In general, the woodier the plant material, the less effective it is to incorporate compost. Roots of herbaceous perennials seldom grow more than a few feet beyond the planting hole, making it feasible to modify the planting site with compost.

Trees and shrubs, however, are likely to produce a lateral root system extending 20 to 100 feet beyond the planting hole. In a typical residential landscape, the roots of a bur oak will fill the entire back yard. So it is generally not practical to amend soil to the planting area for trees and shrubs.

A decade ago, seeding was the only real option for native plantings. Today, you can find native plants in the form of bedding plants, plugs or even sod. The choice to seed or install potted plants is less expensive, but establishment can take two growing seasons. Plants are more costly but establish quickly in a naturalized landscape.

Pay attention to maintenance


Irrigation and weed control are the most important maintenance practices to establish a naturalized landscape. Many native plants require low levels of fertility and are tolerant of pests. Mulch new plantings to provide moisture retention and weed suppression, particularly when installing plugs or pots of native plants.

Seeded plantings are more difficult, since irrigation to encourage establishment of native species also encourages native weeds to germinate and compete. Herbicides such as Plateau can suppress weed growth and allow desirable species, such as those in the Compositae family (Illinois bundleflower, plains coreopsis) to establish.

Tell the property owners that the irrigation requirements are much greater for installation than in the maintenance phase. A reasonable approach is to install a temporary irrigation system, which is designed to function for a year or two. In most cases, such a system is inexpensive and allows adequate time for establishment.

So why naturalize? Many landscape stakeholders are jumping at the chance to create a lower maintenance space while retaining color, texture and high aesthetic appeal. At the very least, the proper consideration of a naturalized landscape will take the owner through a sound landscape renovation or rethinking process, which may lead to other enhancements or refinements. **LM**

—John Fech is with the University of Nebraska, Lincoln.



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Whether you manage golf courses, lawns, sports fields or commercial properties, it pays to pay attention to the latest overseeding techniques and developments. This guide offers insight into overseeding trends, from seed selection and seed bed preparation to critical timing and application.

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Don't underestimate overseeding details

Overseeding success depends on seed selection, timing, seed bed preparation and hands-on management

By MIKE PERRAULT/
Associate Editor

In the narrow Coachella Valley (1.5 to 3 mile wide by 30 mile long) in Southern California, superintendents take overseeding seriously. Very seriously.

In fact, for most superintendents at the more than 100 Palm Springs-area golf courses packed into the narrow desert valley, it's the single most important project they undertake every year.

"Your whole report card is based on the outcome," says Sam Zeigler Jr., superintendent at The Lakes Country Club in Palm Desert, CA.

Most courses close down anywhere from a week to a month every fall to overseed, with upscale courses spending more than \$100,000 and other courses investing 10 to 15% of their annual budgets. The stakes are high, and success can ultimately determine career paths.

Evolving strategies

Overseeding success is equally important to superintendents elsewhere across the country as they overseed fairways, roughs and even go wall-to-wall in many instances. Once reserved for resorts and professional tour stops, winter overseeding is a growing trend at private and daily fee courses from the deep South through the transition zone and northward.

Superintendents say they must stay competitive with neighboring courses and meet expectations of members or winter visitors.

Yet overseeding is no panacea. As superintendents work to establish a cool-season turf cover atop the dormant bermudagrass or other warm-season turfgrass, there are ever-spiraling costs, inevitable problems with spring transition and unpredictable weather and occasional cries from the irate, inconvenienced golfer.

Overseeding trends are regional. For example, while some areas report more overseeding of fairways, the practice has died down somewhat in the USGA Green Section's Mid-Continent region because populations of creeping bentgrass have increased over the last decade, says Mid-Continent region director Paul Vermeulen. And greens are being overseeded after aeration with new varieties of creeping bentgrass.

When USGA Green Section Southeast Region director Patrick O'Brien speaks at golf association meetings, he says no topic "stirs up the pot" more than overseeding dormant bermudagrass fairways for winter play.

It's a hot topic among golf course superintendents, too, whether it's discussed over coffee or during an increasing number of local and regional overseeding forums and roundtable sessions. The only sure thing about overseeding is that it's a constantly changing agronomic undertaking. Just consider the fact that in the 16 years that superintendent Cary Lee has overseeded Heritage Palms CC in Indio, CA, he has never done it the same way two years in a row.

Popular *Poa trivialis*

For years, perennial ryegrass was the preferred overseeding grass on many golf courses, primarily because it germinates fast (typically five to seven days), has fine leaf texture, dark green color, seedling vigor and better disease and traffic resistance than annual ryegrass.

But fine fescues, creeping bentgrass, intermediate ryegrass and annual ryegrass are sometimes viable options, and *Poa trivialis* (Roughstalk bluegrass) is gaining fast in popularity. This year such options may be even more seriously considered by superintendents in 20 mid-Atlantic states, who are looking for ways to cope with the serious outbreak of that perennial ryegrass-zapping gray leaf spot disease.

Superintendent Mark S. Kubic now uses 100% *Poa trivialis* to overseed greens at Fiddlesticks CC in Fort Meyers, FL, in part because he can mow it shorter than ryegrass, giving his golfers what they like: fast greens. Superintendents say they can set mowing

heights at 5/32 of an inch even as *Poa trivialis* establishes itself.

Because *Poa trivialis* has 2 to 3 million seeds per pound vs. 270,000 seeds per pound for perennial ryegrass, it requires less preparation in order to germinate, superintendents add, meaning less disruption to golfers.

Poa trivialis and ryegrass mixes are also popular, especially for courses that must keep costs down. That's because *Poa trivialis* production pales in comparison to perennial ryegrass production. In 1997, for example, the turfgrass seed industry produced and shipped approximately 185 million pounds of ryegrass, compared to 3 million pounds of *Pro trivialis* seed.

Poa trivialis does have its weak points, however. It is susceptible to diseases, such as dollar spot, and has poor wear tolerance and a natural yellow-green color. Hot spots, or dry areas, may develop and require daily hand syringing, and it tends to die out earlier in the spring because of low heat tolerance.

Overseeding overview

For many operations, overseeding is a semi-annual ordeal: overseeding with cool-season grasses in the fall and trying to battle with those same grasses to get the bermudagrass up and running in the spring.

- Overseeding golf courses is part-and-parcel with maintaining a year-round facility.
- Overseeding sportsfields is essential to maintain turf density under high traffic situations and minimize the potential for injuries.
- Overseeding commercial properties is deemed important for sales and identification by the clients with the high-end appearance of the property.
- Overseeding residential property demands vary, based on the location, the expectations of the client and comparisons with other residential properties.

You could probably wake up most people involved in overseeding in the middle of the night, shine a bright light into their eyes and they could rhyme off the steps and timing required for a successful fall overseeding operation. According to North Carolina State University (www.cals.ncsu.edu/course/cs055/overseed.html), rules of thumb to follow include:

- For tees and greens, basic procedures prior to fall overseeding include: reduce or discontinue nitrogen fertilization, core and aerify turf, verticut in several directions, topdress turf and reduce mowing height.
- For lawns, fairways and athletic fields, basic procedures prior to fall overseeding are much less intense with close mowing being the primary requirement, although coring and/or vertical mowing should be considered if thatch is heavy.
- For seed application for greens and tees: seed in at least two directions; light vertical mowing followed by topdressing; drag or brush topdressing and seed into turf canopy.
- For seed application for lawns and athletic fields: seed in two directions; brush or drag seed into turf surface; topdressing helpful but may be impractical.

—Nancy Stairs

A timing tightrope

Superintendent Richard Sall at Tamarisk CC in Rancho Mirage, CA, lobbied his board of directors recently to delay overseeding by a week, until Oct. 12. That may not seem like a big concession, but to him it made all the difference in the world. Cooler temperatures and other favorable conditions increased the odds of success.

Other Palm Springs superintendents have had to adhere to early or mid-September overseeding schedules despite 115°F daytime temperatures, making establishment of overseeded ryegrass in competing bermudagrass difficult, if not impossible.

In other parts of the country, timing is equally critical. Superintendents say seeding too early can result in excessive bermudagrass or zoysiagrass competition and the increased likelihood of diseases such as Pythium blight. Seeding too late in the fall may result in weak, delayed or reduced seed germination because of low temperatures.

Optimum overseeding time is when late summer/early fall night temperatures are consistently within the 50°F range. Or when soil temperatures at a 4-inch depth are in the mid-70s, or the average midday air temperatures remain in the low 70s. Cool-season grass seed germination is favored by temperatures between 50 and 70°F. Time overseeding at least 20 to 30 days before the first expected killing frost.

Other important considerations

- Plant growth regulators such as Primo and Embark are being used to smooth transitions by stifling the growth of overseeded ryegrass without retarding the bermudagrass green-up. In the Carolinas, for example, they use it in the fall to give overseeding grasses an advantage. In the spring, it allows the bermudagrass to emerge a little sooner.

- To better shock the bermudagrass, some superintendents say it's better to raise the height of cut on fairways to loosen the canopy. Then scalping or shocking will have more of an impact.

- In Palm Springs, more superintendents are watering light and frequently on overseeded turf to discourage deep root systems. They're also going to lighter renovations to prevent seed from moving and having the

Most common causes of failure on a golf course

- poor seedbed preparation
- planting too early or too late
- seedling diseases
- herbicide injury (pre- and post-emergence)
- over- or under-watering
- fertilizer burn
- mowing with dull mowers

RICHARD L. DUBLE, TURFGRASS SPECIALIST,
TEXAS AGRICULTURAL EXTENSION

same bare spots show up every spring. Many are using flail mowers.

- Three to four weeks prior to overseeding, superintendents say it's important to reduce or stop fertilization to minimize competitive bermudagrass growth and avoid predisposing the grass to winter injury. Four to six weeks prior to overseeding, they say it helps to cultivate the soil by coring and then allow the cores to dry.

OVERSEEDING'S HIDDEN COSTS

It takes more than seed to overseed.

In fact, many superintendents underestimate overseeding costs by not considering all related items — water, labor, extra equipment, fertilizers, herbicides and growth regulators. Here are items to consider when budgeting for your next overseeding project. Certified Superintendent Bill Anderson at Carmel CC in Charlotte, NC, compiled a line-item cost analysis for 18 holes (or 30 acres), showing he spent \$137,050.

- Seed — At 400 pounds per acre, figuring \$1.10 per pound, Anderson spends \$13,200 for 12,000 pounds of seed.
- Fertilizers — Estimate 30 pounds at \$50 per acre for a total of \$1,500.
- Herbicides — Estimate 30 pounds at \$60 per acre for a total of \$1,800.
- Growth regulators — Estimate 30 pounds at \$215 per acre for a total of \$6,450.
- Water — It obviously depends what you're paying, but Anderson spends about \$4,500 in additional costs to irrigate 30 overseeded acres.
- Labor — Anderson figures \$2,500 in additional labor costs for a total of \$45,000.
- Equipment — Drop spreader, \$2,000; verticut reels, \$8,700; vacuum, \$23,500; fairway mower, \$30,400.



Lawn care overseeding: room for growth

Overseeding for commercial and residential clients is regional and offers additional \$\$\$ opportunity

By RON HALL/
Managing Editor

Overseeding of commercial and residential properties is a service with regional customer acceptance. Lawn and landscape companies often offer this service, but its reception by property owners varies widely, even in areas where overseeding is commonplace on golf courses and athletic fields.

Winter overseeding of bermudagrass is so common it's almost taken for granted in desert resort markets like Palm Springs, CA. Even the median strips dividing the boulevards in these communities get fresh ryegrass seed each September or early October, not to mention resorts, commercial properties, multifamily complexes and, even, home lawns.

"People who come down from the north to play golf and stay at the resorts in these communities expect to see green grass," says Ibson Dow with the Las Vegas Fertilizer Company.

Overseeding is done in markets like Phoenix and Tucson, AZ, but not to the same extent. "A lot of people here overseed, particularly from a commercial standpoint," says Kevin Killmer of The Groundskeeper, headquartered in Tucson. "Maybe 95% of our commercial customers do overseed, and it's stayed pretty constant with the commercial properties. It would probably be less

in the residential market."

But in other southern or southwestern markets, the practice of overseeding commercial, multifamily and residential properties isn't widespread. Not yet anyway. This suggests a potentially profitable add-on service that lawn/landscape companies might want to develop and market more heavily.

Gary LaScalea, GroGreen, Plano, TX, says that overseeding on commercial and residential properties "is all over the board" in the Dallas market. "We do some and contract some out, and some of our customers do it themselves and we help them," he says.

"Every year you see a little bit more," he adds, particularly on upscale retail and commercial properties. "Because we're not a mowing company, we don't actively market overseeding, but if a customer asks for it, we'll do it."

New definition needed?

Generally, most of us think of overseeding as putting down perennial ryegrass (less commonly annual rye) in early fall to provide color and protection to a warm-season turf, usually bermudagrass, which either



Kevin Killmer

thins or goes dormant and off-color as winter approaches. Is this definition too narrow for commercial and residential turf service markets, particularly away from the traditional bermudagrass markets?

For example, in some transition-zone markets, lawn/landscape professionals routinely "overseed" turf-type tall fescue seed into tall fescue lawns each fall.

Fescue over fescue

Pete Giaque, an agronomist with AgriBio Tech, says that drought and disease take their toll on tall fescue properties in and around Atlanta each summer. Fresh fescue seed must be applied to fill in these bare areas.

"It's pretty much mandatory after a rough summer when there's been a lot of brown patch damage," says Giaque. "It's common to come in with three or four pounds per 1,000 (sq. ft.) and reseed into an existing stand of tall fescue."

Dick Bare, owner/operator of Arbor-Nomics, Norcross, GA, says that his company doesn't promote overseeding of tall fescue but, nevertheless, does a substantial amount, generally in conjunction with fall aerification. "We do it as a service because

we have to," he says. The typical charge to the property owner is about \$40 per 1,000 sq. ft., and sometimes that doesn't seem like enough.

"A lot of times here in September it stays hot, it doesn't rain and the ground's as hard as a brick," Bare explains. "If the property owner doesn't water the turf to prepare it for aerification, it's hardly worth all the effort." Bare says that if he can get a customer to make a down payment on the work, "then they'll go out and get the lawn prepared."

What the customer wants

Even so, many experienced lawn care professionals see only limited potential in offering overseeding.

Scott Williams, Lawn Master Inc., Pensacola, FL, says he can almost count the overseeding jobs his company does each year on one hand, and all of them are commercial properties. Williams says that homeowners in his market welcome when their St. Augustine and centipedegrass lawns slow down each winter. "Most people here mow from March to October, then they look forward to not having to mow," he laughs.

CHARACTERISTICS OF SELECTED GRASSES USED FOR WINTER OVERSEEDING.

Grass Species	Perennial Ryegrass (turf-type)	Annual Ryegrass	Intermediate Ryegrass	Fine Fescue	Roughstalk Bluegrass (Poa trivialis)	Creeping Bentgrass
Green Color	Dark	Light	Intermediate	Light-Dark	Light to intermediate	Intermediate
Texture	Med-Fine (2-4mm)	Coarse (3-5mm)	Coarse-Med. (3-4mm)	V. Fine (1-2mm)	Fine (1-4mm)	V. Fine (1-2mm)
Density	Good	Poor	Fair	Excellent	Excellent	Excellent
Establishment Rate	Fast (3-4 weeks)	Very Fast (2-3 weeks)	Fast (2-4 weeks)	Slow (4-6 weeks)	Slow (4-6 weeks)	Very Slow (6-8 weeks)
Winter Performance	Good-Excellent	Fair-Good	Fair	Fair	Fair	Fair
Spring Performance	Good-Excellent	Poor	Fair	Good	Excellent	Fair
Spring Transition	Slow	Medium	Medium	Fast	Fast	Slow
Wear Tolerance	Fair-Excellent	Poor-Fair	Fair-Good	Fair	Poor	Fair
Shade Tolerance	Fair-Good	Fair	Fair	Very Good	Good	Fair
Putting Quality	Fair-Excellent	Poor	Poor-Fair	Good	Excellent	Excellent
Competitiveness with <i>Poa annua</i>	Very	Very	Very	Not Very	Not Very	Not Very
Leaf Fraying	Moderate-minimum	Heavy	Moderate	Minimum	Minimum	Minimum
Disease Resistance	Fair-Good	Poor	Fair	Fair	Poor-Fair	Fair



How the Irish stay green

“Overseeding is more of a playability and safety issue than it is an aesthetic issue,” says Dale Getz, University of Notre Dame turfgrass manager.

“The aesthetics come into play more in how you prepare the field — mowing patterns, striping, that sort of thing.”

Getz has his crews aerify, partially drag and break up cores and fill aerification holes about 3/8-inch from the top. Crews then broadcast seed, break up the rest of the cores and topdress when possible, he says.

“That’s our preferred method, because it gets the seed to the depth we need it for good seed-to-soil contact, and we know we’re not losing it to birds, wind and desiccation.”

Constant overseeding

With athletic fields being used constantly for everything from football to lacrosse to soccer and even frisbee, it’s no small challenge to keep the turf vibrant. Seed is put down as much as every other week, in between official and recreational games.

“Whenever we open up the ground for any reason, whether it’s for aerification, spiking or verticutting, we’ll put seed down any way we can to get that seed-to-soil contact,” Getz says. “We go through a lot of seed.”

Getz broadcasts seed prior to practices and games to keep viable seed in the ground at all times to take advantage of favorable weather conditions for germination.

With 7- to 21-day germination rates for most varieties of Kentucky bluegrass, keeping plenty of seed in the ground increases the odds of success for the relatively ten-

der juvenile plants that may fall prey to desiccation in the first couple weeks.

Why rye?

Getz favors Kentucky bluegrass for his sports turf in South Bend, IN, but he finds that overseeding with pregerminated perennial ryegrass gives him an edge in the fall. “When the fields start to get worn out, say a soccer practice field, you can get the rye to sprout and in two days you’ve got grass coming up. And rye, unlike bluegrass, is a pretty strong and tough juvenile plant. So it can stand a little bit of wear and tear.”

That means if the Notre Dame football team has a three-week stint away from home, Getz can grow a stand of ryegrass by the time the next home game rolls around. “Whereas with bluegrass, pregerminated or not, even if you do get it up, it’s so tender when it’s young that it just doesn’t withstand the wear and tear.”

Getz exclusively overseeds with Kentucky bluegrass varieties each spring because it’s the turfgrass he wants for fall sports.

Part of the challenge for Getz is carefully studying NTEP trials to determine which seed varieties best fit his needs. “For football and other fall sports, I’m looking for a bluegrass that can maintain color late into the fall,” he says. “And it has got to have good toughness after it quits growing late in the fall.”

As Getz surveys the frozen ground only days before his mid-March baseball opener, he notes that spring requires a different approach when selecting bluegrass seed. “Here, I’m looking for a bluegrass that will give me quick greenup.”



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Circle No. 117 on Reader Inquiry Card



Transition can be tricky

Tom Burns, turf manager of The Texas Rangers baseball team, has learned that Mother Nature can throw a knuckleball when it comes to overseeding

With nearly two decades of experience under his belt caring for sports turf in Texas, Arizona, Florida and Ohio, Texas Rangers turf manager Tom Burns knows that overseeding is rarely a cut-and-dried procedure. Mother Nature can always throw a knuckleball.

This spring in Arlington, TX, for example, spring storms combined with problematic shade to cloud his overseeding operations. Unusually warm temperatures caused the bermudagrass to break dormancy early, so Burns found himself overseeding later than ever — in mid-February. “You have to roll with the punches,” says Burns, who believes flexibility may be a turf manager’s greatest overseeding strategy.

Overseeding challenges and frustrations have contributed to his graying head of hair, Burns insists, but they won’t deter him from overseeding altogether. The perennial ryegrass provides wear tolerance to his dormant bermudagrass fields, enhances playability, and makes for better footing.

To keep himself up to speed on the latest overseeding techniques and developments, Burns moderates and participates in Sports Turf Managers Association overseeding roundtables. They’re lively, informative and opinionated sessions, he says. “You can have 100 people at a roundtable discussion and you’re going to have probably 95 different overseeding techniques,” says Burns, who has his opinions, too.

“The establishment phase of overseeding is not the difficult part, generally,” he says. “The hard part is getting the nice, smooth transition from the ryegrass to the bermuda. Some of the ryegrasses that are out there now are so heat tolerant, it’s hard to get rid of them. It’s hard to get your bermuda back because it’s got so much competition from the rye.”

Burns says he’ll likely go back to overseeding in the fall this year and face spring transition problems as ryegrass hangs on longer than he wants. “I think it’s probably easier to know you’re going into the start of the season with good turf. It’s just more of a security blanket.”

Athletic fields

On athletic fields, overseeding should be considered if the fields are used during the winter and/or early spring months. Coring, slicing prior to and top-dressing following overseeding are necessary steps. A heavy seeding rate (from 30 to 60 lbs./1,000 sq.ft.) is generally advised. But keep in mind that the higher the seeding rate, the faster the turf will die out in the spring due to seedling immaturity; but a lower seeding rate will slow transition back to the permanent grass in the spring. Avoid fertilizing until the new seedlings are established or the competition will crowd them out.

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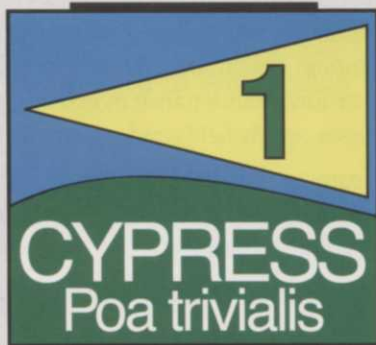


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of all entries in the 1996 Bermuda Triangle Research Center, Palm Springs, California.

Circle No. 120 on Reader Inquiry Card

When bad things happen to good trees

For urban landscape trees, it's just a matter of time before they are in the wrong place at the wrong time. Avoid many problems before they happen

By NANCY STAIRS/
Technical Editor

The urban landscape is no place for a tree. We plant them because of the benefits they add to the landscape, but for trees, it's often just a matter of time before they're in the wrong place at the wrong time.

Trees are meant to grow in groups where roots are shaded, soil compaction is minimal, nutrients are recycled and, should the trees fall, they damage only other trees. In the man-made landscape, very bad things happen from the start. A tree just dug from the nursery can undergo rough handling, planting delays, a dry root ball and more; all of which stress it considerably. And that's before it's even planted!

Urban jungle

By the time the tree is actually placed in the planting hole, it is already in shock. Then there's the planting hole.

Topsoil? More likely, we see compacted subsoils and, if not, a limited rooting area. Tree wells in the pavement do not offer anything to a tree. And, in most communities, tree roots and the sidewalk are considered to wage a constant battle in the tree lawns. Root pruning is common, and if there is any street construction, virtually no

one tries to limit the damage to the tree roots. Vehicles, lawnmowers and other mechanical damage to the tree trunk take their toll.

Add more insults — tree supports that are never removed or removed too late, poor pruning practices, drought, insects or disease — and you have a comprehensive list of the most common mistreatments affecting the average urban tree.

If you can't take the heat

Trees are pretty tough, but they cannot withstand one stress after another without some negative results. Each of these things on its own would have an effect on a tree,



Trees along roads and streets can suffer from compacted soil and lack of oxygen to roots, poor water movement through the soil, vehicle exhaust, winter road salt and the possibility of damage or vandalism.

and a reasonably healthy tree could withstand many of them. But when many insults occur repeatedly, it can be too much. Limiting some of these practices can go a long way in helping a tree survive and adding value to your site for a long time. Consider these pointers to help survival:



Conks at the base of a tree are a sign of internal decay. Don't ignore these signs.

1. Reduce potential for injury

Repeated injury to surface roots or to the base of a tree opens it to decay organisms, some of which are pretty serious (not just for the tree). Decay that affects the tree roots and/or the base of the tree is serious from a hazard point of view. It affects the structural stability of the tree and increases the possibility for failure. Trees with decay at the base and cavities in the trunk should be inspected by a professional arborist with experience in assessing hazard trees.

Pruning tree roots can affect the stability, as well as reduce the rooting area of a tree, making it tough to get enough water and nutritional elements from the soil. All tree species are not affected to the same extent and some are more sensitive than others, but stability problems below ground and decline above ground are a distinct possibility.

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▲ Surface roots are prone to damage, which opens the stabilizing roots to decay.

▶ Fill added to a sloped site can bury the tree roots to a considerable depth. Virtually no tree can survive this treatment.

An arborist's waking nightmare

- ▶ Observing annuals planted under a tree whose roots have been freshly rototilled.
- ▶ Coming too close to large, bad-tempered dogs chained to trees, nerve-racking for the arborist and damaging to the trees.
- ▶ Finding a tree girdled by a clothes-line tied around the trunk.
- ▶ Noticing a piece of wood used to "push" a tree away from a fence.
- ▶ Seeing a large growing tree pruned to keep it small, "butchered" by the untrained.
- ▶ Watching a person bang a lawn mower into a tree.
- ▶ Telling people about the potential hazard and/or need to remove a tree with large dead branches or an enormous cavity — in their park, playground, yard, parking lot, street — and being ignored.



2. Don't pile on the fill

The addition of fill on a site is a common practice, especially during construction. When construction is in progress, levels of fill can be as deep as 5 feet. If the tree is on a slope — even deeper fill levels are possible. In other cases, trees may have shallow, surface roots (which probably already have mower damage) and fill makes it easier to establish turf and mow.

Why is fill a bad thing for most trees? Think about having a large person sitting directly on your chest. How much oxygen would you be able to get into your lungs? How long could you keep breathing in that situation? Put simply, the roots of the tree require oxygen in order to do their job. The addition of fill will reduce the availability of oxygen and, in essence, smother

the roots. For some trees like tulip poplar or beech, the decline and death of the tree can happen fairly quickly. For others, it may take as long as three to five years before the tree finally dies.

3. Plan ahead

So what can you do?

- When planning for new trees, know which tree species are good for specific situations (size, light, moisture, etc.). Utility companies, state extensions and associations are good sources.
 - When planting trees, check the root ball for moisture and good root condition. Get the tree into the ground with minimal delay. Emphasize the need for regular watering.
 - Do not install support stakes unless the site requires it or the tree is large. Where support stakes are necessary, remove them after a year.
 - Maintain a mulch ring around the base of the trees — a ring two to three inches deep that doesn't touch the trunk. This reduces the chance of injury by mowers or string trimmers.
 - Suggest perennials under trees so that the root disturbance happens only once.
 - When relandscaping or during construction, decide if the tree is valuable and should be saved and then protect the tree from as much damage as possible. Limit construction activity to outside the dripline of the crown and recognize that changing the grade, even away from the tree, can change the way moisture moves on the site. A certified arborist can help.
 - If you see conks, cavities, decay or dead limbs, advise that the tree be inspected by a certified arborist for potential hazard, particularly where a target exists (buildings, playground, etc.).
- Reducing damage and other insults to trees will help to increase their life and value. If you don't like trees, consider this a guide for saboteurs. **LM**

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Handle the worst warm-season diseases

Serious fungal diseases are hard to control. Follow these steps to keep turf plants healthy

By ED A. BROWN, Ph.D.

Injury to warm-season turf by disease fungi can be significant, depending on the susceptibility of the grasses. The impact of the disease depends on the cultivars you grow and the environmental conditions.

First, consider disease control *before* you establish the turf. Select cultivars that are adapted for your area. Keep in mind that there are differences in disease susceptibility between different cultivars and even between varieties of the same cultivar.

The five following fungal diseases are serious problems for warm-season turf and are hard to control for some turf types.

1. Brown patch

Brown patch, caused by the fungus *Rhizoctonia solani*, attacks all major warm-season grasses in the South and is the most common disease fungus of turfgrass. St. Augustinegrass and zoysiagrass are the most susceptible, partly due to the way the grasses are managed, making this disease more difficult to control.

Even the slightly more resistant centipedegrass and bermudagrass are frequently damaged by this fungus disease, although they recover better.

Brown patch develops with:

- ▶ favorable environmental conditions which can occur from late April through October,
- ▶ heavy nitrogen applications,
- ▶ high moisture content in the turf and soil,
- ▶ favorable combination of temperature, 80° to 85°F (but infection may occur at 73°F).

The fungus remains active until the air temperature reaches 90°F. Since air temperatures usually drop below 90°F for much of any 24-hour period, the fungus may continue to be active all summer, awaiting only a more favorable combination of temperature, nitrogen applications and water to cause visible symptoms.

Brown patch symptoms

This fungus kills the grass in a circular pattern a few inches to several feet in diameter. Affected areas in bermudagrass, centipedegrass and ryegrass are brownish in color and straw-colored in St. Augustinegrass. In the early morning, during hot, humid weather, you may see smoky gray to black, wilted, webbed grass around the brownish, diseased area.

A limited attack may kill only the blades and the turf will recover in two or three weeks. However, if the temperature, nitrogen levels and water applications combine favorably for disease development, the attack may kill the affected areas of all the grasses except bermudagrass, which usually recovers through new growth of

Bermudagrass with brown patch. Note the reddish brown discolored margin around the diseased area.

◀ **brown patch**



the underground rhizomes.

Occasionally, the fungus may thin a large area of turf and eventually kill it without the circular pattern being evident. This type of symptom occurs primarily under shady, moist conditions.

Control brown patch

► Don't apply excessive nitrogen — use only enough to maintain a reasonably green, attractive turf.

► Water only when the soil is dry, then soak the soil to a depth of 5 to 7 inches. Water in the early morning to allow the foliage to dry as quickly as possible.

► Begin fungicide applications as soon as you observe the disease. A preventive spray schedule is usually not recommended for lawn grass disease control in home grounds because of the expense. Only two or three applications are necessary for effective control, if you monitor the turf closely and make applications as soon as you notice the disease.

2. Dollar spot

The fungus that causes dollar spot, *Sclerotinia homeocarpa*, can attack a large number of grasses. However, it is serious only on bermudagrass and zoysiagrass in the south. Soil moisture, nitrogen levels and temperature determine the severity of dollar spot.

This disease develops with:

► turfgrass growing under dry soil moisture conditions, which is more susceptible than when adequate soil moisture is provided,

► low nitrogen,

► sufficient surface moisture for disease, provided by dew, fog or watering,



Dollar spot causes small circular (1 to 3 inches) straw-colored areas which may coalesce, causing large irregular diseased areas.

dollar spot

► mild weather (60° to 80°F) during spring and fall.

However, dollar spot can

occur throughout the summer.

Ideal conditions for dollar spot development would be bermudagrass growing under low nitrogen levels with low soil moisture, a temperature of 60° to 80°F and early morning fog or dew.

Dollar spot is characterized by circular areas only a few inches in diameter. Where infection is severe, spots may run together, causing large, irregular patterns covering several square yards. Infected areas take on a straw color.

Controlling dollar spot

► Add nitrogen but be aware that high nitrogen tends to favor the development of brown patch. Use discretion in applying nitrogen.

► Soil moisture should be adequate enough for good growth of the turf as an aid in reducing disease severity; however, water only in the early morning so the foliage can dry quickly.

► If soil moisture and nitrogen levels are adequate, two or three fungicide applications at recommended intervals should be sufficient to control dollar spot.

3. Pythium blight (Cottony Blight)

Pythium blight is becoming more wide-

spread in the South, and this may be attributed to increased watering practices. There are several *Pythium* species which can cause disease on turf. Susceptible grasses include bermudagrass and zoysiagrass, but the most affected turf types are the overseeded cool-season grasses, which can cause a problem for golf courses and athletic turf areas.

This disease develops with:

► an abundance of moisture,

► warm temperatures — the disease is negligible below 68°F, but increases with rising temperatures; maximum damage occurs at 90° to 95°F,

► fall and warm winter days on cool-season overseeded grasses. Pythium blight is usually halted by cooler temperatures.

Pythium blight occurs in small, irregular spots which may enlarge and appear dark and water soaked in the early stages. If it is active, there may be a white, cottony growth in the affected spots. The grass in affected spots dies rapidly, collapses and appears matted.

Managing Pythium blight

► Use treated seed.

► Delay overseeding until the onset of cool weather or as late as possible. Water as little as possible during periods favoring disease activity.

4. Gray leaf spot

St. Augustinegrass is susceptible to the fungus *Pyricularia grisea*, a serious problem that has recently become the focus of concern for many turf managers.

Conditions favoring gray leaf spot include:

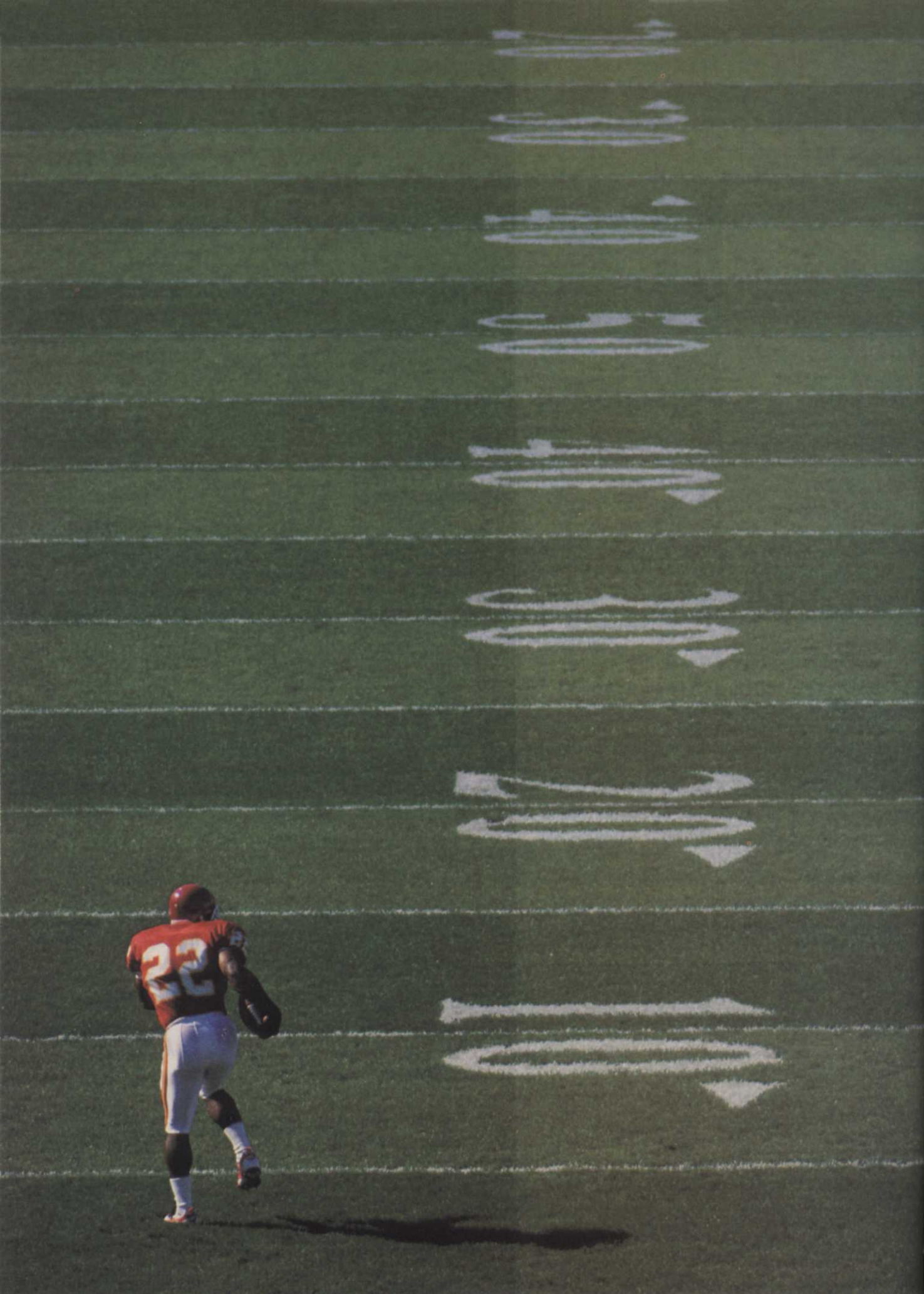
► high humidity, warm temperatures and high nitrogen rates,

► semi-shade, when frequent showers occur or where frequent irrigation produces high relative humidity,

► higher amounts of nitrogen.

Gray leaf spot causes round to oblong,


cont. on page 46



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Circle No. 126 on Reader Inquiry Card



gray leaf spot ▶

Gray leaf spot on St. Augustine-grass can cause significant damage and turf decline.

cont. from page 43

straw-colored leaf blades with purple to brown margins. Severely affected leaf blades wither and turn brown. Death of the turf slows lawn recovery from this disease.

Controlling gray leaf spot

- ▶ Use nitrogen as sparingly as possible to give the desired turf appearance.
- ▶ Water in the morning. Water as infrequently as possible and then water thoroughly.
- ▶ If disease appears, use one of the fungicides recommended by your local cooperative extension service.

5. Spring dead spot

Spring dead spot (SDS), *Leptosphaeria korrae*, is a serious disease of bermudagrass in the northern range of the southern United States, as it kills the entire turf plant. It occurs more often than in the past due to the increase in overmanaged bermudagrass, a result of increasing turf quality expectations.

Once established on a site, the disease will occur year after year. It occurs in bermudagrass growing areas where freezing temperatures are typical. It has not been observed in Florida or the southernmost regions of Georgia.

Spring dead spot develops with:

- ▶ high nitrogen applications and potassium deficiency,
- ▶ heavy thatch, which encourages shallow

root development and weakens turf, allowing winter injury.

Spring dead spot appears as circular dead areas ranging from 6 inches to several feet in diameter. While the damage actually occurs in the fall, the symptoms are not apparent until the early spring, when the bermudagrass starts to come out of dormancy and add green growth.

Initial symptoms are a bleached color in greening bermuda turf. These areas may remain brown throughout the summer and may reoccur for several years in succession. The turf may cover these bare areas during the summer but the roots will not peg into the soil.

These weak areas

Spring dead spot causes bleached white circular patches 6 to 18 inches in diameter.

◀ spring dead spot



also allow weeds to establish and further complicate recovery by competition during reestablishment.

Spring dead spot control

▶ Remove thatch as needed to help prevent the buildup of disease-causing fungi. But avoid heavy thatch removal in early summer since stolons growing over affected areas may be removed.

- ▶ Avoid excessive nitrogen.
- ▶ Promote management practices to encourage slow, even growth to improve winter hardiness.
- ▶ If the other management practices are not corrected, they can affect the results of fungicide treatments.

▶ Aerifying and irrigation may help in reestablishment; follow soil test recommendations and do not overfertilize.

▶ There are specific fungicides that are labeled for control of spring dead spot.

Other diseases that are a problem on warm-season turf include rust and Helminthosporium disease. They do not kill the plants but are common enough to cause management headaches. Remember, disease may still become a problem, even under the best management conditions. Fungicides should only be used along with good management practices to help encourage healthy growth.

—The author is Extension Plant Pathologist at The University of Georgia, Athens, GA.

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- Kabitina Branch Canker
- Pestalotia
- Verticicladiella
- Philalophora
- Nectria Canker
- Thielaviopsis Decline
- Phyalospora (Bleeding Canker)



Contains:
Oxycarboxin

↓

- Anthracnose
- Sycamore
- Ash
- Oak
- Verticillium wilt
- Maple
- Camphor
- Catalpa
- Redwood Branch Canker
- Aridum
- Cunninghamella
- Meinickella
- Pine Pitch Girdle
- Botryosphaeria
- Dothidea
- Meinickella



Contains:
Tebuconazole

↓

CRABAPPLE SCAB
(Venturia inaequalis)

Oak Wilt
(Ceratocystis fagacearum)

Dutch Elm Disease
(Ceratocystis ulmi)

Hawthorn Leaf Spot
(Diplocarpon theumenii)

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Cool-season diseases: the bad & the ugly

Sometimes the most annoying turf problem isn't your worst nightmare

By JOSEPH W. RIMELSPACH Ph.D. and MICHAEL J. BOEHM, Ph.D.



brown patch

dollar spot

On left, brown patch on tall fescue. On right, dollar spot on Kentucky bluegrass, comparing leaf lesions.

A turfgrass disease that kills turfgrass plants' crowns and roots is generally a bigger problem than a disease that merely affects the leaf blades. Keep in mind that the most frequent fungal disease is not necessarily the most severe, and the most damaging may not occur often. Here are some to watch for on the leading grasses:

Kentucky bluegrass diseases

Twenty years ago, leaf spot/melting out was the most common disease on Kentucky bluegrass. Still common, its importance has decreased with the use of improved Kentucky bluegrasses and increased use of other types of turfgrass. Also, applying higher rates of nitrogen in the fall rather than in the spring and avoiding lush spring growth in common bluegrass lessens the severity of this disease. So there is less leaf spot in the spring and fewer problems of melting out (the summer stage of this disease).

Patch diseases occur less frequently, but with more severity. Patch diseases kill grass, as opposed to leaf spot/melting out, which simply affects the cosmetic appearance of the turf. Patch disease fungi invade the roots and crowns. Recovery is poor and often slow.

Patch diseases occur in late spring or early summer under stressful weather conditions. Once the disease is present it will



gray leaf spot

Tip dieback of perennial ryegrass from gray leaf spot.

continue to occur, although the severity will depend on the annual stresses on the turf.

Sodded lawns with excessive thatch, poor quality soils and poorly prepared sites are often the first to show patch diseases and the most severe damage. Older seeded bluegrass lawns with excessive thatch, poor soils and poor management are also at high risk.

Keep the lawn healthy, avoid environmental stress and encourage a deep, healthy root system. Maintain high mowing heights, managing thatch through extensive core aeration (several times a year) and monitoring soil moisture to avoid drought stress. Soluble fertilizers are not recommended since surge growth may accelerate disease development. Slow-release

fertilizers (greater than 50% slow release) are recommended; the slower the better!

Perennial ryegrass problems

Red thread can occur on all cool-season grasses but, with the increased use of perennial ryegrass in home lawns, athletic fields and commercial landscapes, the occurrence of red thread has increased. There is variable susceptibility to red thread, but many cultivars of perennial ryegrass can have severe outbreaks of this disease.

Cool to moderate temperatures, with long periods of wet leaves from heavy dew, light rain, fog and drizzle, are ideal for this fungus. Red thread is more severe under low soil fertility conditions, especially with low nitrogen, phosphorous, potassium and calcium. It is reported to occur every month of the year in many areas of the northern United States. The disease does not kill plants but may damage leaves back to the ground.

Evaluate the soil fertility levels and the fertilizer maintenance program. Promote turf growth through core aeration, proper mowing and irrigation. On new installations where the soil is of poor quality, modify the soil with organic matter and select resistant varieties. Consider preventive fungicide applications on lawns with a history of the disease and where there are expectations for high quality.

Gray leaf spot is a relatively new disease on perennial ryegrass (and other turfgrasses) and has been severe in some areas of the East Coast and mid-Atlantic states. Last year, the disease was found over much of the Midwest, to a lesser extent than the East Coast, but it is expected to increase. First reported on golf courses in the roughs and fairways, it can also be found on home lawns. This disease kills turf.

Gray leaf spot usually develops in the summer and fall. It thrives under hot, humid weather when the leaves are wet for long periods of time. The entire plant may be killed in 48 hours. The disease may be a problem in the fall on new seedlings.

Be on the lookout if:

▶ turf appears to be under drought stress, even with adequate soil moisture

▶ perennial ryegrass is brown while any patches of bluegrass, bentgrass or fescue are not affected

▶ leaf tips have dieback and a twisting or hooked appearance, like a fish hook

▶ individual leaves may have dark spots or lesions which develop into tip dieback.

Since this is a newly emerging disease, specific management strategies are not well understood, but maintain lawns to minimize summer stress with proper irrigation (allow turf to dry between waterings) and core aeration. For severely damaged or dead turf, consider a different type of turfgrass to limit the recurrence of the disease.

Tall fescue troubles

Brown patch on tall fescue can be a considerable disease problem during hot, wet and humid conditions, especially in the transition states. In northern areas, brown patch is usually only a problem on overirrigated lawns or during extremely wet summers.

The disease is not usually a turf killer north of the Mason-Dixon line, although in the South, it may result in turf thinning so that reseedling is necessary. Avoid high levels or excessive soluble nitrogen in the summer. Manage irrigation to promote the

continued on page 52

TURFGRASS DISEASES BY SEASON

KENTUCKY BLUEGRASS

Spring
snow mold
leaf spot
yellow patch
red thread
fairy ring

Summer
melting out
necrotic ring spot/summer patch
dollar spot
brown patch
powdery mildew
rust

Fall
leaf spot
red thread
rust
powdery mildew

PERENNIAL RYEGRASS

Spring
snow mold
red thread
leaf spot/blight
fairy ring

Summer
brown patch
dollar spot
pythium
rust
red thread
leaf spot/blight
gray leaf spot

Fall
rust
red thread
leaf spot/blight
gray leaf spot

TALL FESCUE

Spring
snow mold
leaf spot
fairy ring

Summer
brown patch

Fall
leaf spot

FINE FESCUE

Spring
red thread
leaf spots
fairy ring

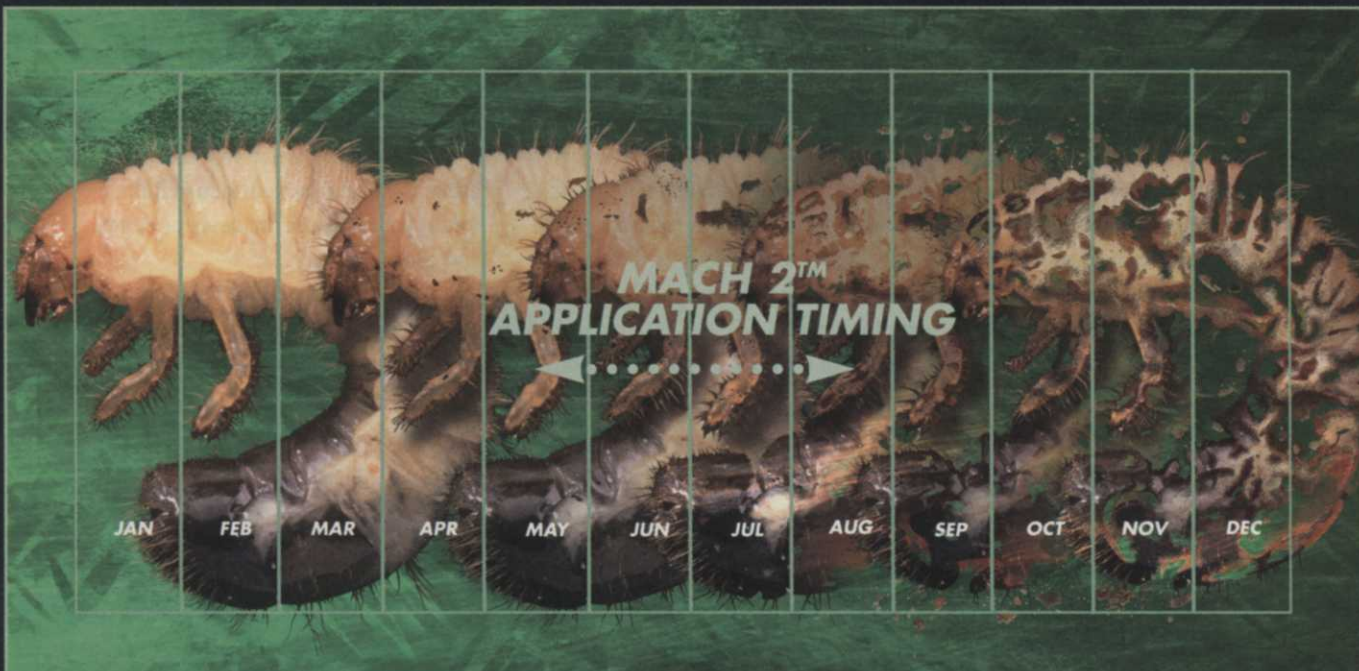
Summer
red thread
dollar spot

Fall
red thread
leaf spots

*These are general time frames for disease occurrence. Depending on local weather and site conditions, disease outbreaks and the duration of activity may vary. Remember the genetic susceptibility of the grass and the environment are the predominant factors driving the occurrence of disease development.

Note: All the above turfgrasses are prone to fairy ring when there are favorable weather conditions.

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TURF DISEASE GUIDE

continued from page 49

maximum time to dry the turf. If soils are poorly drained or areas of the lawn stay wet, improve the drainage. Monitor lawns that have automatic irrigation systems so that the system does not automatically come on every day and create an overwatered environment, ideal for the disease. More resistant new cultivars of tall fescue are being introduced.

Fine fescue failures

Red thread is a major disease problem on fine fescue. The general symptoms and weather conditions described under perennial ryegrass pertain to fine fescue. With low maintenance, these turfgrasses grow slowly. If they're damaged by red thread, recovery may be slow and patches may linger for weeks.

Leaf spot may occasionally occur on

fine fescue, most frequently in overirrigated or wet conditions. Improve drainage in low-lying areas to lessen incidence.

There are no disease-free turfgrasses. Make the best selection to match the factors at your site, maintenance programs and clients' needs.

—The authors are with the Department of Plant Pathology at The Ohio State University, Columbus, OH.

DISEASES OF COOL-SEASON TURFGRASSES

BROWN PATCH/RHIZOCTONIA BLIGHT (*Rhizoctonia solani*)

Susceptible Grass*

TALL FESCUE, Ryegrass, Kentucky bluegrass, Fine fescue

Temperature/Moisture (that encourages disease development) hot/wet

Management Strategies**

- 1) avoid excessive nitrogen
- 2) avoid excessive watering and poor drainage
- 3) increase air circulation; remove surrounding vegetation and increase sunlight

DOLLAR SPOT (*Sclerotinia homeocarpa*)

Susceptible Grass*

BLUEGRASS, Fine fescue, Ryegrass

Temperature/Moisture (that encourages disease development) moderate/wet leaves and dry soil

Management Strategies**

- 1) avoid nitrogen deficiency
- 2) choose resistant grass varieties
- 3) water to increase growth

GRAY LEAF SPOT (*Pyricularia grisea*)

Susceptible Grass*

PERENNIAL RYEGRASS, Tall fescue

Temperature/Moisture (that encourages disease development) warm/humid; wet foliage (often a late summer and fall disease)

Management Strategies**

- 1) avoid stress on turfgrass, a difficult disease to manage

- 2) provide adequate water, but avoid extending time foliage is wet
- 3) avoid high fertilizer in summer
- 4) reduce soil compaction
- 5) young plantings of ryegrass more sensitive than established stands

LEAF SPOT/MELTING OUT (*Drechsler & Bipolaris spp.*)

Susceptible Grass*

KENTUCKY BLUEGRASS, Fine fescue, Ryegrass, Tall fescue

Temperature/Moisture (that encourages disease development) leaf spot — cool/wet (spring/fall); melting out — hot, dry (summer)

Management Strategies**

- 1) raise cutting height
- 2) mow frequently to avoid stress
- 3) avoid excessive nitrogen
- 4) avoid light frequent watering and prolonged wet grass

NECROTIC RING SPOT (*Leptosphaeria korrae*) (previously called *Fusarium Blight*)

Susceptible Grass*

KENTUCKY BLUEGRASS, Fine fescue

Temperature/Moisture (that encourages disease development) warm/extremes in soil moisture (fluctuating from wet to dry soils)

Management Strategies**

- 1) avoid low mowing heights
- 2) reduce excessive thatch
- 3) use Kentucky bluegrass and perennial mixtures
- 4) avoid excessive watering or drought stress
- 5) use slow-release fertilizer

POWDERY MILDEW (*Erysiphe graminis*)

Susceptible Grass*

KENTUCKY BLUEGRASS, Fine fescue

Temperature/Moisture (that encourages disease development) moderate/high humidity; shade

Management Strategies**

- 1) reduce shade
- 2) increase air circulation by removing surrounding vegetation
- 3) use resistant Kentucky bluegrass varieties

PYTHIUM BLIGHT (*Pythium spp.*)

Susceptible Grass*

PERENNIAL RYEGRASS - new seedling plants of all types

Temperature/Moisture (that encourages disease development) very hot/wet

Management Strategies**

- 1) improve soil drainage
- 2) increase air circulation by removing surrounding vegetation
- 3) avoid excess watering
- 4) avoid high rates of nitrogen

RED THREAD (*Laetisaria fusiformis*)

Susceptible Grass*

PERENNIAL RYEGRASS, FINE FESCUE (reported on all cool-season grasses)

Temperature/Moisture (that encourages disease development) moderate/wet foliage

Management Strategies**

- 1) balanced fertilization program

- 2) promote growth by aeration, watering, etc.
- 3) use resistant varieties

RUST (*Puccini spp.*)

Susceptible Grass*

PERENNIAL RYEGRASS, Kentucky bluegrass

Temperature/Moisture (that encourages disease development) moderate/wet foliage; dry soil

Management Strategies**

- 1) avoid nitrogen deficiency
- 2) use resistant varieties
- 3) water if dry, promote growth

SUMMER PATCH (*Magnaporthe poae*) (previously called *Fusarium Blight*)

Susceptible Grass*

KENTUCKY BLUEGRASS, Fine fescue


Temperature/Moisture (that encourages disease development) warm/extremes in soil moisture, (fluctuating from wet to dry)

Management Strategies**

- 1) avoid low mowing thatch buildup
- 2) maintain soil pH between 6 and 7
- 3) frequent watering during dry periods to avoid heat stress
- 4) use slow-release nitrogen
- 5) use Kentucky bluegrass and perennial ryegrass mix

*Turfgrass(es) in all capital letters, highest potential for severe problems

**For fungicide recommendations check with county cooperative extension office and state Land Grant university in your area.

A large-scale agricultural landscape under a warm, golden light. In the foreground, a hand in a tan glove holds a large, curved scythe, positioned as if ready to cut. The background shows a vast field of crops, with several workers in the distance using similar tools. The scene is set against a backdrop of rolling hills and a large tree on the right side.

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Attack

ornamental diseases

Use the "disease triangle" to help you protect valuable ornamentals

By JAMES A. CHATFIELD

A key concept in understanding infectious diseases (those involving pathogens such as fungi, bacteria and viruses) is the disease triangle. This concept is simple, yet powerful. It includes:

- ▶ a host plant susceptible to a particular disease
- ▶ a virulent disease-causing organism (pathogen)
- ▶ an environment conducive to that disease.

Without all three components, infectious disease will not occur. For example:

- For many fungal diseases, the number of hours of leaf wetness is the key environmental condition necessary for infection. Imagine the pathogen involved in black spot of rose (*Diplocarpon rosae*) present on

last year's leaves, which remain on the ground, where black-spot susceptible roses are grown. Two components of the disease triangle are present. However, if the weather is dry for two months, irrigation water is kept off the foliage and good air movement is provided by pruning and proper plant siting, black spot will not be severe, because the key environmental element — leaf wetness — is absent.

- If apple scab fungus is abundant, it is a very moist spring and there is a susceptible crabapple such as *Malus* 'Radiant,' all three components of the disease triangle are present and significant scab disease will occur. However, if the cultivar is *M.* 'Prairifire,' with excellent genetic resistance, scab will not generally occur. The susceptible host is the missing component of the triangle.

All three components of the disease triangle must be present for disease to occur.

▲ rose black spot

Using the disease triangle to highlight different control strategies in these cases, would involve using:

- ▶ resistant varieties
- ▶ quarantines to exclude the pathogen
- ▶ cultural practices to modify the environment.

The disease triangle concept is a powerful tool, not only to understand disease, but to think about multiple ways to control diseases.

Case study: Rose black spot

As an example, here are some disease management strategies for rose black spot disease, caused by *Diplocarpon rosae*.

Black spot is the most important infectious disease of roses. It occurs only on roses (*Rosa spp.*), and is widespread among most rose species and cultivars. Many hybrid tea roses are very susceptible. Lists of black spot-resistant roses



often are variable due to localized races of the pathogen.

The round to irregular black splotches with fringed margins occur mostly on upper leaf surfaces, and defoliation of infected leaves is common. Repeated defoliation weakens plants, leading to poorer blooming and greater sensitivity to other stresses.

The fungus overwinters on fallen leaves and diseased canes. Microscopic spores are then splashed to newly emerged leaf and stem tissue in the spring. Under ideal conditions of leaf wetness, humidity and temperature, the spores can germinate and infect in one day, cause symptoms in four to five days, and produce spores that can infect additional leaf, flower and cane tissue within 10 to 11 days. Spores can easily spread to new locations by air currents.

• **Strategy 1: Keep foliage dry.** Plant roses in sunny locations to encourage drying. Avoid sites with dense surrounding vegetation. Avoid overhead irrigation, especially late in the day. Black spot is most severe with sustained rainy periods.

• **Strategy 2. Keep it neat.** Remove all black spotted leaves from and around plants, throughout the season. Before winter or before leaves emerge in the spring, remove and clean up all diseased leaves and remove diseased canes where possible.

• **Strategy 3. Select for resistance.** In spite of localized races of the fungus, lists of disease-resistant varieties should always be a part of plant selection decisions. For these lists, check references such as "Pest Resistant Ornamental Plants," by D.C. Smith-Fiola of Rutgers Cooperative Extension.

• **Strategy 4: Use preventive fungicide sprays.** Fungicide controls are not successful if you don't follow cultural and sanitation practices. Make applications preventively, providing a protective fungicide barrier to kill germinating fungal spores landed on plant tissue. If conditions for infection are present and a high level of control is desired, start preventive spray programs as soon as rose foliage emerges in the spring and continue throughout the summer at frequent intervals (as frequently as every 7-10 days in wet weather).

Case Study: Apple scab.

It might be tempting to look at the disease triangle and ask, "Why not just use disease-resistant hosts — then you need not worry about anything else?" First, there is no such thing as a completely disease-resistant plant. Second, even with a single disease, there may be no readily available cultivars with good resistance (like *Botrytis* gray mold on geranium). Third, disease resistance is not the only consideration when selecting a particular cultivar.

At Secrest Arboretum in Wooster, OH, we looked at 47 crabapple selections for the past six years. We have a replicated, randomized plot rate them on a scale of 0 to 5, with 0 being no scab and 5 being extreme scab, defoliation complete or near complete. We came up with a list of eight crabapples with no scab.

We also rated the crabapples monthly for overall aesthetics, with 1 being an exceptionally ornamental crabapple (flower, foliage, fruit or form at time of rating) to 5 as an ornamentally unacceptable crabapple.

The monthly ratings were averaged, and the top eight crabapples listed. Apple scab, with its obvious effects on foliage, fruit and overall aesthetics, was a factor in these overall ratings.

Many of the overall, top-rated crabapples did get some scab over the years and only one of the top eight had no scab. Most of the crabapples with no scab were not the best in terms of overall ratings, most being rated as less attractive than many of the nonscab-resistant crabapples. For example, 'Dolgo' was one of the worst in the entire plot; no scab but large, messy fruits which severely restrict its use as an ornamental. Obviously, ratings for a particular disease are only part of the story.

The disease triangle is central, not only to understanding how disease occurs but also in how to limit its occurrence. Like a three-legged table, the removal of one side of the disease triangle will reduce the occurrence and severity of a disease. But, as always, the best way to do that is to consider these factors *before* installation of the plant in the landscape.

apple scab

TOP AESTHETICALLY RATED CRABAPPLES WITH THEIR SCAB RATINGS

Crabapple	Aesthetics	Scab
<i>M.</i> 'Molten Lava'	1.8	1.3
<i>M.</i> 'Mary Potter'	2.2	1.3
<i>M.</i> 'Red Jade'	2.2	1.2
<i>M.</i> 'Prairifire'	2.3	0.0
<i>M.</i> 'Strawberry Parfait'	2.3	0.1
<i>M.</i> 'Sugar Tyme'	2.4	0.7
<i>M.</i> 'Donald Wyman'	2.4	1.3

SCAB-FREE CRABAPPLES WITH THEIR AESTHETIC RATINGS

Crabapple	Aesthetics	Scab
<i>M. baccata</i> 'Jackii'	2.8	0.0
<i>M.</i> 'Beverly'	3.5	0.0
<i>M.</i> 'Bob White'	2.9	0.0
<i>M.</i> 'Dolgo'	3.9	0.0
<i>M.</i> 'Prairifire'	2.3	0.0
<i>M. sargentii</i>	2.8	0.0
<i>M.</i> 'Silver Moon'	3.0	0.0
<i>M.</i> 'White Angel'	3.2	0.0

—James A. Chatfield is the Northeast District Horticulture Specialist with the Ohio State University Extension.



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Award-winning landscape

Property at a glance:

Location: Boise, ID

Staff: in-house

Category: Government Building or Complex

Year site built: Statehouse, 1905; Capitol Mall 1960 - 1980

Total acres maintained: 35

Acres of turf: 12

Acres of woody ornamentals: 5

Acres of display beds: 2.5

Total man-hours/week: 240

The 1998 Grand Award Winner of the Professional Grounds Management Society for Government Building or Complex.

The Idaho Statehouse and Capitol Mall is located in downtown Boise, and is comprised of 11 state government office buildings within a 16-block parcel. The statehouse construction began in 1905 and the mall was built between 1960 and 1980. An historic home, Alexander House, with a formal rose garden and gazebo, is also part of the property.

Visitors and employees alike enjoy touring the well-manicured grounds. The heavy clay soils are prone to compaction and are aerified three to four times a year and spread with gypsum. The 35-acre site is maintained by a six-person crew during the growing season.

Idaho Statehouse and Capitol Mall



management



▲ A formal rose garden and gazebo near the historic Alexander House.

◀ The Idaho Statehouse in downtown Boise, Idaho.

▶ A worker sweeps debris that was left behind after edging the sidewalks. They also clean parking lots and garages with this machine.

Editors' note: *Landscape Management* is the exclusive sponsor of the Green Star Professional Achievement Awards for outstanding management of residential, commercial and institutional landscapes. For more information on the 1999 Awards, contact PGMS at 120 Cockeysville Road, Suite 104, Hunt Valley, MD; 410/584-9754.

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Maintenance challenges

- ▶ cleaning up after vandalism, including resetting monuments
- ▶ keeping up with the sheer volume of traffic seven days a week
- ▶ Christmas decorating
- ▶ maintaining numerous upright planters through dry season

Project checklist

(Completed in last two years):

- ▶ total landscape renovation of the park area directly to the front of the Capitol
- ▶ installation of computer-controlled irrigation systems
- ▶ installation of 2,500 feet of concrete edging

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- ▶ 2 full-time staff, 4 seasonal, 1 licensed pesticide applicator





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Professional Grounds Management Awards 1999

We're searching for the country's Best-Maintained Landscapes
27th Annual Professional Grounds Management Awards

The awards will be presented during the Professional Grounds Management Society

Annual Meeting, Nov. 15 in Baltimore, MD. Grand award winners will be featured in *Landscape Management* magazine. Honor award winners will appear in the *PGMS Forum*.

Deadlines

The deadline for entries is Aug. 6, 1999. All entries must be submitted to the Professional Grounds Management Awards, c/o Professional Grounds Management Society, 120 Cockeysville Road, Suite 104, Hunt Valley, MD 21030.

Entry Categories

1. Small site (budget under \$80,000)
2. Residential landscape
3. Public works sites (includes parkways & intersections)
4. Shopping area
5. Hospital or institution
6. Government building or complex
7. Cemetery or memorial park
8. Industrial or office park
9. Park, recreation area or athletic field OR — multiple sites under same management
10. School or university grounds OR urban universities

11. Condominium, apartment complex or planned community

12. Hotel, motel or resort

13. Amusement or theme park.

Judging

A distinguished panel of judges selected by the Professional Grounds Management Society and *Landscape Management* will determine the winners.

Presentation of Awards

Awards will be presented during the annual conference of the Professional Grounds Management Society, Nov. 15. This meeting will be held in conjunction with the Green Industry Expo '99 in Baltimore, MD.

Purpose

The aims of the Professional Grounds Management Awards program are:

- To bring national recognition to grounds manicured with a high degree of excellence.
- To recognize individual professional efforts leading to high maintenance standards and high quality appearance of the landscape.
- To challenge those responsible for maintenance of grounds throughout the country to achieve a higher level of excellence. In sponsoring this

awards program, *Landscape Management* magazine and the Professional Grounds Management Society wish to extend their mission in promoting well-maintained landscapes throughout the country.

Eligibility

An entrant must be professionally engaged in, and responsible for, the maintenance of grounds described in ENTRY CATEGORIES. Projects for which an entry was submitted in a *design or construction award competition* are eligible in the Professional Grounds Management Awards program, even if the project won an award, because *maintenance* is the criterion upon which an entry is judged in this award program.

Grand Award winning projects in the Professional Grounds Management Awards program are ineligible to re-enter the program for a period of two years. For example, 1997 Grand Award winning projects are ineligible until 1999.

Any size landscape for which the entrant has the main responsibility for maintenance and beautification may be entered. The amount of money in the landscape operating budget is not a criterion for judging. Rather, the judges will consider the quality, challenge and performance in maintenance of the grounds for a period of at least

You are invited to enter the 27th annual maintenance awards program co-sponsored by *Landscape Management* magazine and the Professional Grounds Management Society.

The annual Professional Grounds Management Awards Program brings national recognition to grounds maintained with a high degree of excellence. The program complements other national landscape award programs that recognize outstanding landscape design and construction. This program salutes the landscape contractor or grounds manager responsible for maintaining a well-manicured landscape year-round.

Grand and Honor Awards are offered in 13 categories covering all types of private, public, commercial and industrial landscapes. To qualify for entry, a landscape must be at least four years old and under continuous maintenance for at least two years. See the entry form (page 64) for complete details of eligibility, categories and awards.



PGMS

two years, beginning at least two years after construction.

Awards

There are two classes of awards: Grand Awards and Honor Awards. Only one Grand Award may be presented in each of the categories listed. The judges may grant as many Honor Awards as they deem deserving, and they may decide no entries are deserving in a given category. Awards will be in the form of certificates mounted under Lucite on walnut plaques.

How to Enter

All entries must include:

1. Fifteen (15) color 35mm slides — ten (10) showing the overall beauty of the total landscape project and five (5) showing the crew at work. **DO NOT USE 'POSED' SHOTS.** Furnish a descriptive caption for each slide.

2. Ten (10) 5- by 7-inch color prints — five (5) showing the overall beauty of the landscape and five (5) showing how the grounds crew works in areas that are difficult to maintain. **DO NOT USE 'POSED' SHOTS.** Label each photograph with a descriptive caption containing all pertinent information.

Important note: Put your best scenes on the slides, which are critical to both judging and final banquet display.

3. One recent photograph of yourself, as the person in charge, working in the landscape.

4. **INDIVIDUALLY LABEL** all slides and photographs with the

name of the entrant and the site. **DO NOT USE TAPE** to mount photographs and/or slides. Please put in plastic or metal mounts.

5. Include a brief description of the site.

6. All entries must contain a **COVER LETTER** releasing the material for publication at the discretion of *Landscape Management* magazine. All entries become the property of the sponsors and may be published in *Landscape Management* magazine or used for other purposes the magazine deems ap-

propriate. **NO ENTRY MATERIAL WILL BE RETURNED.**

7. Enclose a check for the **ENTRY FEE: \$125 for members** of the Professional Grounds Management Society or **\$180 for non-members.**

For a reduced rate of \$250, non-members can join PGMS and enter the contest. There is not limit to the number of categories an organization may enter. Each entry, accompanied by the entry fee, must be sent in a separate envelope.

8. To qualify, all elements of the entry must be **COMPLETE** in

one mailing envelope.

9. Submit entries to:
Professional Grounds Management Awards

c/o Professional Grounds Management Society
120 Cockeysville Road, Suite 104
Hunt Valley, MD 21030

Call 410/584-9754 with any questions.

10. Entries must be received by Friday, August 6, 1999.

SEE THIS YEAR'S ENTRY FORM ON PAGE 64!

How to get bragging rights

Winning a landscape services award can have an amazing effect on your employees, your customers and your peers. Not only is your organization recognized for high quality work, but you can reap additional benefits by turning that award into more business. In fact, the process of preparing contest materials itself is a lesson in smart marketing.

Several industry associations sponsor awards programs to honor outstanding workmanship and skillful management of landscape projects ranging from single-family homes to entire institutions. Although many enter, only a few win, and that is often because they provide first-class entry materials.

WHAT JUDGES WANT

Judges look for certain criteria in all entered projects. But most of all, they look at quality of materials, workmanship and overall appearance. Both judging panels for the Professional Grounds Management Award study the property's description, its special challenges (such as excessive use, budget limitations, weather conditions, complexity, etc.), slides and photographs showing it and how all those elements come together.

Judges see each project's best points through:

- ▶ Clear statements of the property's characteristics and challenges.
- ▶ High-quality photography depicting landscapes at their best times and professional looking staff working on them, wearing appropriate safety gear. (Hint: A sunrise, steam coming off of a pond, aerial view or night lighting will add drama to your presentation.)
- ▶ Neat and complete materials.
- ▶ Best slides placed first and last — they will be viewed the longest in the presentation.
- ▶ Presentations that begin positively and end with a bang.
- ▶ Concise but specific descriptions.
- ▶ Maintenance project close-up shots; long shots of the plant material.
- ▶ "Worthy" projects. Some aren't especially difficult or challenging.
- ▶ Follow instructions and enter the right category!

Frequent winner David Frank, president of David J. Frank Landscape Contracting Inc., Germantown, WI, said entering an awards program adds some pizzazz to a job. "Some firms that are too busy or choose not to participate should be encouraged to participate, and I think they're missing something. They're missing a chance to celebrate."

—Kristen Constantino

In A Dark Shed At 5 a.m. All Line Trimmers Perform The Same



The Real Test Comes At Sunup

New John Deere XT-Series Trimmers are the ones to have your hands on when day breaks. Our seven new XTs are powered by high-performance M-Series engines with intake silencers and low-tone mufflers for quieter operation. *And power-to-weight ratios among the best in the industry.* By the way, our engines are also EPA and CARB compliant, something not all manufacturers can say.

John Deere XTs will work hard 'til sundown and not take it out on you. *A new comfort grip*

and our protected, wide trigger control help take the strain off job-weary hands and arms.

But the greatest thing about owning a John Deere is having access to the *best parts delivery system in the business.* In most cases, we can deliver emergency parts to your door in 24 hours or less.

Don't wait 'til dawn to see the light. Pick up a new XT Series Trimmer now. For the John Deere dealer nearest you, call 1-800-537-8233.

Or visit us online at www.deere.com.



Professional Grounds Management Awards 1999

Official Entry Form and Fact Sheet



Please **PRINT CLEARLY** or type the information requested below. Check for accuracy. This information will be used for publicity purposes and awards.

Each entry must include this completed form and entry fee:

- * PGMS members — \$125
- * Combination PGMS membership and entry fee — \$250
- * Non-members — \$180

Make checks payable to the Professional Grounds Management Society.

SEND COMPLETE ENTRY AND FEE TO:

Professional Grounds Management Awards
 c/o Professional Grounds Management Society
 120 Cockeysville Road, Suite 104
 Hunt Valley, MD 21030
 Call 410/584-9754 with any questions.

NAME OF SITE: _____

State: _____ Entry Category #: _____

Name of company or agency owning this landscape: _____

Address: _____

City: _____ State: _____ Zip: _____

**SIGNATURE OF THE COMPANY OR AGENCY OFFICIAL
 CONSENTING TO THIS ENTRY AND A RELEASE FOR PUBLICITY:**

Signature: _____

Title: _____

WHO IS RESPONSIBLE FOR MAINTAINING THIS LANDSCAPE?

- In-house staff Outside contractor

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone (____) _____

(IMPORTANT) Year site was built: _____

Years I have maintained this site: _____

Total acres maintained: _____

Acres of turf: _____

Acres of woody ornamentals: _____

Acres of display beds: _____

Total paved area: _____

NUMBER OF EMPLOYEES: _____

Full time (year round): _____ Seasonal: _____

Other (please specify): _____

Licensed pesticide applicators: _____

Total man-hours per week: _____

ANNUAL EXPENDITURES:

Total budget: (Including salaries) _____ \$

Equipment: _____ \$

Chemicals and fertilizers: _____ \$

Seed and plant material: _____ \$

SPECIAL MAINTENANCE CHALLENGES:

1. _____

2. _____

3. _____

SPECIAL PROJECTS COMPLETED IN THE LAST 2 YEARS:

1. _____

2. _____

3. _____

If selected a winner, I request the name on the award to be
 (check one or both):

Name of entrant (name which will appear on plaque):
 (please print) _____

Name of organization or agency:
 (please print) _____

IMPORTANT: Please provide the name of the person who will accept the award at the banquet:
 (please print) _____

I certify that all information provided on this form and in the accompanying entry is accurate to the best of my knowledge. I understand that no materials will be returned and that all material may be used for publication in *Landscape Management* magazine or for other purposes deemed appropriate.

Signature of entrant _____
 Date _____

ENTRIES MUST BE RECEIVED BY AUGUST 6, 1999

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*Dr. Terrance P. Riordan
Turfgrass Plant Breeder
University of Nebraska*



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Address _____

City _____ State _____ Zip/Postal Code _____

Country _____

Internet/E-Mail Address _____



Bush Hog 762H accepts either regular or heavy-duty buckets in 9-, 13-, 16-, 24- and 36-in. widths. Maximum reach is 9'6".



The Lowe Model 7 hydraulic trencher adds versatility to smaller skid steer loaders in the 800- to 1000-lb. class.

CAN YOU DIG IT?

Trenchers and backhoes get down and dirty

By CURT HARLER/ Contributing Editor

Whether you're installing irrigation pipe or running accent lighting along a pathway, use the right equipment to speed the job, minimize damage to surrounding turf, shorten the time to refill the open trench and cut down on reseeding or sodding.

Backhoes can be compared to chain saws: best used on big jobs (like placing irrigation mains or digging deep, long cuts for drainage pipe). They can dig down farther and faster than other machines, but count on spending some time filling in the trench and hand-raking a lot of soil and stone left behind after the excavated ground is replaced.

On the other hand, trenchers are like hand-saws. They leave a smaller cut than a backhoe and are much gentler on the surrounding turf. In fragile turfgrass areas or in residential areas where a backhoe is too noisy or too cumbersome, a trencher is likely to be the tool of choice.

Mini-trenchers are like pruning shears. They can get into even the smallest area. Lightweight and maneuverable, they weigh about half the standard walk-behind trencher's 700 to 1,000 pounds. That makes mini-trenchers super for short-run jobs.

Brown Manufacturing
800/633-8909
www.brownmfgcorp.com

The BedEdger F-780H Trencher is designed for defining landscape beds or installing plastic or steel edging, saving time up to 90% over a shovel. Manufactured in Ozark, AL, the BedEdger is equipped with steerable rear wheels and an 8-hp Honda engine.

Circle No. 250

Burkeen Manufacturing Co.
800/647-9824
www.burkeen.com

From Olive Branch, MS, the Burkeen B-30 Combination Trencher/ Vibratory Plow has a 30-hp diesel engine, features a two-speed transmission, plow self-centering system, sod cutter, bolt-on plow blades and a lifetime warranty. It is equipped with a rotary boring unit for tunneling under streets or sidewalks; a trencher attachment for trenching in large-diameter pipe or opening pits for boring applications; and a rotary-boring unit for installing



The Burkeen B-30 Combination Trencher/Vibratory Plow

pipe of various types up to 2 inches in diameter.

Circle No. 251

**Bush Hog
334/872-6261**

www.bushhog.com

The Bush Hog 762H is the Selma, AL, company's backhoe of choice for landscapers, electrical contractors and golf course superintendents. It is designed for operator comfort with a walk-through design on the operator's platform. The maximum digging depth is 7'6" and maximum reach is 9'6". Regular and heavy-duty buckets are available in 9-, 13-, 16-, 24- and 36-in. widths.

Circle No. 252

**Ditch Witch
800/654-6481**

www.ditchwitch.com

The Ditch Witch Model 5700 trencher has 57 hp and an all-hydrostatic design. Made by The Charles Machine Works Inc., Perry, OK, it has a 20-degree swiveling operator's seat for comfort during long jobs. A single handle controls the backfill blade, with a float function for easier job site restoration. A new long-arm steerable vibratory plow attachment and long-arm steerable combo attachment add versatility and offset plowing capabilities. Trenches can be as deep as 52 in. Backhoe attachment can dig as deep as 64 in.

Circle No. 253

**Elite Trenchers
800/223-5468**

www.elitetrenchers.com

Elite offers four trencher styles ideal for installing sprinkler systems, bed edging, root pruning, cable installation, telephone cable installation and golf course drainage. The

products, made in Cape Coral, FL, dig at depths ranging from 6 to 12 in. The push-forward disc blade type trencher can dig 20 to 30 ft. per minute. The 900-lb. winch design



Elite offers four trenchers.

and roller wheel body allows the machine to roll up and down easier.

Circle No. 254

**Glenncorp Inc.
870/239-4796**

Glenncorp's GCI-500 3-Point Hitch Trencher has a 3-ft. digging depth, a reservoir, filter system and PTO pump. The Paragould, AR-based company includes a two-spool control valve. Standard equipment includes open platform, joy stick



Glenncorp's GCI-500 3-Point Hitch Trencher can dig three feet.

controls, outrigger guides, cushioned seat, replaceable bushings and 160-degree rotation. Digging depths range from 6 ft. to 12 ft.

Circle No. 255

**Ingersoll Equipment Co. Inc.
920/582-5000**

www.ingersoll-inc.com

Ingersoll's 6018 LBH Loader Backhoe, from Winneconne, WI, features power steering, single-lever shifting for forward and reverse, speed control with a right-mounted foot pedal and single lever control of the swing and boom. The lower

weight keeps it from tearing up turf. The 6018 can be towed on a trailer behind a pickup truck.

Circle No. 256

**JCB Inc.
888/PICK-JCB
www.jcbna.com**

JCB's Backhoe Loader from Great Britain uses a new tool-carrier coupler. It features a two-position loader linkage to maximize bucket or pallet fork performance. Larger diameter loader arm pipework and a detent for the third valve spool provide power for continuous-flow attachments like sweepers. All of the models (JCB 214S, 215S and 217S) feature the Smooth Ride System to eliminate front-end bounce. Maximum backhoe dig depths range from 14'7" to 17'3".

Circle No. 257

**John Deere
800/537-8233
www.deere.com**

John Deere's 47 and 48 Backhoes, when teamed with a John Deere 4000 series tractor, create an enhanced digging force with faster

cycles power and compact size with the Kubota Backhoe Attachment. The two Japanese-made products together can dig to 9.2 ft. The four-point, quick-attach mounting system with reinforced frame provides worry-free backhoe operation when elevated by stabilizers. The B5550 Trencher, designed for use with the B21, operates quietly and digs to 3 ft. deep and from 3 to 12 in. wide. It has 11 trench size combinations with rapidly changeable boom and digging chain lengths. The gear box, rated at 20 hp, is easily accessible for normal service requirements.

Circle No. 259

**Little Beaver, Inc.
409/327-3121
www.littlebeaver.com**

The Kwik-Trench Earth Saw is a portable trencher for residential sprinkler systems, cable TV, satellite dish drops, electrical, plumbing, telephone, gas lines, landscape edging, drainage lines and root pruning. It is easy to load and all rotating parts are shielded. The product is made in Livingston, TX.

Circle No. 260

**Lowe Manufacturing Co.
888/DIG-LOWE
www.loweman.com**

The Lowe Model 7 hydraulic trencher is an economical and solid basic trencher attachment for most models of skid steer loaders. Made in Readstown, WI, this unit adds versatility to smaller skid steer loaders in the 800- to 1,000-lb. class. Included are a 34,000-lb. digging chain, a removable spoil auger and seal bearings in the nose. Model 7 has a 3,000-psi continuous operating pressure capability. Model 21C trenching attachment is designed for larger skid loaders and hydraulic flows between 13 and 25 gallons per minute. It has a 50,000-lb. anti-back flex digging chain.

Circle No. 261

**Melroe Ingersoll-Rand
701/241-8700
www.bobcat.com**

The Bobcat 607 Backhoe Attachment has a digging depth of nearly 8 feet and operates with Bobcat 751, 753, 763, 773 and 863 Skid Steer Loaders. It has a single bucket mounting position for straight wall and power digging. Standard 6-inch curb clearance and

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> LM REPORTS

the optional vertical stabilizers are ideal for working in tight areas. The Bobcat LT204 Trencher Attachment for 700- and 800-size Skid Steer Loaders is made for light to medium jobs, has digging depths from 2 to 4 feet and features hydraulic side shift capability to trench close to buildings or fences.

Circle No. 262



Toro SiteWork Systems with backhoe

Steiner Turf Equipment Inc.
330/828-0200
www.steinerturf.com

The Steiner Trencher TH300 features a visible depth indicator, variable depth control, and quick chain tension adjustment. The product, made in Dalton, OH, has a debris-free trench with a crumb scraper, a front mount and a quick hitch. The TH300 also has a heat-treated carbide tip chain. It attaches to a Steiner tractor.

Circle No. 263

Thomas Equipment Ltd.
800/561-5623
www.thomasloaders.com

The BH108 Side Shift Backhoe Attachment has a narrow profile, a vertical stabilizer design and side shift capability, for work close to walls and obstructions. It offers internal or external control systems. Internal controls allow you to sit inside the loader cab, out of the weather and controls have easy access and flip up and out of the way allowing easy entry and exit from the loader cab. External control provides visibility to the full 8.5 ft. digging depth.

Circle No. 264

Toro
800/476-9673
www.toro.com

Toro SiteWork Systems includes the Dingo compact utility loader and more than 35 attachments including a trencher and backhoe. The Bloomington, MN, company's Dingo is 42-in. wide, and fits through four-foot gateways allowing it to take hydraulic power to areas previously open only to hand labor. The trencher attachment digs trenches up to 3 ft. deep and up to 12 in. wide.

Circle No. 265

Vermeer Manufacturing Company
888/VERMEER
www.vermeer.com

Vermeer's V-8550A Hydrostatic Trencher/Plow has a 90-hp Cummins engine, a backfill blade with a floating position and patented creep override in forward and reverse. Made in Pella, IA, the V-8550A features higher torque curve and improved performance. An enclosed wet disc service and parking brake automatically apply when the engine stops and an operator presence system shuts down the machine when the operator leaves the seat.

Circle No. 266

Woods Equipment Company
800/289-3067
www.woodsonline.com

Woods Groundbreaker Backhoes are available in 6.5-, 7.5- and 9-ft. digging depths. The products, manufactured in Rockford, IL, are available for three-point mounting on tractors ranging from 15 to 70 hp. They also mount on most skid steer machines. Subframe kits allow easy mounting of the Groundbreaker series on more than 50 compact tractor models.

Circle No. 267

Yazoo Kees Inc.
800/723-9496
www.yazookees.com

Yazoo Kees, Jackson, MS, has improved the Millennium Series Dig-It TLB (tractor/loader/backhoe) models: the Dominator M2208, Dominator Diesel M2208D and the Tiger M2008. Dominators have a 22-hp Kohler Command PRO TM or a 21-hp Kohler D722-E diesel engine. The Tiger comes with a 20-hp Kohler Command engine.

Circle No. 268

LANDSCAPE
management

May 1999

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NAME (please print) _____
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Signature: _____ Date: _____

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Fill in ovals as shown: ●

1. My primary business at this location is: (fill in ONE only)

CONTRACTORS/SERVICE COMPANIES

- 02 255 Landscape Contractors (installation and maintenance)
- 03 260 Lawn Care Service Companies
- 04 265 Custom Chemical Applicators
- 05 270 Tree Service Companies/Arborists
- 06 275 Landscape Architects
- 07 280 Land Reclamation and Erosion Control
- 08 285 Irrigation Contractors
- Other Contractors/Service Companies (please specify) _____

INSTITUTIONAL FACILITIES

- 09 290 Sports Complexes
- 10 295 Parks
- 11 300 Right-of-Way Maintenance for Highways, Railroads or Utilities
- 12 305 Schools, Colleges, Universities
- 13 310 Industrial or Office Parks/Plants
- 14 315 Shopping Centers, Plazas or Malls
- 15 320 Private/Public Estates or Museums
- 16 325 Condominiums/Apartments/Housing Developments/Hotels/Resorts
- 17 330 Cemeteries/Memorial Gardens
- 18 335 Hospitals/Health Care Institutions
- 19 340 Military Installations or Prisons
- 20 345 Airports
- 21 350 Multiple Government/Municipal Facilities
- Other Groundscare (please specify) _____

SUPPLIERS AND CONSULTANTS

- 22 355 Extension Agents/Consultants for Horticulture
- 23 360 Sod Growers, Turf Seed Growers & Nurseries
- 24 365 Dealers, Distributors, Formulators & Brokers
- 25 370 Manufacturers
- Other (please specify) _____

2. Which of the following best describes your title? (fill in ONE only)

- 26 10 Executive/Administrator - President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Director of Physical Plant
- 27 20 Manager/Superintendent - Arborist, Architect, Landscape/Grounds Manager, Superintendent, Foreman, Supervisor
- 28 30 Government Official - Government Commissioner, Agent, Other Government Official
- 29 40 Specialist - Forester, Consultant, Agronomist, Pilot, Instructor, Researcher, Horticulturist, Certified Specialist
- 30 50 Other Titled and Non-Titled Personnel (please specify) _____

3. SERVICES PERFORMED (fill in ALL that apply)

- 40 A Mowing
- 41 B Turf Insect Control
- 42 C Tree Care
- 43 D Turf Aeration
- 44 E Irrigation Services
- 45 F Turf Fertilization
- 46 G Turf Disease Control
- 47 H Ornamental Care
- 48 I Landscape Design
- 49 J Turf Weed Control
- 50 K Paving, Deck & Patio Installation
- 51 L Pond/Lake Care
- 52 M Landscape Installation
- 53 N Snow Removal
- 54 O Other (please specify) _____

4a. Do you specify, purchase or influence the selection of landscape products?
 75 Yes 76 No

4b. If yes, check which products you buy or specify: (fill in ALL that apply)

- 55 1 Aerators
- 56 2 Blowers
- 57 3 Chain Saws
- 58 4 Chipper-Shredders
- 59 5 De-icers
- 60 6 Fertilizers
- 61 7 Fungicides
- 62 8 Herbicides
- 63 9 Insecticides
- 64 10 Line Trimmers
- 65 11 Mowers
- 66 12 Snow Removal Equipment
- 67 13 Sprayers
- 68 14 Spreaders
- 69 15 Sweepers
- 70 16 Tractors
- 71 17 Truck Trailers/Attachments
- 72 18 Trucks
- 73 19 Turfseed
- 74 20 Utility Vehicles

5. Do you have Internet Access? 77 A Yes 78 B No

5a. If so, how often do you use it?

- 79 A Daily
- 80 B Weekly
- 81 C Monthly
- 82 D Occasionally

101	113	125	137	149	161	173	185	197	209	221	233	245	257	269	281	293	305
102	114	126	138	150	162	174	186	198	210	222	234	246	258	270	282	294	306
103	115	127	139	151	163	175	187	199	211	223	235	247	259	271	283	295	307
104	116	128	140	152	164	176	188	200	212	224	236	248	260	272	284	296	308
105	117	129	141	153	165	177	189	201	213	225	237	249	261	273	285	297	309
106	118	130	142	154	166	178	190	202	214	226	238	250	262	274	286	298	310
107	119	131	143	155	167	179	191	203	215	227	239	251	263	275	287	299	311
108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312
109	121	133	145	157	169	181	193	205	217	229	241	253	265	277	289	301	313
110	122	134	146	158	170	182	194	206	218	230	242	254	266	278	290	302	314
111	123	135	147	159	171	183	195	207	219	231	243	255	267	279	291	303	315
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Signature: _____ Date: _____

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- 40 A Mowing
- 41 B Turf Insect Control
- 42 C Tree Care
- 43 D Turf Aeration
- 44 E Irrigation Services
- 45 F Turf Fertilization
- 46 G Turf Disease Control
- 47 H Ornamental Care
- 48 I Landscape Design
- 49 J Turf Weed Control
- 50 K Paving, Deck & Patio Installation
- 51 L Pond/Lake Care
- 52 M Landscape Installation
- 53 N Snow Removal
- 54 O Other (please specify) _____

4a. Do you specify, purchase or influence the selection of landscape products?

- 75 Yes 76 No

4b. If yes, check which products you buy or specify: (fill in ALL that apply)

- 55 1 Aerators
- 56 2 Blowers
- 57 3 Chain Saws
- 58 4 Chipper-Shredders
- 59 5 De-icers
- 60 6 Fertilizers
- 61 7 Fungicides
- 62 8 Herbicides
- 63 9 Insecticides
- 64 10 Line Trimmers
- 65 11 Mowers
- 66 12 Snow Removal Equipment
- 67 13 Sprayers
- 68 14 Spreaders
- 69 15 Sweepers
- 70 16 Tractors
- 71 17 Truck Trailers/Attachments
- 72 18 Trucks
- 73 19 Turfseed
- 74 20 Utility Vehicles

5. Do you have Internet Access? 77 A Yes 78 B No

5a. If so, how often do you use it?

- 79 A Daily 80 B Weekly 81 C Monthly 82 D Occasionally

101	113	125	137	149	161	173	185	197	209	221	233	245	257	269	281	293	305
102	114	126	138	150	162	174	186	198	210	222	234	246	258	270	282	294	306
103	115	127	139	151	163	175	187	199	211	223	235	247	259	271	283	295	307
104	116	128	140	152	164	176	188	200	212	224	236	248	260	272	284	296	308
105	117	129	141	153	165	177	189	201	213	225	237	249	261	273	285	297	309
106	118	130	142	154	166	178	190	202	214	226	238	250	262	274	286	298	310
107	119	131	143	155	167	179	191	203	215	227	239	251	263	275	287	299	311
108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312
109	121	133	145	157	169	181	193	205	217	229	241	253	265	277	289	301	313
110	122	134	146	158	170	182	194	206	218	230	242	254	266	278	290	302	314
111	123	135	147	159	171	183	195	207	219	231	243	255	267	279	291	303	315
112	124	136	148	160	172	184	196	208	220	232	244	256	268	280	292	304	316

AgriBioTech Inc., named Tony Blum to the newly created position of Vice President, Director of Communications, Planning and Development. Blum was formerly Director, Planning and Development.

Aimcor, manufacturer of Turface® Sports Field Conditioner and Profile™ porous ceramic conditioners, is now **Profile Products LLC**.

Bayer has a new website for turf and ornamental questions: www.protect-your-turf.com

Century Rain Aid purchased Rain Control, a Midwest dis-

tributor of irrigation equipment. This expands the range of products, geographic diversity, locations and delivery services and increases technical expertise and product support.

Growth Products has added Patrick Carney, CGCS, as a technical sales representative. His sales territory includes KY, IN, IL, IA, WI and MN.

Bill Gonyea was named manager of customer service by **Harmony Products Inc.**

Joe Ernst was named director of commercial sales and technical services for **Howard**

Johnson's Enterprises Inc.

The company also named Jerry Schroeder territory manager for its Western Region.

Tom Childers was promoted to Eastern regional sales manager for **Irritrol Systems**. Childers will implement sales programs and promotions in states west of the Mississippi River.

Lesco opened a new 90,000-sq.-ft. fertilizer production facility in Sebring, FL, which incorporates the most advanced quality control methods and is producing standard and mini-size fertilizers and combination products.

The Maryland branch of **Lofts Seed** is relocating to Savage, MD, to accommodate production and distribution needs for the mid-Atlantic states and future growth. This is a combined operation of Seed Corporation of America and Lofts Seeds Maryland branch.

Pursell Technologies is expanding its plant in Sylacauga, AL, to keep up with increased demand for such products as POLYON® fertilizer coating technology.

Seed Research of Oregon has a new office/warehouse facility in Glendale, AZ, to serve as a central office and to enhance the Arizona operation's shipping, receiving and warehousing abilities.

James A. Wier was named president and chief operating officer of **Simplicity Manufacturing Inc.**

Stihl was the first platinum sponsor (\$10,000 and above) of the Equipment and Engine Training Council (EETC) and challenges all other power equipment manufacturers to also support the EETC financially.

Harold C. Pinto has been named managing director of **Textron Turf Care & Specialty Products - Europe**. He is responsible for manufacturing operations and sales facilities in England, Germany, France, Italy and Australia. Previously, Pinto was senior vice president of sales and marketing at Textron Turf Care & Specialty Products - Americas. **LM**

Info center

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SOIL AND PLANT ANALYSIS LABORATORY REGISTRY... for the United States and Canada provides up-to-date information about public and private laboratory services: name, address, telephone and fax numbers, contact person, analytical services provided (soil testing, plant analysis and water analysis) and sampling and consulting services. From CRC Press for \$49.95 plus S&H, 2000 NW Corporate Blvd., Boca Raton, FL, 33431-9868, 800/272-7737 or www.crcpress.com

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ALTERNATIVE TO WOODEN BULKHEADS... can be seen in a videotape from Crane Plastics Company about its C-LOC® engineered vinyl sheet piling, an erosion control product that replaces conventional bulkhead materials. For a copy of the video contact Robyn Snider, Crane Plastics Company, 800/690-2562.

EQUIPMENT CATALOG... from Husqvarna shows the full product line of lawn and garden equipment for 1999 and includes safety equipment, information about association sponsorships and chainsaw safety tips. For a copy of the catalog call 800/HUSKY 62.

LIGHT UP YOUR LIFE... with the 1999 NightLife Landscape Lighting catalog from Hadco. The catalog includes all the information needed to design and specify a complete landscape lighting installation. Call Hadco at 717/359-7131 or www.hadcolighting.com



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The Land Pride DryJect™ injects high volumes of dry material into the soil, combining aeration, amending and topdressing in a single pass. You can aerate and inject up to 8 cu. ft. of amendment per 1,000 sq. ft., at 10,000 sq. ft. per hour. Injection depth can be adjusted from 2 to 10 inches with spacing from 2 to 8 inches. The DryJect is ideal for high-efficiency subsurface injection of liquid or dry fungicides, biological products, insecticides and amendments.

The aerator is powered by a 4-cycle, air-cooled Kohler engine with 13-hp and has an electric start. Speed control is adjustable by hand control in both forward and reverse and it has a disc-type parking brake. For more information contact Advanced Agro Technologies, Inc. at 800/270-TURF, www.dryject.com or

Circle No. 269

Mole and gopher chaser

R.J. Advantage, Inc. has added ReJeX-iT Mole and Gopher Chaser to its line of products for controlling nuisance animals. It uses castor oil as the active ingredient, combined with an agent for deep soil penetration. It is easy to use and lasts up to 60 days. One quart will cover 10,000 sq. ft.

Other ReJeX-iT products include AG-36 for repelling Canada geese and other nuisance birds from turf areas; TP-40 for spraying on impoundments, decorative ponds or temporary pools of water; and TP-40 (commercial fogging use) for repelling birds from roosting sites or other areas. For more information contact R.J. Advantage, Inc. at 800/423-2473 or

Circle No. 270

Pinpoint approved for broadcast applications

Pinpoint® 15 Granular Insecticide, a granular Orthene® with lower odor, has been approved for use as a broadcast treatment. The Valent product provides true systemic action and up to four weeks of control. The granules dissolve quickly with no visible residue and areas treated with Pinpoint can be re-entered immediately. For more information contact Valent Professional Products at 800/89-VALENT, www.valent.com or

Circle No. 271

Smooth Air Ride sulky

Tru-Cut Lawnmowers presents the ultimate sulky, the Air Ride. The large air shocks make for a smooth ride, never on hard wheels and easy on your knees. Dual wheels provide a stable ride and the wide track means less lines on the turf.

The sulky can be disconnected quickly with one pin and the adjustable hitch allows it to be attached to almost any brand of equipment. For more information contact Jack Ball at 323/258-4135, fax 323/258-3376 or



Circle No. 272

Little Wonder blowers continue to improve

Little Wonder High-Output blowers now feature a strengthened back panel with deeper ribs to cut down on vibration and commercial grade 5 hardware for longer, trouble-free performance. A safety guard has been added to the patented discharge chute to meet stringent standards.

The line of blowers includes nine different models ranging from 5 to 11 hp. An optional 10-in. diameter intake hose and either a disposal bag or a 20-ft. discharge hose allows the Little Wonders to be adapted for vacuuming use. For more information contact David Navroth at 215/357-5110 or

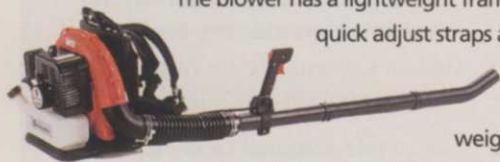
Circle No. 273



Back pack blowers

The new 155BT back pack blower from Husqvarna is quiet, lightweight and powerful. Powered by a 49-cc engine and a maximum air velocity of 183 mph, it is ideal for landscape contractors and grounds management crews.

The blower has a lightweight frame, lower vibrations design, quick adjust straps and a unique hip/waist support to stabilize the blower and reduce weight on the shoulders. The



throttle is designed for control and lighter weight, with a pistol-grip handle mounted on the tube. For more information contact Husqvarna Forest & Garden Co. at 800/HUSKY-62, www.husqvarna.com or

Circle No. 274

Bayer improves mini-drum packaging

The packaging for Bayleton® Fungicide and Merit® Insecticide has an added feature to improve the integrity of the mini-drum packaging. Water-soluble packets that come in the mini-drum are now enclosed in protective bubblebags for added protection. For more information call 816/242-4749 or

Circle No. 275

Cut closer, use less power

The new Model 914A midmount, rear-discharge mower for New Holland Boomer™ tractors, in 60- and 72-in. cutting widths, mulches grass clippings to avoid the need for raking or clipping disposal. In addition to excellent mulching action, other features include a lower power requirement and — since there is no side discharge chute — the operator can trim close to trees and other obstructions from either side,



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Circle 149



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Circle 130

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Events

JUNE

3 Pruning Trees & Ornamentals

University of Massachusetts, Amherst, MA; 413/545-0895

10-12 Snow & Ice Symposium

Airport Marriot Hotel, Pittsburgh, PA; 814/456-9550

11 Trees & Utilities Seminar

Charlotte, NC; National Arbor Day Foundation, 402/474-5655

15 Turf Seed Annual Field Day

Pure Seed Testing Research Facility, Rolesville, NC; 919/556-0146

15 Tree Hazard Evaluation Workshop

UCR Extension Center, University of California, Riverside; 909/787-5804; www.unex.ucr.edu

18 Pennington/Seeds West International Warm-Season Turfgrass Research Tour

Seeds West Arizona Research Facility, Maricopa, AZ; 520/783-2050

25 Selecting, Planting and Maintaining Trees to Save Money, Time and Effort

UCR Extension Center, University of California, Riverside; 909/787-5804; www.unex.ucr.edu

JULY

1 ALCA Landscape Contribution Awards deadline

ALCA, 800/395-2522; www.alca.org

13-15 Turf & Landscape Field Days

Virginia Tech Campus, Blacksburg, VA; 504/231-5897

19-20 PLCAA Legislative Day on the Hill & Arlington Renewal and Remembrance Project

Holiday Inn Capitol, Washington, DC; PLCAA, 800/458-3466; www.plcaa.org

21-23 Turfgrass Producers International Summer Convention & Field Days

East Lansing Holiday Inn, MI; 847/705-9898; www.turfgrassod.org

23 Conference on Woody Plants for the Landscape & Garden Center Industries The Lang Performing Arts Center, Swarthmore College, Swarthmore, PA; Longwood Gardens, 610/388-1000 x516

23-25 Masters in Management for the Landscape Industry Seminar

Hilton Chicago O'Hare Airport; ALCA, 800/395-2522; www.alca.org

24-26 International Lawn, Garden & Power Equipment Expo

Kentucky Exposition Center, Louisville, KY; 502/562-1962; EXPO.mow.org

26-31 Perennial Plant Assn. Symposium

Lansing, MI; 614/771-8431;

www.perennialplants.org

27 Midwest Regional Turf Field Day

West Lafayette, IN; 765/494-8039; www.purdue.edu

27-29 Penn Allied Nursery Trade Show

Fort Washington Expo Center, Fort Washington, PA; 717/238-1673; www.pantshow.com

AUGUST

1-4 International Society of Arboriculture Conference

Stamford, CT; 217/355-9411; www.ag.uiuc.edu/~isa

6 Landscape Management /PGMS Grounds Management Awards Deadline

Professional Grounds Management Society, 410/584-9754; www.pgms.org

6-8 TAN-MISSLARK Nursery, Garden, Landscape Supply Show

Dallas Convention Center, Houston; Texas Assn. of Nurserymen, 800/880-0343; www.growzone.com

7-9 Southern Nursery Assn. World Showcase of Horticulture

Georgia World Congress Center, Atlanta; 770/973-9026; www.sna.com

8-11 Soil & Water Conservation Society Annual Conference

Biloxi, MS; 515/289-2331; www.swcs.org

10-13 Florida Turfgrass Assoc. Conference & Show, O'Connell Center,

Gainesville; 800/882-6721 LM

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Grab Bag

Wanted: CPAs with green thumbs

Consultant Ed Wandtke received a lot of interest in his recent article, "Is your service mix costing you money?" (February LM, pages 52-58). And the callers were CPAs, of all things.

Seems that Ed's examples of analyzing a mythical company's (Mixed Mowing & Maintenance Co.) service mix and separating profit and loss information by services was a bit too complicated for some CPAs. Our readers understood it however, and liked it.

"I've had CPAs call me to explain how we did it because their clients (contractors) wanted to do it this way," he explains. "I walked them through the P&Ls in the column."

Wandtke, a CPA himself, is a little mystified. "They know how to put the information into columns but don't understand how to put the types of work into the proper columns."

Does your accountant or financial person truly understand your operations? We hope so. Just to be sure, you might ask them if they understand the difference between maintenance and installation services, or chemical lawn care and lawn maintenance. It might be a real eye-opener!

Why is Brad Hauter standing?

Maybe it's because on June 10, Brad Hauter will cruise into Santa Monica, CA, on this Yard-Man tractor after having ridden it 4,500 miles in 60 days. He started his journey April 7 in Atlanta. Hauter, sponsored by Yard-Man by MTD, is making the ride to raise over \$200,000 for the Keep America Beautiful Great American Cleanup. Brad, 33, is the soccer coach at St. Mary's University in Minnesota. You can follow his ride at www.yardman.com.



Fill your gas cans the correct way or risk a kaboom!

News reports tell of fires spontaneously igniting when people attempted to fill portable metal or plastic gas cans. The situation linking these events was that the cans were either in the back of a pickup truck equipped with a plastic bed liner or in a car, set on a carpeted surface. Serious burns and other injuries have resulted.

The cause of these fires is the buildup of static electricity. The insulating effect of the bed liner or carpet prevents the static charge generated by gasoline flowing into the container from grounding. A static discharge to the grounded gasoline dispenser nozzle can cause a spark and ignite the gasoline.

When filling a portable gas can, you can dissipate the static charge by: placing the can on the ground before filling; touching the with the gas dispenser nozzle before removing the cover; and keeping the dispenser nozzle in contact with the can while filling.

For more information contact the National Institute for Occupational Safety and Health at 800/35-NIOSH or check it out on the web at www.cdc.gov/niosh/homepage.html.

Way to go Bert!

Congratulations to Dr. Bert McCarty, a frequent contributor to LM. McCarty received the "Outstanding Young Scientist Award" from the Weed Science Society of America, the highest society award, for a scientist 40 years of age or younger. McCarty was selected for his research on weed management in turfgrass.

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