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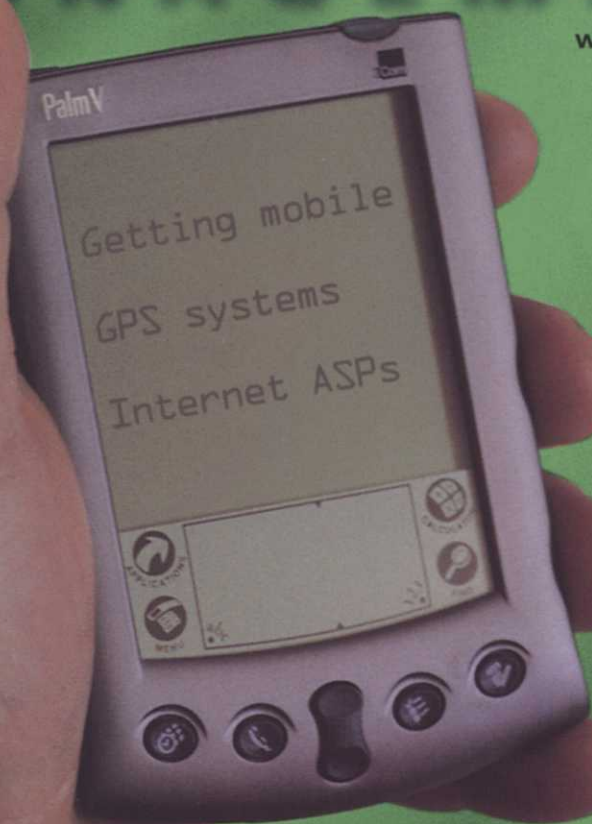
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Circle No. 104 on Reader Inquiry Card

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BY SUE GIBSON / EXECUTIVE EDITOR

How high tech won't help

After five minutes in a Best Buy store, I've usually found three or four things I "must" have — new software, a portable phone, some audio gizmo. Tech does that to you. Tech toys change constantly, luring us with more memory, more features, smaller size, sleeker design — you name it. They're almost irresistible.

Two things about tech amaze me: the quick and constant innovation and the speed of obsolescence. My four-year-old laptop works fine but it's almost embarrassing to admit it doesn't even have a built-in CD-ROM drive. And it only has 100 MHz. Get serious!

Many of us mistakenly think that because our tech toys are faster and more versatile, they'll make us smarter, faster and more productive. That's the promise, anyway.

If you've actually used every feature in your Word program, please give me call. And if you've never gotten sidetracked using the Internet, call me also. I want to meet you. Even learning the new features of a software upgrade takes lots of your time and effort, not to mention your employees'. I know what you go through when you completely change your computer systems — a hassle of the hundredth magnitude.

Tech's here to stay

Let's face it — tech is taking over. In response, we've focused several articles on new technology developments for your "mobile" office (page 24); new Internet business services that might solve some of your problems (page 36); and GPS systems that may soon make your management chores much easier (page 32).

But remember, it's so tempting to think that tech is

all you need. It may be fun to use your palm device on the fly, but is it really the most useful thing you can buy for your organization?

I love talking with our editorial advisors, because they have so much good sense. Dwight Hughes, of Dwight Hughes Nursery in Cedar Rapids, IA, purposely keeps his organization small and constantly finds business growth through efficiency.

What does he think about the new tech toys? Dwight uses palm devices and computers, but he gets enthusiastic about his real love — landscape machinery. He tells me about his visits to landscape operations full of gleaming computers and office setups.

But Dwight doesn't want to see that. He wants to know why the owners haven't bought equipment to help their crews work smarter, easier, faster. He wants to know why megabytes are a more important measure than revenue dollars/employee. He wants to know why the production crews are in the 19th century and the front office is in the 21st.

It's a matter of priorities and situations, and smart landscape professionals remember that production is the core of our business. If tech tools make you more productive, go for it. But if your crews need help being efficient, take another look at ground level. Your best investment might be in iron, not silicon.

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

We mistakenly think that because our tech toys are faster, they'll make us smarter, faster and more productive. That's the promise, anyway.



events

WHAT, WHEN & WHERE

August

23 Michigan Turfgrass Field Day / Lansing, MI; 517/321-1660

23 Indiana State Lawn Care Association Summer Field Day / Carmel, IN; 317/575-9010

September

7-8 Southwest Horticultural Trade Show / Phoenix, AZ;
Sponsored by the Arizona Nursery Association; 480/966-1610

12-13 Turfgrass and Landscape Research Conferences and Field Days / Riverside, CA; 909/787-4430

13 Hampton Roads Agricultural Research and Extension Center Field Day / Virginia Beach, VA; 757/363-3906

14 Lawn and Ornamental Conference / Dallas, TX;
Sponsored by the Texas Chapter of the PLCAA; 800/458-3466

14-16 Northern Plant Symposium / East Lansing, MI; 800/879-6652

19-21 Turf and Landscape Field Days / Blacksburg, VA;
Sponsored by Virginia Tech and the Virginia Turfgrass Council; 540/231-5897

26-27 Trees, People and the Law National Conference / Nebraska City, NE;
Sponsored by the National Arbor Day Foundation; 402/474-5655

28-30 Tree City USA National Conference /

Nebraska City, NE; 402/474-5655

October

1-4 Society of Municipal Arborist (SMA) Year 2000 Conference / Lansing, MI; 517/482-5530

4 Washington Landscape Trade Show and Field Day / Puyallup, WA; 800/833-2186

4-5 Turfgrass Landscape and Equipment Expo / Costa Mesa, CA; 818/764-5016

18-19 Western Nursery and Garden Expo / Las Vegas, NV; 800/748-6214

20-22 New Jersey Shade Tree Federation's Annual Meeting and Expo / Cherry Hill, NJ; 732/246-3210

23-27 Hawaii MIDPAC Horticultural Conference and Trade Show Expo / Hilo, HI; Sponsored by the Hawaii Export Nursery Association; 808/969-2088

25-28 International Maple Symposium / Lisle, IL; 630/719-2468

28-30 American Society of Landscape Architects Annual Meeting and Expo / St. Louis, MO; 202/898-2444

November

1-3 Eastern Regional Nurserymen's Association Expo 2000 / Atlantic City, NJ; 800/376-2463

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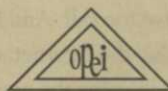
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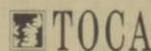
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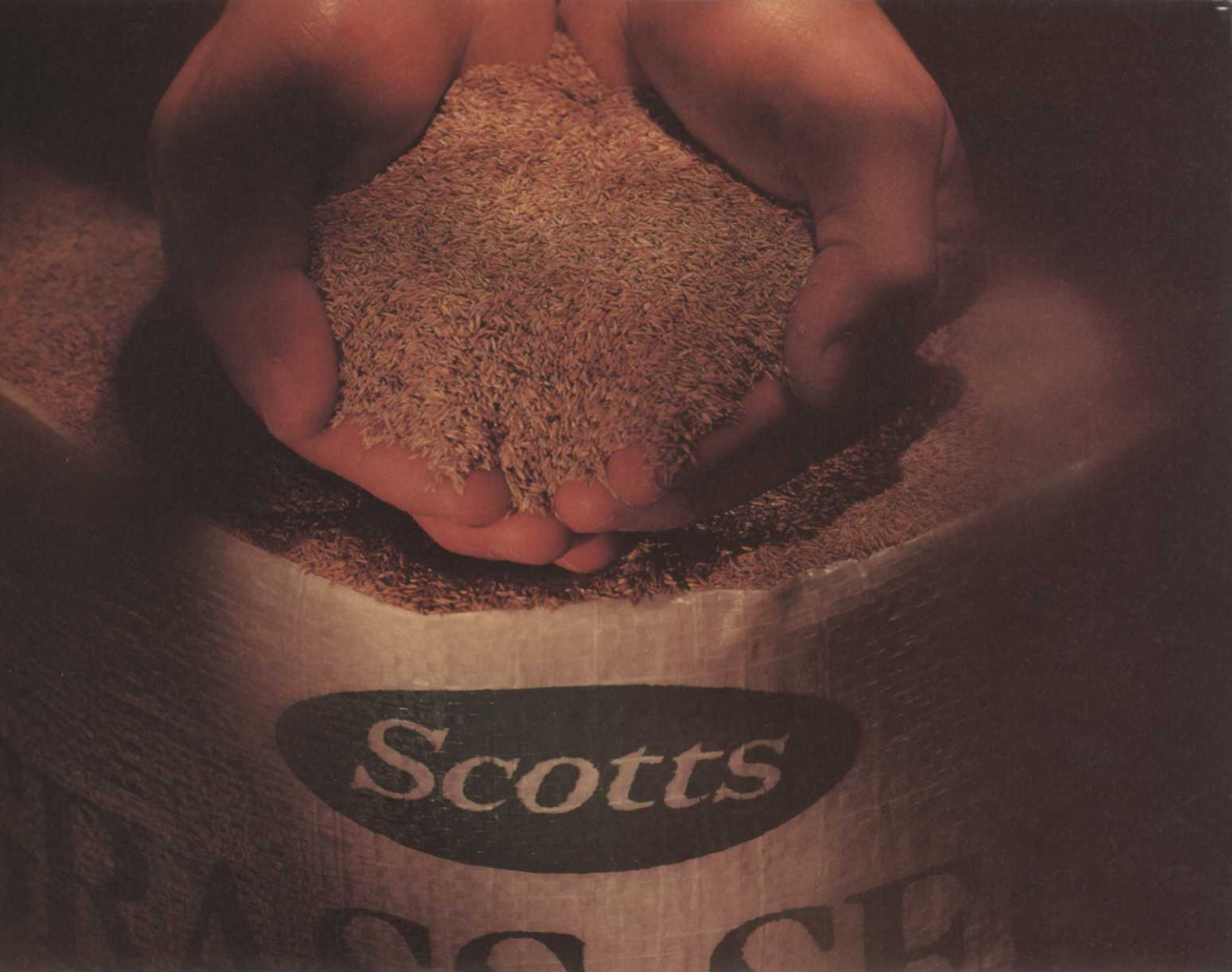
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Circle No. 107 on Reader Inquiry Card

BY RON HALL / SENIOR EDITOR

Boring? Are you kidding?

The Sonnen family — Rudy, his wife Paulette, and their sons, Cory and Ty — started Western Productions, a seed company, about six years ago. Rudy had already logged over 20 years in the turf and forage seed business.

The Sonnens work elbow-to-elbow in a small building just outside the small town of Woodburn, OR. There's nothing fancy about their offices. They roll up their sleeves when they walk through the front door.

The day I visited their operation, you didn't have to wipe the dirt from your shoes, the telephone jangled incessantly and everybody seemed to be moving in all different directions at once. And this was two or three weeks before the "busy" season, which usually kicks off with seed harvesting about July 4.

When somebody remarks that something is about as boring "as watching grass grow," they probably haven't spent much time in the Willamette Valley in western Oregon.

If they had, they would know that many people here — like the Sonnens — spend a lot of their time watching grass grow. And they can, in fact, get darn excited about it. Growing grass seed, both turf and forage, is the livelihood of several thousand people in this valley.

While grass seed is grown elsewhere in the United States and Canada, northern Europe and even New Zealand, the Willamette Valley is ground zero for most of the world's cool-season turf seed, including almost all of its perennial ryegrass seed.

For this reason, you should be aware of the valley, too, which gets its name from the Willamette River that meanders northward, mostly through farmland, before emptying into the mightier Columbia River

near Portland. The valley produces an amazing variety of crops, at least to a Midwesterner like myself — everything from berries to hops to hazelnuts.

But the production of grass seed — half a million acres worth — is, by far and away, King of the Crops here. It's Oregon's third most valuable agricultural product, surpassed in value only by nursery stock and cattle.

There are good reasons why this valley is such a prime location for growing grass seed, including climate. The valley is bounded on the west by the Coast Range and by the higher Cascade Mountains in the east. Winters and springs are generally cool, but rarely bitter cold, and moist. Summers are usually hot and dry.

But the biggest reason is the development over the last 50 years of an amazing infrastructure which this season will harvest, package, inspect, label and ship about 800 million pounds of grass and legume seeds. Much of this takes place in a period of about two months.

Growing grass for seed, even in good times when the economy is rolling and demand is high, is, like all agriculture, a tough business that takes tough, determined people like the Sonnens and the many others like them in the valley.

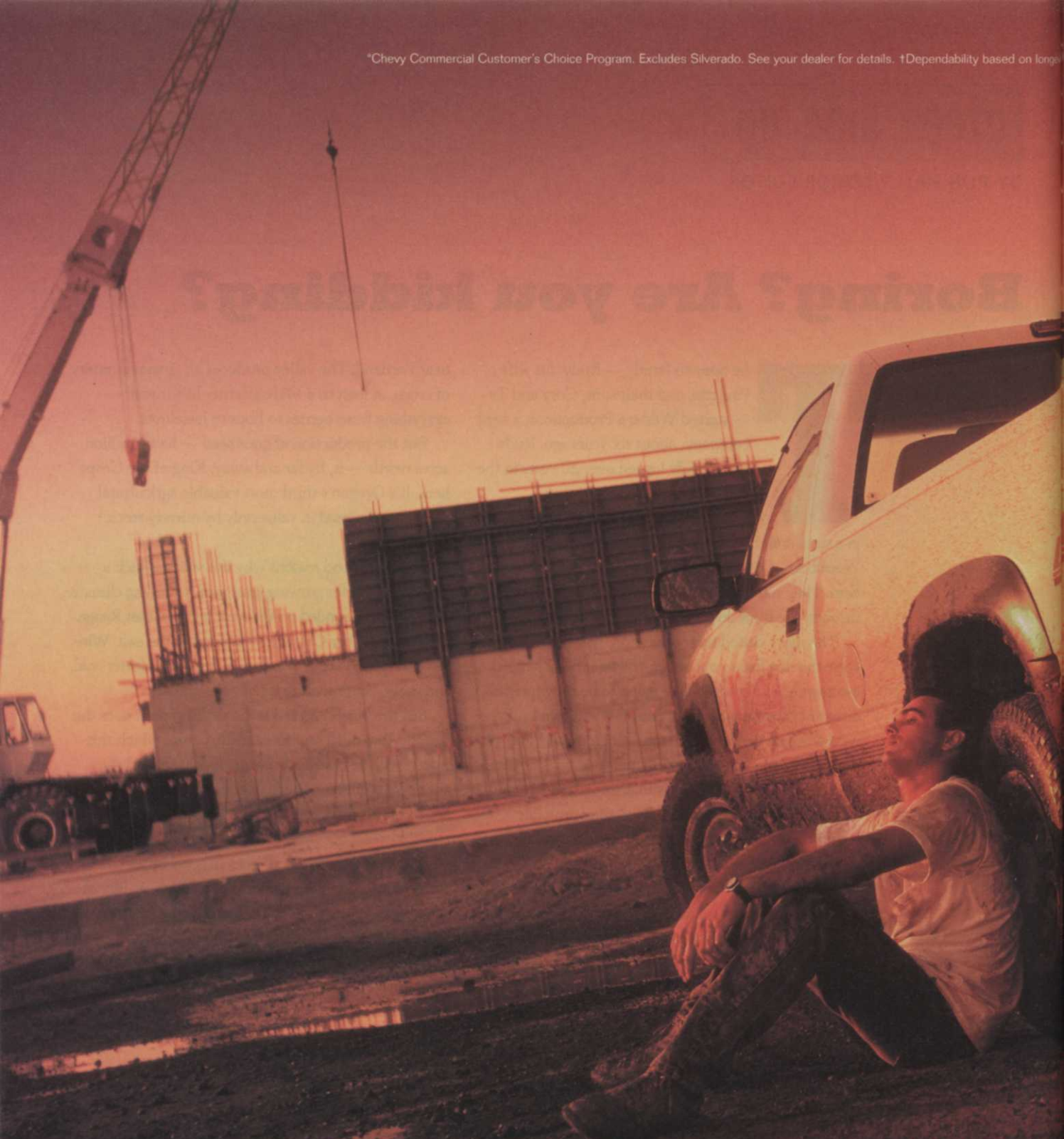
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"Operating headaches are part of the industry, but it's how they're handled and how they're kept from reoccurring that makes a company run smoothly."



Don't plan, and go nowhere

There seems to be a common question that Green Industry owners and managers constantly ask: Is all this work and worry worth it? Nothing ever seems to go right.

Operating headaches are a part of the industry, but it's how they're handled and what solutions are used to keep them from reoccurring that makes a company run smoothly and efficiently. The type and volume of these headaches occur at all levels of your business (from the field to the office) and affect companies of all sizes. Through pre-planning, you can avoid some of these.

But pre-planning is often the last thing a fledgling business owner does. Here's a typical landscape and maintenance firm start-up scenario and its problems.

John's stab at success

John works as a field foreman and sees that the owner of the company drives a nice car, has a nice house and takes great vacations. John tells his wife that through his efforts, the owner is making lots of money and he's not getting paid what he's worth. They decide to start their own company so they can make all that money for themselves.

At this point, the headaches begin. They borrow start-up money and purchase trucks, equipment and office equipment. They are now in a cash shortage but don't know it yet.

John sells the work, installs the work, fixes the equipment and more. His wife tries to raise the family and run the office simultaneously. At first, they can

manage the daily affairs because the company is so small. It's not difficult to get work because John works on every project himself, and therefore the quality of the work is high and the price is low.

But soon John has so much work he has to hire a foreman to run the crews while he sells work. The office work becomes too much for his wife, so they hire an office staff. Cash flow is at a critical level — they scarcely cover payroll and get way behind with payments to their vendors. Soon, they can't pay themselves a salary. It now becomes harder to get equipment fixed and buy material for jobs due to the cash crunch.

The office staff doesn't know what information to track so they track everything, but John can't understand why he's losing money when his company is so busy. His employees are not producing the same quality work, and his customers begin to complain. Some laborers don't show up every day, causing scheduling problems. John works harder than ever and makes less money.

After three years, John closes the business. He and his wife never developed a plan for managing the company's growth or proactively (not reactively) running the company.

Unfortunately, this is typical in our industry since landscaping and maintenance seem so easy. John still can't understand why his former boss, Sandy, was doing so well. Next month, we'll see what made Sandy's company so successful.

— Jerry Gaeta is a partner with The Good Earth Inc., Mt Pleasant, SC, and a Green Industry consultant. He can be reached at 843/884-6114.



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Albizo leaves ANLA

Joel Albizo left the American Nursery & Landscape Association (ANLA) in July to join PlantAmerica, a green industry technology firm. He joined the ANLA in 1988 as director of public relations.

Griffin markets new fungicide

VALDOSTA, GA — Griffin LLC, a joint venture company of Griffin Corporation and DuPont, will market its own brand of chlorothalonil fungicide, to be sold under the trade name Concorde SST.

BASF responds to EPA study

RESEARCH TRIANGLE PARK, NC — As a result of the tolerant reassessment process conducted by the EPA under the Food Quality Protection Act (FQPA), BASF Agricultural Products has agreed to amend usage patterns for the broad-spectrum fungicide Curalan

continued on page 18

CLIPPINGS

ABT saga drawing to a close

LAS VEGAS, NV — The saga of the bankruptcy of AgrioBioTech Inc. (ABT) is finally coming to an end, and the U.S. turf seed industry is hoping for more stability.

The bankruptcy court, located in this desert city, sold most of ABT's grass business to a group consisting of former ABT president Kenneth Budd, Dick Olson of Proseed Marketing, Jefferson, OR, and Idaho-based J.R. Simplot Co. The price was \$24.5 million.

As of press time, it wasn't clear how the three parties would split the assets of the failed seed company, but split them they will, sources in Oregon told *Landscape Management*. The new owners reportedly began entertaining offers from other seed companies for certain varieties soon after the announcement was made, the industry source said.

The purchase price, along with the sale of most of ABT's forage business to Research Seeds Inc., should generate about \$60 million. With another \$20 million due from seed inventories and accounts receivables, the court expects to generate \$80 to \$90 million to help pay off farmers and other creditors who took big hits when ABT declared bankruptcy this past January.

David Nelson, of the Oregon Grass Seed Council, said that the resolution of the bankruptcy — along with management of ABT's inventory by experienced seed people — "will help bring stability to the industry and to the market."

ABT, with sales of less than \$1 million in 1992, went on an extended buying spree through the 1990s and bought up over 40 turf and forage seed companies, most of them family-run operations. The company grew to \$200 million in sales by 1999 but ran out of capital and declared bankruptcy this past January. The failure left behind a lot of unhappy farmers and other creditors, and lots of turf seed looking for buyers.

Ryegrass — what a bargain!

BY RON HALL/
SENIOR EDITOR

If you purchase large quantities of perennial ryegrass seed — perhaps for overseeding warm-season grasses or for establishing new lawns — you'll love this story.

Perennial ryegrass seed is a bargain this season. While not all varieties are available, it may be a long time before you will see prices this low for many other of your favorite varieties of quality ryegrass seed.

Here are some reasons why:

▶ the large amount of acreage planted for ryegrass turf seed in 1998. The number of acres of perennial ryegrass harvested in



Turf managers will get a ryegrass price break

Oregon rose from 137,750 acres to 186,500 acres from 1995 to 1999. Production rose from 170 million lbs. to 279 million lbs. of seeds in the same period.

▶ the use of the plant growth regulator

continued on page 17

continued from page 16

Palisades (Primo) on production fields which increases seed yields by about 30%.

► a sizable carryover of the 1999 ryegrass crop was exacerbated by the January bankruptcy of the huge turf and forage grass consolidator AgriBioTech. Some growers who had been under contract to grow AgriBioTech varieties found their barns full of 1999 ryegrass seed as this year's harvest began. (See related article on AgriBioTech, page 16.)

New lawns, overseeding

In general, Oregon farmers have been boosting ryegrass seed production to meet the demands of the overseeding market. Golf courses in the southern United States routinely overseed perennial ryegrass into their courses for winter color and wear tolerance. The home and commercial construction boom in the 1990s also bumped up turf seed demand.

But nobody in the Willamette Valley (where most of the perennial ryegrass seed is grown) is happy with the oversupply of this one species of seed this season.

"It's definitely a buyers' market," said Phil Ward, director of the Oregon Department of Agriculture, during a June visit to the new Barenbrug warehouse/packaging facility in the Valley. "Basically, every company has carryover of perennial ryegrass. This happens about every four or five years."

Look for the seed companies and the farmers who they

contract to grow the seed to take steps, including cutting acreage, to get supply better in line with demand.

Seed crops in demand

Don't expect soft prices in other species of turf seed this season in spite of average to relatively good crops in the Pacific Northwest.

"The crop of common and proprietary bluegrass is estimated at approximately 80 to 85 million lbs.," reported Gayle Jacklin of Simplot Turf and Horticulture, headquartered in Post Falls, ID. "Overall yields will be average to slightly above average. We are estimating carryover pounds to be the lowest on record, about 6 million lbs. Traditionally, 10 to 12 million lbs. are carried over."

Demand for Kentucky bluegrass has been high. "During November and December ('99) and extending through April and May, we experienced a movement of proprietary bluegrass like I have not seen in 20 years," said Tom Stanley, marketing director of Turf-Seed, Inc., Hubbard, OR.

Expect firm prices for turf-type tall fescue also. Because of a very dry 1999 autumn, Missouri's Ky-31 tall fescue production was estimated to be off by about a third. Shortfall will increase demand for other varieties — keeping turf-type tall fescue prices firm.

"The Ky-31 crop looks to be less than 100 million lbs. for 2000," said Stanley. "Compared with a 140-million lb. crop in 1999, the 2000 Ky-31 crop will be significantly less."

The John Deere Worldwide Commercial and Consumer Equipment Division recently celebrated the production of the first Gator® utility vehicle at the company's new \$30 million, 300,000-sq-ft. facility located in Williamsburg, VA. Here, Lou Gomez, project manager, John Deere Vehicle Group (driver's seat) and Al Smalls, technician, display the first Gator utility vehicle for local government officials, members of the local business community and all John Deere Vehicle Group employees at a celebration marking the first production on Thursday, June 15, 2000.



Exmark launches new Web site

BEATRICE, NE — Exmark Manufacturing Corp. joined the growing number of Green Industry companies entering cyberspace by recently launching its new Web site: www.exmark.com.

Exmark national marketing manager John Cloutier believes the site will enable his company to provide better customer service. He also hopes the company's Internet efforts will spur on dealers to take advantage of the Web.

"A key element in our Web initiative is to act as a facilitator in getting our dealer network to utilize the Internet as a sales, customer service and communications tool," he said. "Our goal is to have 100% of our dealer and distributor group with Internet and e-mail capabilities."



continued from page 16

in professional turf and ornamentals. Curalan uses will continue after 2000 in golf course and industrial turf management areas.

Vendex® OK for ornamentals

VALDOSTA, GA — The EPA reinstated application to ornamentals for the Vendex 50WP-T/N/O miticide label.

Toro aiding Audubon program

RIVERSIDE, CA — Design a sprinkler, help wildlife. That's the message The Toro Company sent as it announced a program aimed at helping Audubon International's Cooperative Sanctuary System. For every irrigation design submitted to Toro Irrigation by Oct. 1, 2000 that employs the 570Z PRX Series spray sprinklers, Toro will donate \$100 to Audubon's Backyard Program. Designers are encouraged to submit designs. Send them to: The Toro Company, Toro/Audubon Partnership, 5825 Jasmine St., Riverside, CA 92504.

DTN partners with ESRI

MINNEAPOLIS, MN — DTN Kavouras Weather Services, a subsidiary of Data Transmission Network Corp. (DTN), Omaha, NE, has partnered with the Environmental Systems Research Institute (ESRI) to provide real-time weather information in ESRI format that can be used with GIS software.

Users will be able to better calculate and communicate when and where a serious storm will impact a specific area.

[CLIPPINGS]

PLCAA polls members on Dursban limit

According to a recent poll conducted by the Professional Lawn Care Association of America (PLCAA), a little over half of landscape professionals say the loss of the insecticide Dursban will affect their business. Most say they haven't received any complaints from customers, and a large percentage are concerned about the future ramifications of government regulation. (See related story, page 44.)



The poll was sent to 605 regular PLCAA members and received 16% response. Here's how each member responded to the three questions asked in the poll:

- ▶ Will the eventual loss of Dursban affect your business? Yes: 55% No: 45%
- ▶ Have you experienced customer complaints, questions and confusion about the negative publicity surrounding the Dursban story? Yes: 24% No: 76%

The strongest response came with the question: How are you conducting business in the face of losing this product and potentially other products due to environmental regulations? Most members question the reasoning behind such decisions and whether the EPA is more politically than environmentally motivated. Some said they have no Plan B, but displayed resiliency by saying, "Business will go on."

The poll also revealed a discrepancy in members' knowledge of insecticides. Many feel that the loss of Dursban is a minor issue because of all the other products available. Other responses showed that some members didn't know of any alternative products.

Those who said the loss of Dursban would affect them cited a lack of other effective insecticides and possibility of lower customer satisfaction when a less effective insecticide is used. Others cited the low cost of Dursban vs. other insecticides. Those who said they weren't going to be affected argued that they hadn't used Dursban in years, or had never used it at all.

The small number of members who said they had received customer complaints blamed the news media for presenting an unbalanced story of the reasoning behind the ban. Several mentioned that the calls they got were from customers who were not really anti-Dursban, but simply concerned about the overall safety of lawn care products.

Eco Soil, Simplot amend purchase deal

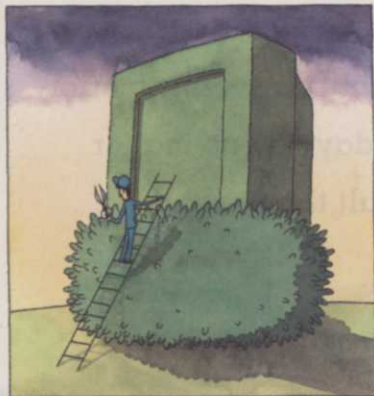
Eco Soil Systems, Inc. (ESSI) amended the agreement to sell its Turf Partners subsidiary assets to the J.R. Simplot Company. The new agreement calls for a fixed purchase price for Turf Partners' assets, payable in cash at the closing of the transaction.

The total purchase price includes a payment to ESSI of \$23 million, assumption of Turf Partners' bank debt of \$17 million and assumption of Turf Partners' liabilities associated with its existing vendors, contracts and leases. Under the amendment, ESSI will not be required to deliver a tangible net worth of \$3 million nor repay at least \$7 million of inter-company debt to Turf Partners.

Simplot agreed to provide ESSI with a \$2 million letter of credit and a loan of \$3 million to be used as working capital. The \$3 million loan is to be repaid at the close of the transaction.

Eco Soil and Simplot have also agreed to several distribution, supply and field trial agreements, including Simplot's purchase of a minimum of \$5 million of Eco Soil FreshPack® product over the first two years of a five-year agreement.

Web-wise operators



Survey respondents *Landscape Management's State of the Industry Report* are starting to frequent the Internet in record numbers. Our survey showed that one in five (21%) of respondents' organization have their own Web-sites and that more than half (53%) use the Internet for business-related purposes.

Grounds managers in our survey are by far the most active Internet users for business, with 71% of them reporting, compared to landscape contractors (55%) and lawn care companies (46%).

Cyber-savvy landscape pros

Bozzuto Landscaping's site attracts hundreds of hits per day from current and potential customers. Searches for potential customers, product research and limited buying also occupy users. But one of the best uses benefits the company directly, says Tom Davis, president. "People can apply for a job with us online. We've already hired several people from our Web-site applications."

Wayne Richards, COO of Cagwin & Dorward, also sees a world of opportunity online: "The Internet will become a primary communication tool for the green industry within five years. If you think about the impact the facsimile had on the speed of communication, look at the possibilities of the Internet."

Several landscape managers noted the advantages of using Web-sites to communicate with residential customers.

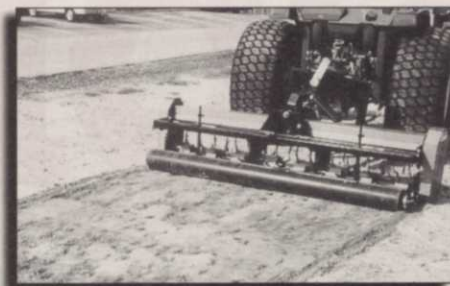
"If we were residentially driven, the Internet would be good for marketing," says Neil Thelen, president of Landmark Landscapes. "The residential customer need special attention."

And the face-to-face relationship with dealers still rates high, despite some ventures into Internet buying. Gary Nichols of Twin Oaks Landscaping is typical of many landscapers checking plant supplies and occasionally buying office supplies online. But he still prefers to buy equipment from local vendors. "They're quality people with whom you want to do business," he notes.

Don't look for Internet use to decrease in the future. Rick Randall, CEO of Randall & Blake Inc., sums it up: "Two years ago, we expanded to a wide area network bringing all our offices online and giving us Internet access. Now, we are ordering materials, downloading and sending plans, negotiating change orders, you name it. We will be doing most of our business on the Web within the next couple of years."

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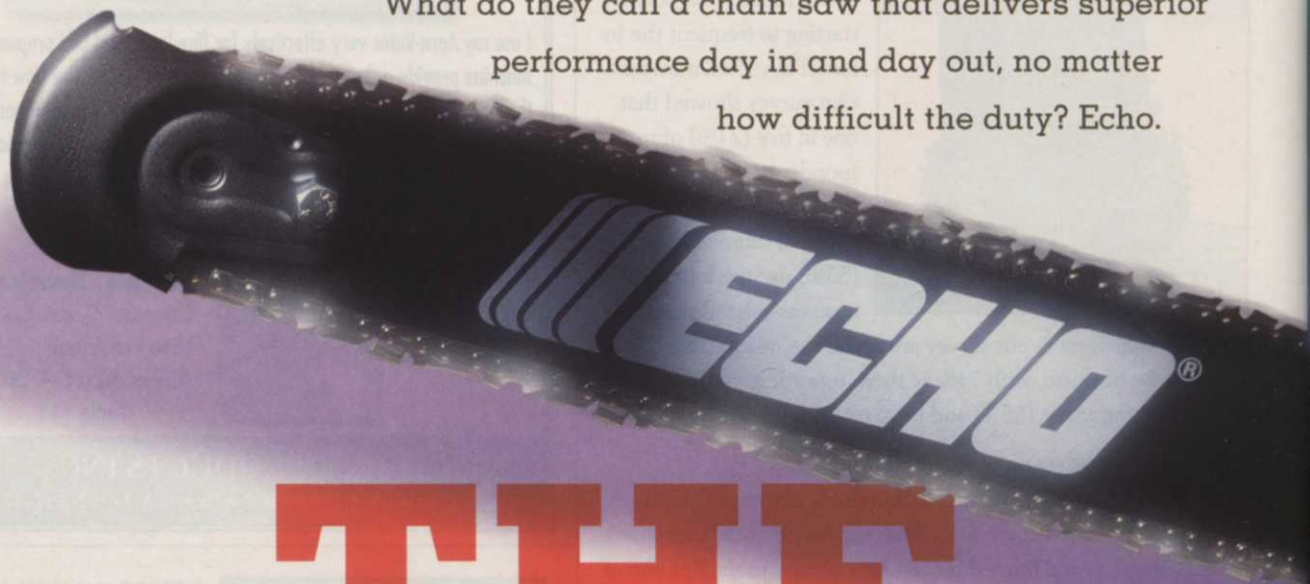


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People & companies

BlueBird International appointed **Carla Herron** director of marketing and business development, **Bruce Gibson** director of operations and **Richard Moran** engineering manager.



Ferris Industries named **Hal White** vice president of marketing.

Bayer Corp.'s Bayleton® 50 Fungicide is now la-

beled to treat gray leaf spot (*Pyricularia grisea*).



Simplot Turf and Horticulture appointed **Bill Whitacre** president.

Irritrol Systems hired **Keith Shepersky** as category manager for the stand-alone controller product line.

Encore Power Equipment recently added Chas.

J. Smith and Co. of Jersey City as a distributor for its commercial mower line. The territory covered by Chas. J. Smith includes New York, Long Island and New Jersey.



Bio-Green, Las Vegas, NV, has appointed **James E. Smith** as the new director of retail sales operations.

The Green Industry Expo Board elected **Kevin O'Donnell** of Villanova University as president, **Rick Doesburg** of Thornton Landscape Services as vice president and **Jon Cundiff** of Turf's Up Lawn Service as secretary and treasurer.



Pursell Technologies named **John Johnson** director of marketing.

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It seems like everywhere you go these days there's another dotcom player in the lawn and garden industry popping up promising greener pastures.

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Get mobile with tech

Getting mobile has never been easier with new tech tools designed to increase your efficiency at home, the office or the truck

BY JASON STAHL /
MANAGING EDITOR

It's no secret that landscape professionals are busy these days. It pays to be everywhere at once, to get back to clients instantly, to be in constant contact with crews...and to do all of this anywhere. Let's face it: landscape work is outside work, so anything that can get you out of the office but maintain your level of productivity is a good thing, right? There's a host of hot technology toys you can use on the road or in the office, and they're not only increasing productivity and efficiency but boosting the bottom line.



Efficiency is Job 1

When you talk high tech toys with Dwight Hughes, president of Dwight Hughes Nursery in Cedar Rapids, IA, the first thing he'll tell you is that they don't even make his top three list of most valuable tools.

"My most valuable high tech tool is my Kubota backhoe loader. My second most valuable high tech tool is my Power Trac 1430 with all the attachments," Hughes says. "Make no mistake — we make money by putting plants in the ground."

But Hughes didn't build an industry-wide reputation as an innovator by being hard-headed. He has recognized how new technology can help landscape managers do their jobs better.

"You have to decide what's going to be good for your own operation," Hughes says.

In his case, it was PalmPilots and cell phones. He has four





Dwight Hughes

PalmPilots, which are located in different places: his desk, his wife's desk, his nightstand and his truck. So far, having them on the road has been invaluable.

"They have all of our customers' addresses and phone numbers in them," Hughes says. "They are very simple, store a lot more information in a small space and help me manage my time more effectively."

Their cost wasn't an issue with Hughes, as money, he said, comes in third in his decision making process. "The expense wasn't so much an issue as trying to find the correct version."

While he can't transfer invoice information from the PalmPilot to his computer en route to the office, he can once he gets there by plugging it into the computer.

One thing Hughes and his employees can do while driving is make phone calls, since each truck has a mounted cell phone. And they're mounted for a reason.

"I prefer not to be obsessed with the phone," Hughes says. "We try not to abuse it. A lot of people aren't being efficient in their usage. When we make a call, we make sure it is important and has some value to the sender and receiver."

When the phone rings, it activates the truck's horn so someone is alerted. Usually, the call is about client concerns, a change in a job or an update on a job completion.

If anyone appreciates cell phones, it's Hughes. He remembers staying on the phone at night from one to two hours and having to stop to use pay phones while on the road. Then, he bought radio phones for \$3,000 apiece that cost \$.60 per minute to use. "Now, those two hours are saved every night," he says.

Hughes doesn't have a Web site, and it's not because he hasn't had time to construct one. "My customers are not going to react to a Web site," Hughes says. "They react when they see our trucks in their neighborhood or see me at a civic event."

Hughes' rule for buying technological tools is simple: if they help you become more productive, then they're worth it. He says busi-

nesses have to be wary of being blinded by the technology craze.

"A lot of leadership people in this industry have pagers, cell phones and fax machines, while the guys on the job have nothing to work with," he says. "That's why they're not reaching their goals."

Mobile with a purpose

With a large landscape company with four satellite offices in Laurel, MD, being able to communicate wherever you are is important to Bozzuto Landscaping. Each manager has his own PC at the office, and half have company-supported computers at home.

"We have three in-house computer people to support our managers at home, plus we give them all the software and hook them up so they can operate, get e-mail and run bids," Davis says.

Critics might say that all those computers add up to too much office time and not enough field time. That's why Davis says that in October, the PCs will be phased out in favor of laptops his managers can take on the road to work up estimates and contracts.

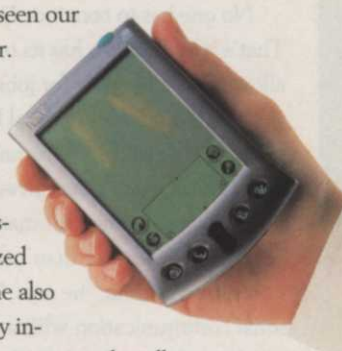
Each branch also has a digital camera, which managers take with them in their trucks to snap photos of properties. A designer then downloads it into a computer and, through the use of design software called Micrographics, adds landscape plantings to show a client how the property might look prior to doing any physical work. All of the designing is done in the office, sometimes in front of a client.

"It has been a huge sales tool for us," Davis says of the company's digital design services. "We've seen our enhancement sales grow at 20% a year. How much of that is attributable to designing is hard to say, but it's a lot."

All 10 managers are supplied with PalmPilots to help them keep their customer lists, leads and schedules organized while driving from site to site. Everyone also has a Nextel phone, which has not only increased communication but saved the company a bundle.

"The Nextel phones eliminated our pagers because we can get text paging. They can also send us messages rather than calling us,"

continued on page 26



"We get one-third of our business from getting back to clients quickly." — Larry Brinkley, president, BLT Landscape Services

"You have to integrate all of this technology carefully because there is a lot of junk out there. There are cool and fun things, but whether they can be used to make your operation more efficient is the question."

— Bruce Allentuck, owner, Allentuck Landscaping



Tom Davis

continued from page 25

Davis says. "We were saving about \$1,200 a month, and those savings have increased since then because we now have more units."

Even though Bozzuto's truck mileage is tracked manually by a fleet manager who regularly e-mails his reports, the company is currently looking at tracking devices that work off the Global Positioning System

(GPS). The GPS involves a terminal in the truck that would read coded signals from satellites and determine its location.

"With increased fuel costs, it's huge to be able to conserve wherever possible," Davis said.

No one has to convince Davis about the Internet's power. That's why Bozzuto has its own Web site: to market the company, allow people to apply for jobs on-line and sell used equipment.

"We'll send the potential buyer a digital picture of the equipment," Davis said. "We recently sold 11 pieces of equipment and shipped them six states away."

Davis encourages his managers to stay out of the office as well. "E-mails are quicker than having lengthy conversations, so sometimes it saves time," he says. "In some cases, if you take out personal communication with a client, it's a problem. Some love talking through e-mail, others don't."

Davis believes there is such a thing as relying on technology too much. "We realized that the people who needed to see certain things like job performance and bids didn't see them because it was all done on computers," he says. "We now have tracking boards or scheduling boards so crews can see whether they're winning or losing."

Apt to try anything

Larry Brinkley, president of BLT Landscape Services, Dallas, TX, says he has a liberal approach to technology, with a "try anything"

attitude. And it's no surprise, given that he conducts half of his business on a cell phone, usually on the go. BLT used to have radios in all of the trucks, but now it has the Nextel communication system.

"Radios were okay, but now we can get Johnny on the spot and handle things instantaneously," Brinkley said. "We do pay for air-time, so the expense for calls has gone up, but our overall efficiency has improved."

Brinkley says his \$2 million company doesn't have laptops yet, but will soon because he feels everyone would be more productive if they could take their computers on the road. He is eager to get those laptops so design software can be taken on the road and customers can see instantly what the addition of a tree or mulch bed in their yard might look like. He says his design software, his is Green Thumb, has accounted for a 37% increase in sales.

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Tech tools—one step at a time

Before deciding whether to invest in the latest technology for your operation, ask yourself a few questions:

1. Is it right for my service mix?
2. Is it cost effective?
3. Can it be as effective outside the office as inside?
4. Will it help the overall operation become more efficient and productive?
5. Is it a top priority now or can it wait?

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"I prefer not to be obsessed with the phone. We try not to abuse it. A lot of people aren't being efficient in their usage. When we make a call, we make sure it is important and has some value to the sender and receiver." — Dwight Hughes, president, Dwight Hughes Nursery

continued from page 26

Responding to people quickly, either on the road or at the office, has a huge impact on business, says Brinkley. "We get one-third of our business from getting back to clients quickly. We get calls in the spring and fall from people who say we were the only one to call them back." He averages about 20 e-mails a day, and says he has sold two or three large jobs just through e-mail.

"We don't just communicate with them through e-mail," Brinkley says. "We make sure our foremen talk to clients on site or leave a note explaining what we're doing. If there's a problem, we call instead of e-mail."

Changing times

When Bob Rennebohm bought Heard Gardens Ltd. of Johnston, IA, nine years ago, the company had no computers, cell phones or fax machines. "If I look back, I see that we haven't grown much with people but we have with equipment."

Now, all project managers have computers at work and at home where they can log into the company network any time. Rennebohm himself has a laptop, which has helped him manage the company's finances and communicate through e-mail either on the road or at the office.

The company, which has 42 employees and grossed \$1.7 million last year, recently began using design software, SoftDesk Landscape Assistant, to boost sales.

Rennebohm is currently looking to buy PalmPilots to help all crew supervisors manage their time more effectively. He's also looking to acquire the Asset software program by the end of the year to download crew work reports and job times.

Heard has a comprehensive Web site with the primary purpose of providing information. However, Rennebohm hinted at selling landscape plants online one day through a retail garden center, not to mention his world famous lilacs, which are currently ordered through the mail.

Rennebohm has also investigated using GPS, but decided it

wasn't for his company. "What they're working on right now is integrating the equipment right in the cab of the truck," he said. "The pricing right now isn't cost effective for what we're doing."

On the verge

Bruce Allentuck, owner of Allentuck Landscaping, Gaithersburg, MD, recognizes the value of designing landscapes via computer. It's one of the things, like doing estimates, for which his managers use their computers.

"It's a time saver because it allows you to move things in the landscape around quicker," Allentuck said. "Hand drawings are okay, too, but doing it on the computer presents an air of professionalism to clients and prospective clients." He says the use of design software to create virtual landscapes has boosted sales, especially of big jobs.

What also helps with sales is access to hortocopia.com, a database of 3,800 plant pictures. Allentuck and his managers can download the pictures and print them out in color on glossy paper, ready for the client to view. When they add laptops in the future, they will be able to take them in their trucks to make instant sales on site.

He is currently exploring PalmPilots and the GPS, but is not ready to commit just yet.

"You have to integrate all of this technology carefully because there is a lot of junk out there," Allentuck said. "There are cool and fun things, but whether they can be used to make your operation more efficient is the question."

"We absolutely rely on these technological tools," Allentuck said. "We could survive without them only if our competition didn't have them as well."



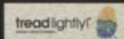
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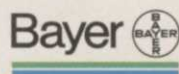
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Circle No. 117 on Reader Inquiry Card

Turf goes 'Space Age'

GPS isn't just for golf courses anymore.
Find out how it will streamline your operations

BY GREGG BRENINGMEYER

Remember when all you had was a citizen band radio to communicate with crews and a hand calculator to price out jobs? All that is changing as the Space Age comes down to Earth. Advances in technology have made cell phones commonplace, while personal computers store business data and calculate job specs at the speed of light. The next phase of change will unfold in navigation technology, mapping from space and machine diagnostics.

Relics of Cold War thinking

Research on satellite navigation began in the 1960s, dreamed up by Cold Warriors. For the commander of a Polaris submarine to launch a nuclear-tipped missile accurately, he had to know his sub's precise location. In 1968, the United States launched 23 Navy Transit satellites — the first navigation satellites — to pinpoint submarine positions anywhere on or under the seas.

The U.S. Air Force pursued a similar idea with the Global Positioning System (GPS). The idea was to place 24 satellites in orbit, which is what the United States did in 1995 at a cost of \$10 billion. These Navstar satellites weigh 210 lbs., look down from a height of 12,000 miles and circle the world every 12 hours. To determine an exact location, readings are needed from four satellites: three for triangulation and one to fix altitude above sea level.

Down to turf

Now that civilians have access to Navstar satellites and GPS, all kinds of interesting projects that can solve chronic problems in the lawn care industry are under development. Here are just a few of the ideas on the drawing board at places like John Deere Special Technologies, a subsidiary of Deere and Company:

1 *You know the exact location of your large mowing machines.* The key word is "embedded." A GPS terminal can be embedded in the engine area of a machine so it can't be removed or disabled easily. The terminal can read coded signals from four Navstar satellites and determine its precise location. A computer screen will show the exact location of every major piece of equipment overlaid on a map of your community so you, as manager, know where every crew is working. You have the "big picture" right in front of you.

2 *You know if something is missing and how to find it.* If a wide-area front mower disappears from your inventory, you can track it down without using bloodhounds. Just snap on your "big picture" screen to locate machines. In the evening, all your machines except one are shown clustered around the shop. And there, on your screen, will be the missing machine at the corner of Main St. and Elm Ave. Send the cops to retrieve your stolen mower.

3 *You can collect important data about crew routes and mowing times.* Connect the GPS to your personal computer, log in and find out all kinds of information about routes that crews take to job sites, time it takes to mow and trim each job and the use of trailers. All this knowledge stored in your computer can be evaluated by smart software, or expert programs that can give you tips on how to load trailers more efficiently and create routes that help crews cover more jobs in a day. The result is increased productivity and improved profitability. Someday, a system such as this will help you price jobs more effectively to counter competition and increase your income.

4 *You can eliminate downtime.* In the not-too-distant future, on-board sensors will monitor key components and high-wear parts to detect telltale signs of fatigue. Engineers currently use stress gauges when testing components for durability, so the next step is logical — build sensors into a machine so that it can diagnose its own problems.



GPS will change the way you allow monitor operations. Better data will help you increase productivity and limit equipment downtime.

But don't stop there — design the machine so it even orders its own parts. For example, when a sensor notices wear on a belt, it can send a message to a dealer who can then deliver the part to you with information about how to install it. Better yet, the dealer can send a mobile service unit to your machine and make the preventative maintenance repair on the spot. The dealer can find the machine through GPS.

5 *You can map jobs from the sky to price more accurately.* It's said that the CIA has spy satellites that can read a newspaper headline from space. Landsat satellites have been mapping the surface of the world for years. Someday, you'll have access to that kind of technology and be able to use satellites to map each job

continued on page 34

continued from page 33

site and determine mowing areas and trimming work precisely. This kind of information will help you price jobs more profitably and determine time-at-job more precisely for higher-volume scheduling.

6 You can spray material with the precision of an eyedropper. Spray units guided by GPS and mapping satellites that monitor soil and plant conditions can help you meet government regulations and document every job.

7 You can make full use of your assets with a total management system. With

satellites tracking movement from space and software keeping track of your costs and revenues, you can sit in front of your "big picture" computer screen and make



Portable GPS units communicate with satellites, giving you constant data for managing.

key decisions with more facts at your fingertips. You can ask the right questions about equipment inventory, parts storage, preventative maintenance and equipment replacement, profitability of each job, overall profitability, cash flow, wages, taxes and insurance. Plus, you can make the important decisions with a sense of confidence.

That's the promise of satellites integrated with computers. The Space Age comes down to turf by giving you more information to help you make tough business decisions with confidence.

— The author is manager of commercial mowing for John Deere, Raleigh, NC.

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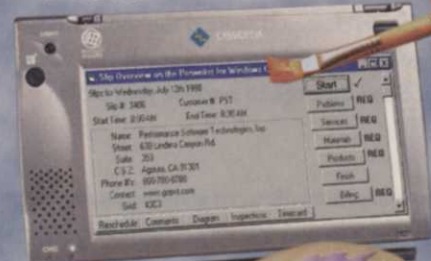
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ASPs:

Outsource services on the 'Net

Application service providers can simplify your operations. Their on-line services let you concentrate on what you do best — service your customers

BY DAVID WEINSTOCK

If your operation has grown quickly, you may discover that keeping your budget on Excel just doesn't cut it any more. Perhaps you're located in an area that doesn't attract many computer professionals, but you need one.

Maybe you have several computer applications already, and the headache of keeping up with new products, as well as product updates, is more than you or your staff can handle. Or maybe your IT operation is just too expensive.

Where can you get the expertise or business management software you need? There's help, and it comes in the form of a new kind of company called an application service provider, or "ASP."

Just ASP for help

ASPs buy network-based business software packages and some combine general computer applications such as accounting, payroll and benefits. Others are more industry-specific and tailored, for example, to equipment maintenance or irrigation scheduling.

An ASP puts those programs on a server (a large computer with techno-gurus managing it) located on the Internet. The ASP then rents the programs to firms like yours that want to be spared the expense of buying, maintaining and upgrading them.

As a subscriber, you provide your ASP with data, which it stores in very secure "data centers" interconnected on a network running 24 hours a day, seven days a week. Your authorized employees can access whatever reports the software generates at any time on any day via the Internet.

What ASPs sell is their expertise in choosing and running computer applications. Managers in landscape and lawn care firms or

grounds organizations who contract with an ASP wouldn't have to worry about maintaining computers and software they don't want to purchase, or going through the process of constant upgrading.

ASP for small businesses

One current ASPs offering services suited for smaller businesses such as yours is Interliant. The list will most certainly grow as this system catches on in popularity.

Interliant (<http://www.interliant.com>) of Purchase, NY, may be one of the oldest of these firms. It was started in 1995 and has more than 1,000 employees worldwide. For the most part, it services larger companies, but its division, AppsOnline (www.AppsOnline.com), focuses on small business customers.

"AppsOnline targets companies of 50 employees or less," says Brad Nickel, vice president. "Sixty percent of our customers are either retail or mom-and-pop firms."

Once customers surf into the Web site, pick a computer application they want to use and provide Interliant with their credit card information, the application instantly becomes accessible.

All applications at AppsOnline are Web-based, meaning the only equipment you need is be a computer, a modem, Internet access and Web-browsing software.

Users are billed on a per-use or per-user monthly fee basis. "Individual packages cost from \$9.95 to \$24.95 per month; we have some software bundles whose costs range from \$49.95 to \$99.95 per month," Nickel says.

The division is constantly looking for new software to add to its current listing of 10 packages. One of its hot sellers is a small business accounting program that handles invoicing, general ledger and payroll functions. It also has a business-based service package that covers human resources, benefits and payroll.

Juggling projects

If you juggle several projects at once, you might be interested in "collaboration" or project management applications.

AppsOnline rents access to a Lotus program called QuickPlace, which handles elementary project scheduling, tracking and oversight functions. For more detailed reports, consider using project management software with several functions.

The auction option

Thinking about setting up an industry auction site? AppsOnline will rent access to a program called AuctionPool that does everything from displaying goods and setting minimum bids to notifying

bidders of when the auction begins. It even has a Web-based, cooperative buying service.

"We'll even host your Web site," Nickel says. "That's the business we were in before we became an ASP."

— David Weinstock is an assistant professor of new media technology at Central Michigan University, Mt. Pleasant, MI.

Are ASPs right for you?

There are a number of things to consider before engaging the services of an ASP.

Security Any ASP worth doing business with should have a security officer, written security policies, regular security audits and audit reports. Above all, they should take steps to assure that only the ASP, you and your firms' employees have access to your data.

Access Be sure the firm you engage offers 24/7 access to your data via Internet. Anything less is unacceptable. Odds are you'll want to access payroll, personnel or scheduling information at strange hours and you can't be bound by someone else's schedule. Look for firms with applications used by the Green Industry.

Focus The operation profiled above caters to small business, but it has purposely chosen its applications to appeal to a broad business audience. As this industry continues to grow, other firms will offer programs used more frequently in the Green Industry.

Definition of responsibility When your rented application crashes or doesn't work for some reason, be sure the contract defines whose responsibility it is to seek technical support. Some firms take full responsibility for this function, while others only troubleshoot as long as it is believed that the problem is software-based and not a problem with your hardware or network.

— David Weinstock

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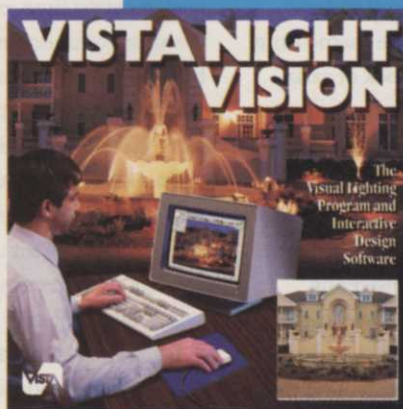
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13 ideas to ignite training

Training doesn't have to be a drag. Spice it up with these ideas

BY PHIL FOGARTY



Training is an ongoing effort, and it's easy to get in a slump. Keep your sessions creative, energetic and focused on improving by using any of these ideas.

- 1. Play music.** Get a boom box and use some energizing sounds – the theme from the Lone Ranger, country rock or salsa – whatever appeals to people.
- 2. Get hands-on.** Develop training sessions around something employees do, like pruning, planting or loading a truck.
- 3. Get feedback from everyone.** Challenge everyone to fill out a card answering, "What is the best thing you have learned from the sessions?" Next week, everyone makes a one-minute presentation on their answers. Applaud every presentation, and award the most energetic.
- 4. Check posture.** Check how everyone sits and ask them to sit as if they were bored. Ask them to sit as if it was the most exciting thing they have ever heard. Now challenge them to stay that way for the entire session. Dis-

cuss how we can apply posture to control our attitude at the job site.

5. Videotape it. Allow the presenter to take the session home to study how well they did or how they can improve.

6. Role play. This is great for customer service and team-building. Have a scene written out with the setting and specific roles. Don't be afraid of role playing — it is the number-one training technique

and the best way to build leadership skills. (For a role-play sample, e-mail us at jjpaluch@jphorizons.com)

7. Grab some charts. If you chart what you have spent on training to date (program cost, meeting time, etc.), employees will see your commitment to training. If possible, show comparisons from last year, like turnover, equipment repair costs or other facts that show training makes a difference.

8. Do a conference call. Arrange with another "training challenge" company to have a speaker phone set up so both companies can talk to each other while a training session is taking place.

9. Develop in-house certification. Give certificates for attendance, teaching, spirit, etc. They're easy to create on the computer.

10. Get some good press. The Skills Development Series orientation package has a sample news release, or try your own. Send out several until you get a call from a paper. Then invite them out to see how your company is approaching the problem

of providing consistent training. When they come, make it a great show.

11. Develop competition. Have a 'field day' atmosphere. Put several teams together to identify plants, change oil, plant a plant, edge a bed, etc. Use your creativity and create five-minute, educational competitions in a fun atmosphere. Award a traveling trophy that the team keeps for a week.

12. Do a planning session. Use a training session to plan. If you are covering bulb planting or irrigation troubleshooting, use some time to brainstorm how your organization can become more efficient or improve on the topic. Take good notes and then as a management team, work to implement those ideas. The team will be more likely to participate when they see results coming from the sessions.

13. Make a mission statement. Have competitions on who can say your company's mission statement the quickest. Have groups of six say it, with each person saying a word and going to the next person. This is an excellent team building session. Have a serious discussion on "How are we doing in pursuit of this mission?" Be open to the negative as well as the positive. The mission must be discussed in each meeting.

—The author leads the Skills Development Series, a year-long training program co-sponsored by American Cyanamid and Landscape Management. For more information about applying the SDS system to your organization, call him at JP Horizons, 440/254-8211 or email: pfogarty@stratos.net.

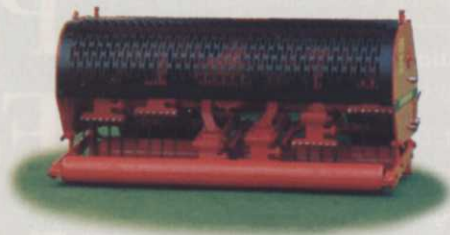
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Property at a glance

Location: Peterson Air Force Base, Colorado Springs, CO

Staff: Embassy Lawn/Davey Commercial

Category: Government building or complex

Total budget: \$1,500,000

Year site built: 1942

Acres of turf: 682

Acres of woody ornamentals:
13,500 shrubs and perennials, 9,800 trees

Acres of display beds: 70

Total paved area: N/A

Total man-hours/week: 1,600

Maintenance challenges

- ▶ Extremely strict specifications
- ▶ Semi-arid, 6,000-ft. elevation
- ▶ Work orders — job orders

Project checklist

(Completed in last two years):

- ▶ Installation of 700 new trees and shrubs
- ▶ 42 special events
- ▶ Complete update of CAD landscape inventory and irrigation system

On the job

- ▶ 25 full-time staff, 25 seasonal employees, 2 certified arborists, 2 certified irrigation technicians, 2 licensed pesticide applicators

Peterson Air Force Base

The 1999 Grand Award Winner of the Professional Grounds Management Society for Government Building or Complex

You better believe the grounds at Peterson Air Force Base in Colorado Springs, CO, are closely manicured, enough to bounce a quarter off them. Any mower operator missing a section of turf has to drop and do 20 push-ups.

But seriously, Embassy Lawn of Kansas City, MO, and Davey Commercial Grounds Management of Kent, OH, work together to tend this large complex with contract specifications of over 75 pages. Included in the contract is a "Performance Requirement Summary" (PRS) issued by two full-time government "quality assurance evaluators." Talk about pressure! The PRS establishes rules of government surveillance, level of defects allowed and the formula for withholding pay if defects are found.

Given that the base is located in a dry climate, all but a few native plants must be irrigated. The irrigation system, which includes drip lines throughout planted beds, is extensive enough to require two full-time certified irrigation technicians and one systems monitor.

Rock beds coexist with turf areas, and in no case is finding a weed larger than 2 in. high or wide in the beds acceptable. In winter, when crews apply sand to walks and steps, the sand has to be removed within one hour of the snow and ice melting. After the 685.5 acres of turf are mowed, this is one tired crew.



► A special blend of granular fertilizer containing micronutrients is applied three times per year to the 117 acres of improved turf.

▼ Historic military aircraft displayed throughout the base add to the site's beauty.



Editors' note: *Landscape Management* is the exclusive sponsor of the Green Star Professional Grounds Management

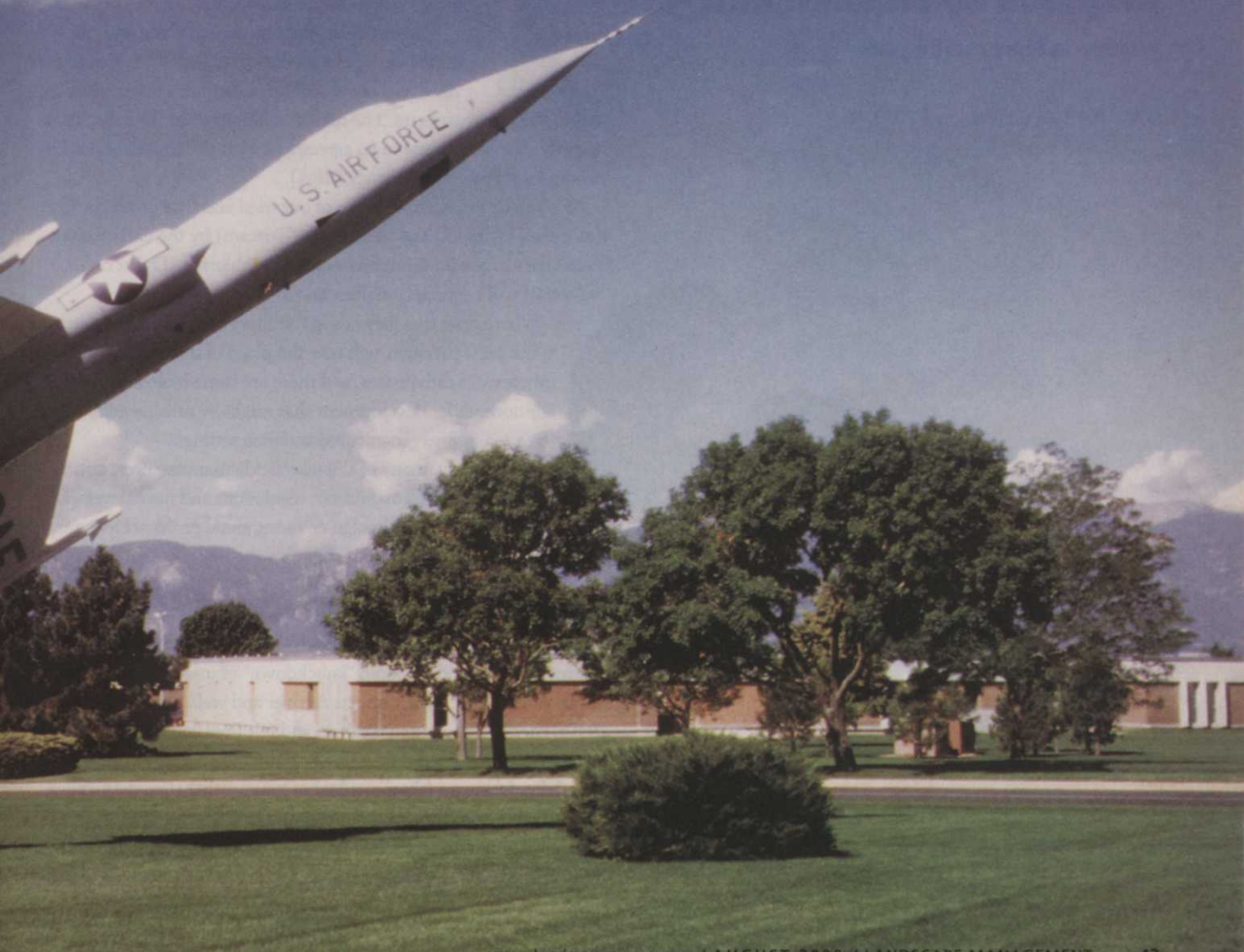
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LIFE AFTER DURSBAN: The new insecticides

The rules are changing for insect control, so be prepared by understanding your alternatives

DR. PATRICIA J. VITTUM



The rules of pest management are changing. The 1996 Food Quality Protection Act (FQPA) is having a significant impact on the availability of pesticides you can use to manage turf.

In particular, the organophosphate and carbamate insecticides are being subjected to intensive review, and many will be pulled from the market within the next two years. The maker of chlorpyrifos (Dursban) just recently cancelled its use in an agreement with the United States Environmental Protection Agency (EPA).

We will be losing many more of our tried and true products, like isofenphos (Oftanol) and bendiocarb (Turcam) by the end of 2001. There are many who think diazinon and trichlorfon (Dylox or Proxol) will become casualties, too.

Where does that leave us in the short term? You do have options. New products will take the place of the organophosphates and carbamates, and there are some biological control options under development that might be reliable enough to be used in finely manicured turfgrass settings.

Fortunately, many of the insecticide manufacturers anticipated the changing government regulations and have developed new chemistry with more benign environmental profiles. Here are some of them:

The pyrethroid option

Pyrethrum is a natural product derived from certain chrysanthemums in Africa, and provides a rapid "knockdown" of insects, acting like a stun gun. However, many insects recover and walk away. In the 1940s, chemists studied pyrethrum and felt they could design compounds that resembled it structurally but would not have the perceived disadvantages (short residual of hours rather than days, quick breakdown in sunlight and limited ability to kill target insects).

Several iterations of pyrethroids were developed in the next 40 years. Some have become popular in the turf market because they are



relatively immobile in water (and less likely to reach ground water than other products). They remain in the thatch, where they can be effective against surface insects.

Most of the current products work within one or two days after application, remain active for two to four weeks and hold up well in sunlight. (Pyrethroids can be sensitive to high temperatures, so mid-summer applications may be less effective than those made in cooler periods.) Application rates usually are an order of magnitude lower than those of the organophosphates and carbamates — 0.1 lb. AI/acre versus 2 to 5 lb. AI/acre.

Best application spots. Because pyrethroids often do not penetrate past the thatch, they are not normally recommended for use against soil insects like white grubs. For the same reason, they are ideal candidates to control insects that remain on the surface or in the upper layers of the thatch, such as annual bluegrass weevil adults or black turfgrass ataenius adults. Pyrethroids have become popular choices to control chinch bugs, cutworms and webworms, all of which spend most of their time in the thatch or on the surface.

Commercial examples. Several synthetic pyrethroids are available and labeled for some uses in turf, including bifenthrin (Talstar), cyfluthrin (Tempo), deltamethrin (Deltagard) and lambda-cyhalothrin (Battle, Scimitar). Application rates range from 0.05 to 0.2 lb. AI/acre, depending on the product and target insect.

Thiomethoxam — a neonicotinoid

Thiomethoxam is a new insecticide in the process of being released by Novartis (soon to be Syngenta), and will be marketed as Meridian in the turf market and Flagship in

the ornamentals market. It reduces populations of many different kinds of insects, including those with sucking (e.g. aphids) and chewing mouthparts (e.g. white grubs). While it is relatively soluble in water, it is systemic (translocated through the xylem) so it is rapidly taken up through the roots.

This material remains active for about 50 days in soil, which is longer than many materials currently available. Insects that come in contact with or ingest it change their behavior almost immediately — they stop feeding or using their antennae to inspect their surroundings. Application rates usually are less than 0.5 lb. AI/acre.

Best application spots. Thiomethoxam appears to be effective against many of the white grub species — perhaps in part because it is relatively soluble and can reach the root zone with post-application irrigation. Because of its relatively long residual, it can be applied somewhat earlier in the year than the "traditional" products. (Current use patterns involve application beginning within a week or two of the time when adult beetles begin laying eggs.) It also can be used as a soil or foliar application in ornamentals because it is systemic.

Field trials indicate thiomethoxam has activity against a wide range of insects in the ornamentals market, especially aphids, whiteflies and mealybugs. It tends to be less detrimental to beneficial insect species than contact insecticides (because the beneficial insects like predatory beetles feed on other insects, not on plant material). It may be an option in areas where less benign products could lead to problems and

continued on page 46



Targeted new products can reduce populations of grubs, here shown under the turf layer.

The organophosphate and carbamate insecticides are being subjected to intensive review, and many will be pulled from the market within the next two years.

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may have activity against red imported fire ants.

A chloronicotiny compound

Imidacloprid (Merit) has been used in turf for several years so should not be considered "new," but its properties are different than insecticides like Dursban or Oftanol. Both imidacloprid and thiomethoxam have similarities in their chemical characteristics — both are systemic and can be used against soil insects as well as insects feeding on ornamentals.

Imidacloprid is much slower acting than the traditional materials when used in turf — it may be two weeks before you begin to see dead grubs. But it remains active in the soil much longer than traditional products. Some managers apply it in the spring, allowing that application to control grubs that emerge in late summer. However, these early spring (April or May) applications will not have any significant effect on the grub population already present (having just emerged after the winter).

Some "season-long control" claims that appear in marketing releases can be misleading. Some people read "season-long control" and expect that a spring application will control everything for the entire growing season (including the grubs that are already present in the spring). At least with white grubs, that is not necessarily true.

Imidacloprid does have the residual activity to affect grubs in late summer, but most university entomologists urge turf managers not to make applications too early.

Why not wait until just before the young grubs begin to hatch out of eggs? Then, the pesticide will be that much

fresher and have a better chance to provide control.

Halofenozide timing

While halofenozide (Mach 2) is hardly new either, we should mention a few things about it. It could be considered a growth regulator because it is a "molt accelerating compound." An insect enters the molt before it has had a chance to save up the energy it will need to complete the molt. In other words, the process is virtually guaranteed to fail. In most cases, an insect that encounters halofenozide stops feeding quickly, so damage does not worsen. The insect usually dies within two or three weeks, sometimes even sooner.

Vertebrates (including people and their pets) don't molt, so halofenozide is much less toxic to vertebrate organisms than most other insecticides currently available. Nevertheless, the label notes it does have characteristics (solubility, half-life, etc.) similar to those that are eventually detected in ground water. The usual precautions should be taken to provide adequate buffer zones when treating areas near surface water or sensitive soils.

Best application spots. Halofenozide is most effective when targeting small stages of immature insects such as white grubs and various caterpillars. Its interference with the molting process can be effective against young insects.

Some suppliers say that halofenozide provides "season-long control" against white grubs, but the field data reports are contradictory. Most studies that involve April, May or early June applications do not provide significant reductions in grubs that are already present in the spring.

This makes sense when we consider the material's mode of action — the grubs are

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Timing treatments will become more critical with the new insecticides in development.





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Expect additional restrictions at the federal and local levels on the use of turf and ornamental insecticides.

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already in their largest stage of development by the time it is applied so the only molt that might be compromised is the molt from grub to pupa. By then, the damage is already done. However, applications made within a month after adult beetles begin to lay eggs appear to work well.



This material remains active in the soil long enough to be effective when larvae first emerge.

Trials indicate that late summer applications (usually at slightly higher rates) can also be effective against grubs after they have been feeding for a couple of weeks. So halofenozide can be used as a preventive (early summer application relying on residual activity to control young grubs beginning their first molt) or as a curative (late summer application controlling mid-sized grubs before they reach full size).

Field trials confirmed that some species of grubs are less sensitive to halofenozide than others. Generally, European chafers are much less vulnerable, as are oriental beetles. Fortunately, Japanese beetles and masked chafers are relatively sensitive, so it can be a good control option. It also can be effective against species of caterpillars, including some cutworms and webworms.

Spinosad for caterpillars

Spinosad, sold as Conserve, is a byproduct of a soil bacterium that affects acetylcholine receptors on nerve cells. But it works differently than other materials. It does not appear to affect the receptors on vertebrate nerve cells in the same way, so it is much less toxic to mammals and other vertebrates than the OPs and carbamates.

It is being used on ornamentals and turf to control various caterpillars. Spinosad is relatively specific, even within the caterpillar group, but one advantage is that it seems to have little impact on most beneficial predatory insects found in turf. It can be used to control sod webworms, cutworms and armyworms, but is most effective if applications are made when those caterpillars are still quite small. It is not effective against chinch bugs, ants, grubs, billbugs or mole crickets.

Spinosad is still relatively new in the turf market and the full profile is not yet understood. But we can expect to see more products like spinosad coming on the market within the next few years. **LJM**

— *The author is associate professor in the Department of Entomology, University of Massachusetts, Amherst, MA.*

Watch for more impact to come

As FQPA's impact continues to grow, we can expect more traditional insecticides to be removed from the turf market. At the same time, new products with very different chemistries and modes of action are being developed. Compared to the materials we have used for the past 40 years, these new products will have:

- ▶ lower levels of acute toxicity to vertebrates,
- ▶ lower rates of application and lower solubility and
- ▶ more targeted control against some of the turf insect pests but not all.

Expect additional restrictions at the federal and local levels on the use of turf and ornamental pesticides. One of the most predictable offshoots of these regulations will be greater emphasis on finding biological control options with the reliability and consistency that is critical to successfully managing turf insects.

You will have to be even more vigilant, monitoring insect activity and knowing the specifics of the life cycle of each pest. Then, you will have to match the pest with the best of the products available, and remember that each product has notable strengths and weaknesses. Timing will be even more critical.

— *Pat Vittum*



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High-tech wonders

BY JASON STAHL /
MANAGING EDITOR

It's the Year 2000. There aren't any flying cars yet, nor can people communicate through telepathy. But it's safe to say that more technological advances have been made in the last ten years than in the last 100. Buy a computer today, and it's out of date tomorrow. Rocket scientists are actually considering colonizing the moon. Doctors have cloned animals.

What does all this mean for landscape professionals? Better business, that's what. True, it's still the guys on your crew who are doing all your hard work, but you would be foolish to ignore the technology around you. You need every advantage you can get in today's crammed landscape market.

With so many crews spread out doing so much work, you need to have an adequate communications system. If you have the right software to show a client how his yard could look before you start your actual service, he might hire you instead of the next guy. No doubt your maintenance barn looks like a busy freeway with crew members driving here and there. Wouldn't it pay to invest in a monitoring system so your guys could see what's behind them when backing up? And what about a Web site? Haven't built

one yet? You may be missing out on a prime marketing opportunity, not to mention a good way for your clients to get a hold of you when you're out in the field.

Don't be stubborn. Stick to your hard work ethic but let today's technology help you in whatever way it can. Your customers, and you, will appreciate it.

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The Motorola Accessories and Aftermarket Division has a full line of accessories to support the recently introduced iDEN i700plus handset, which combines phone, two-way radio, messaging and Internet data capabilities all in one. Data cables connect the handset to most popular PDAs, providing a wireless connection for e-mail and Internet, and transfer data back and forth between iDEN unit and PDA. A "slim" nickel metal hy-



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what to look for in software

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- ▶ **Flexibility. Make sure it can accommodate the expansion of your company so you don't have to replace it down the road.**
- ▶ **Windows-based.**
- ▶ **Help. Find out the costs of technical support.**
- ▶ **Reliability. Companies should offer you lists of customers who can tell you their experiences with the product.**

drive battery now provides 160 minutes of talk time on a full charge. A Rapid Travel Charger will recharge a standard battery to 90% capacity in just 75 minutes. A hands-free car kit allows for convenience and safety. For you construction/installation crews, don't forget about Motorola's noise-canceling headsets. Available in headband or hard hat mount styles, the headsets offer noise reduction quality of 22 dBA. Harmful sounds are suppressed to a safe level and low sounds are amplified up to five times original level, but never more than 82 dBA. Headsets are available with boom microphone and compatible with Motorola in-line adapter cables for workers who need to transmit and receive communication often.

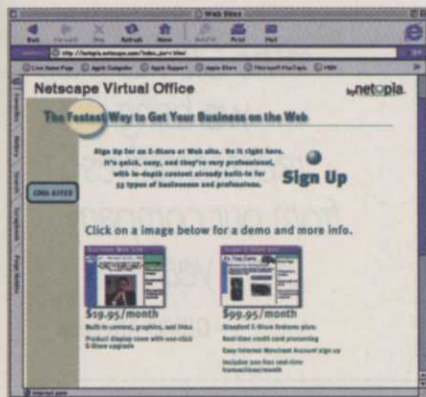
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The new SuperSight collision avoidance system allows the driver of a vehicle to view objects

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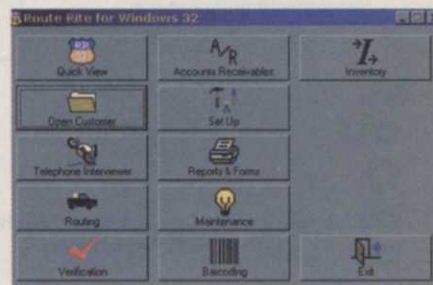
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continued on page 53

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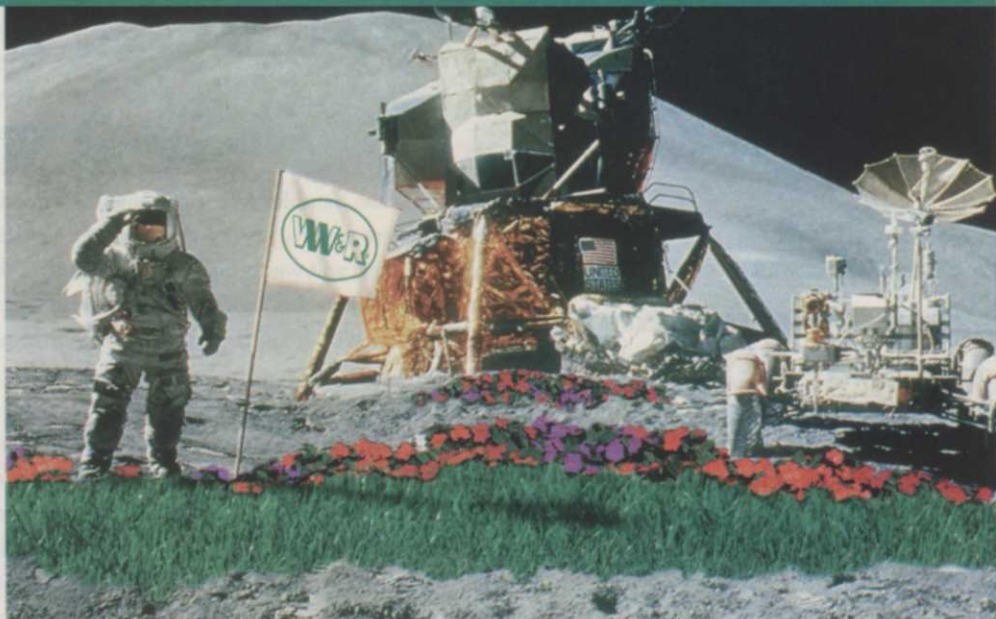
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Circle 126



Tree treatment goes bio

A treatment program consisting primarily of bio-stimulants was the knockout punch for verticillium wilt

of vascular disease. Samples were taken and forwarded to the plant lab at The Ohio State University, where positive results came back for verticillium wilt.

The verticillium wilt was brought about by one of the following things (or possibly a combination of all): improper installation; disease was already at the site and the stressed trees couldn't resist it; or contaminated trees were brought to the site.

Seeking a solution

Webber felt there were a few options available to solve the problem. They were:

- **Removal of the trees** — Verticillium wilt is a highly infectious, soil borne disease. Root grafting, mechanical transfer and other means can transmit it. If this option was used, another species not susceptible to the disease, such as oak, would be planted as a replacement.
- **Health treatments** — Many species of trees, including the genus *Acer*, can section off infected tissue by compartmentalization. But for this process to work, the plant should be in good vigor and be conducting all plant processes at optimum perfection prior to an infection.
- **Bark injections** — One means of controlling verticillium wilt is the Mauget fungicide microinjection system. When applied correctly, it controls the active verticillium pathogen in

continued on page 56

In September of 1997, a client of Mark Webber's Landscaping Company was concerned that 49 Norway Maples (*Acer platanoides*) lining his driveway had verticillium wilt.

When Mark Webber arrived at the property with the intention of gathering information for field analysis and laboratory testing, he saw that the long, tree-lined driveway led to a home built back into the woods. When the trees were installed four years ago, they were 3-in. caliper. Now, they were 18 to 19-ft. tall.

Many of the trees exhibited complete branch die back and cankers with a blackish brown substance oozing out and running down the stem tissue. Closer inspection showed a pattern of heavy decline in certain portions of the plantings, while other areas appeared to have lesser degrees of decline. Significant decline seemed to be in trees located nearest the roadway entrance and wooded entry of the drive.

To inspect the branches and stems, Webber made longitudinal cuts along the plant stems and discovered varying degrees of discoloration that appeared to be a form

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Shadow II	5.0	6.5	6.0	6.4
Banner III	4.9	6.6	5.9	6.1
Jamestown II	4.7	5.9	4.9	6.0
LSD Value	1.3	0.2	0.5	0.3

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The treatment schedule

- ▶ **October 1997** — Vertimulching started with Webster® vertimulcher.
- ▶ **November 1997**— Mulch rings increased from 2' radius to 4.5' radius with 2-2.5" of double process mulch applied to the beds.
- ▶ **March 1998** — Dormant oil applied to trees to reduce overwintering pests.
- ▶ **March-December 1998** — System of scouting started.
- ▶ **June 1998** — Trees showing significant loss of limbs and infection selectively pruned. Pruning equipment was sterilized between each cut with 1 part bleach to 8 parts water. All pruning was then burned.
- ▶ **July-August 1998** — Trees watered due to drought conditions.
- ▶ **November 1998** — Trees vertimulched. Webber uses the ROOTSinc® product, mycorrhizaROOTS™, which provides much needed cold tolerant endomycorrhiza and provides a quality biostimulant.
- ▶ **November 1998** — Maples not responding to the treatments were removed. Swamp white oaks (*Quercus bicolor*) were installed. Fifteen trees were replaced. Transplant 1-Step™ was used to help the trees establish themselves.
- ▶ **Summer 1999** — Another round of deep-root feeding using mycorrhiza-ROOTS®. "Maples are big endo-users," Webber said, "and the Oaks use ecto- . Supplying both kinds of mycorrhiza in a quality biostimulant will lead to an increase in water and nutrient uptake."
- ▶ **Fall 1999** — Vertimulching with the Webster deep root feeder. This time, the amendment used was the newly introduced M-ROOTS™ — a combination of dryROOTS® and affordable mycorrhiza.
- ▶ **Spring 2000** — Dormant oil and deep root feeding applied, using mycorrhiza-ROOTS®. Each time the feeding extended beyond the current drip line. Root primodial, measured on every visit, showed that this pro-health approach has progressively payed off. Shoot growth has been consistent, showing another 4-5" over last year. Scouting, as recent as May, has shown a 10-13" average shooting longation.

Webber began his attack on verticillium wilt with a vertimulcher.



By using a caliper, Webber found the trees had grown greatly since they were first installed.

continued from page 54

plants' vascular systems. A concern with this approach is that the injections could cause further wounds, offering pathogens an entry point to attack the plant.

• **Leave the trees alone** — The last option would be to let nature run its course, then install resistant cultivars to replace the dead trees as time passes.

After meeting with the client to discuss these options, Webber decided to pursue a combination of the first three options with an emphasis on corrective measures to better the trees' health. Part of the reasoning behind this approach was because the trees were still relatively young.

He decided that the "below ground" landscape issues could be corrected by an aggressive program that consisted of vertical mulching, deep root feeding, IPM monitoring, selective pruning, bark injections with fungisol and corrective mulching and bed practices.

Webber's program (see sidebar) is still ongoing, but the verticillium wilt has gone away. "There has not been any wilt since the first year," Webber said. "Fungisol injection killed it off. Keeping trees and roots young and vigorous will keep the wilt at bay." **LJM**

— *Mark Webber is a certified arborist and owner of Mark Webber's Landscaping Company, Dayton, OH. In business for over four years, Webber's company has 11 employees, three of whom are ISA certified arborists.*

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

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

3. SERVICES PERFORMED (fill in ALL that apply)

- | | | |
|--|---|--|
| A <input type="checkbox"/> Mowing | F <input type="checkbox"/> Turf Fertilization | K <input type="checkbox"/> Paving, Deck & Patio Installation |
| B <input type="checkbox"/> Turf Insect Control | G <input type="checkbox"/> Turf Disease Control | L <input type="checkbox"/> Pond/Lake Care |
| C <input type="checkbox"/> Tree Care | H <input type="checkbox"/> Ornamental Care | M <input type="checkbox"/> Landscape Installation |
| D <input type="checkbox"/> Turf Aeration | I <input type="checkbox"/> Landscape Design | N <input type="checkbox"/> Snow Removal |
| E <input type="checkbox"/> Irrigation Services | J <input type="checkbox"/> Turf Weed Control | O <input type="checkbox"/> Other (please specify) _____ |

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

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

- | | | |
|--|--|--|
| 1 <input type="checkbox"/> Aerators | 8 <input type="checkbox"/> Herbicides | 15 <input type="checkbox"/> Sweepers |
| 2 <input type="checkbox"/> Blowers | 9 <input type="checkbox"/> Insecticides | 16 <input type="checkbox"/> Tractors |
| 3 <input type="checkbox"/> Chain Saws | 10 <input type="checkbox"/> Line Trimmers | 17 <input type="checkbox"/> Truck Trailers/Attachments |
| 4 <input type="checkbox"/> Chipper-Shredders | 11 <input type="checkbox"/> Mowers | 18 <input type="checkbox"/> Trucks |
| 5 <input type="checkbox"/> De-icers | 12 <input type="checkbox"/> Snow Removal Equipment | 19 <input type="checkbox"/> Turfseed |
| 6 <input type="checkbox"/> Fertilizers | 13 <input type="checkbox"/> Sprayers | 20 <input type="checkbox"/> Utility Vehicles |
| 7 <input type="checkbox"/> Fungicides | 14 <input type="checkbox"/> Spreaders | |

5. Do you have Internet access? A Yes B No

5A. If so, how often do you use it?
 A Daily B Weekly C Monthly 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

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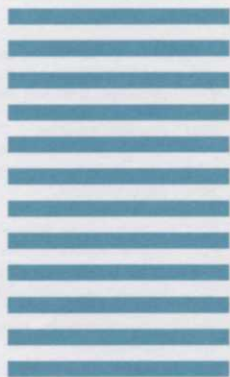


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I would like to receive (continue receiving)
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Yes no

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

CONTRACTORS/SERVICE COMPANIES

- 255 Landscape Contractors (Installation & Maintenance)
- 260 Lawn Care Service Companies & Custom Chemical Applicators (ground & air)
- 285 Irrigation Contractors & Consultants
- Other Contractors/Service Companies (please specify) _____

LANDSCAPING/GROUNDS CARE FACILITIES

- 290 Sports Complexes
- 295 Parks
- 305 Schools, Colleges & Universities
- Other Grounds Care Facilities (specify) _____

SUPPLIERS AND CONSULTANTS

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

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

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

NAME (please print) _____
 TITLE _____
 FIRM _____
 ADDRESS* _____
 CITY _____ STATE _____ ZIP _____
 *Is this your home address? Yes No
 PHONE (____) _____ FAX (____) _____
 E-MAIL ADDRESS _____
 Signature: _____ Date: _____

3. SERVICES PERFORMED (fill in ALL that apply)

- A Mowing
- B Turf Insect Control
- C Tree Care
- D Turf Aeration
- E Irrigation Services
- F Turf Fertilization
- G Turf Disease Control
- H Ornamental Care
- I Landscape Design
- J Turf Weed Control
- K Paving, Deck & Patio Installation
- L Pond/Lake Care
- M Landscape Installation
- N Snow Removal
- O Other (please specify) _____

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

Yes No

4b. If yes, indicate which products you buy or specify:

- (fill in ALL that apply)
- 1 Aerators
 - 2 Blowers
 - 3 Chain Saws
 - 4 Chipper-Shredders
 - 5 De-icers
 - 6 Fertilizers
 - 7 Fungicides
 - 8 Herbicides
 - 9 Insecticides
 - 10 Line Trimmers
 - 11 Mowers
 - 12 Snow Removal Equipment
 - 13 Sprayers
 - 14 Spreaders
 - 15 Sweepers
 - 16 Tractors
 - 17 Truck Trailers/Attachments
 - 18 Trucks
 - 19 Turfseed
 - 20 Utility Vehicles

5. Do you have Internet access? A Yes B No

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

A Daily B Weekly C Monthly D Occasionally

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112	124	136	148	160	172	184	196	208	220	232	244	256	268	280	292	304	316

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ask the expert

BY BALAKRISHNA RAO, PH.D.

Magnolia scale

We have a problem with magnolia scale. Our local nursery person told our client to spray with Cygon. Instead, we applied oil once in early summer and again in late summer. We found a few dead scales but a number of scales are still juicy and fleshy. What should we do?

— MISSOURI

Magnolia scale is a serious pest on magnolia in many locations in the United States. The label that I have doesn't recommend using Cygon spray as you may experience some phytotoxicity.

The oil treatment you provided may not be effective for a couple reasons. We don't recommend oil treatment in summer months to manage the large mature scales. Also, the rate you have used (1%) is too low. I prefer 2% oil applied at different timings.

The 2% oil treatment should be targeted towards young second instar crawlers (nymphs). These young crawlers should be active on leaves around late August through September. By November through December, they will move from leaves to twigs. Therefore, an application of 2% oil during late September/October, and again during February/March, will help manage them. Oil doesn't have residual, so good coverage is important. In addition, if the problem is severe, you can use insecticides such as Dursban (the one you mentioned) during late August through early September (at least for the next season).

Cytospora canker

On a large estate property, several spruce trees' lower branches show

extensive needle drop and some of the needles have purplish discoloration. The branches' inside canopy has some whitish resin. The trees are 35 ft. tall and growing in sandy soil. No nylon thread at the base of the stems was found; however, on many trees there are no root flares. What might be the cause?

— MICHIGAN

Based on the symptom pattern, the problem is most likely related to Cytospora canker. This fungus establishes on stressed and weakened trees, particularly as they age.

You mentioned that the trees are growing in a sandy soil. This may contribute to moisture deficiency at different times, particularly during drought conditions. Also, evergreens can become injured during winter due to insufficient moisture for uptake. Even though moisture may be in soil, it may be frozen during winter.

However, on sunny and windy days, exposed plant parts may lose a lot of water. Since the moisture is frozen, it will cause an imbalance in water uptake, resulting in winter drying and subsequent injury. Some of the injury may not be evident the following spring. This year I have seen a number of evergreens showing the adverse effect of drought. Therefore, consider exposure to extremes in moisture and/or temperature contributing to the decline.

There is no fungicidal recommendation for cytospora canker disease management. Reduce stress and provide good growing conditions and water as needed during dry periods. Improve plant health through proper mulching, watering and fertilizing as needed.

Regarding the lack of root flare, check out the possibility of fill around trunks that

would contribute to stress. Some trees may not demonstrate a pronounced root flare, particularly when they are younger.

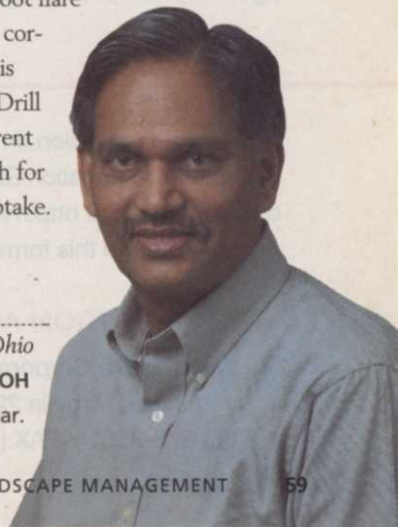
Dutch elm disease

One of our representatives sold Dutch elm disease management using Arbotect. It has been sold as treating once every two years. When I reviewed the label, it says one-year preventive or three-year therapeutic rates. What would be the best approach?

— ILLINOIS

Arbotect can be used preventively or therapeutically depending upon the disease activity and need basis. The Dutch elm disease should be managed preventively where feasible. An alternative option is to treat therapeutically. In this situation, reports indicate that success depends upon the severity of the disease in the tree. If the tree has less than 5% crown infection (flagging symptoms), there's a chance of recovery. If there is more than 5% crown infection and dieback, the tree may not respond well.

Make sure the injections are made on root flare as close to the ground as possible. It may be necessary to remove soil from root flare and then inject. Also, make sure that the injection "Ts" are not placed in the "valleys" of root flare and that the correct drill bit is being used. Drill into the current year's growth for optimum uptake.



Manager of Research and Technical Development for the Davey Tree Expert Co., Kent, Ohio

SEND YOUR QUESTIONS TO: "Ask the Expert" Landscape Management; 7500 Old Oak Blvd.; Cleveland, OH 44130, or email: sgibson@advanstar.com. Please allow two to three months for an answer to appear.

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For more information on Meridian contact Novartis at 800/395-TURF or www.cp.novartis.com / circle no. 250

Pumping up soil

Regal Chemical Company introduces Liqui-Green, an all natural, slow-release nitrogen fertilizer that relies on microbes in the soil as the catalyst for the process that releases nitrogen to make it available to plants' root systems. As microbes "eat away" at the molecule's structure, nitrogen gets released into the soil. The more LiquiGreen that is applied, the more microbes are attracted.

For more information call 800/621-5208 / circle no. 251

Load 'em up

Komatsu Utility Corporation's two new compact wheel loaders feature wheel loader per-



formance and skid steer versatility. A low effort single pedal allows for efficient control of speed and braking. After dumping, the loaders feature a return-to-dig function that improves cycle times. The operator's compartment has dual

Light up your life

Kichler Landscape Lighting's K-15060 AZT, an uncomplicated "simplicity side mount," offers perfect illumination along paths and gardens without bothersome glare. With durable die cast aluminum construction, it is finished in textured architectural bronze. It measures 4 in. in diameter, 21 1/2-in. high and extends 5 in. The fixture is supplied with a 24.4-watt bulb.

For more information call 800/659-9000 / circle no. 252



entry and exit, bucket visibility and low noise operation. The WA 30 model has an operating weight of 6,040 lbs.; bucket capacity of 0.52 cu. yd.; and 29 hp. The WA 50 has an operating weight of 8,200 lbs.; bucket capacity of .73 cu. yd.; and 37 hp engine.

For more information write to 440 North Fairway Dr., P.O. Box 8112, Vernon Hills, IL 60061-8112 / circle no. 253

Blow like a pro

Selbro, Inc.'s high velocity/high output blowers for the Scag S series and Toro Proline series



mowers are designed to eliminate operator fatigue and increase productivity with Selbro's blower attachments for out front rotary mowers. New for 2000 is the ProBlow Max line of high output walk-behind debris blowers available in several engine styles.

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For more information call 610/286-5025 or visit www.morgancorp.com / circle no. 255

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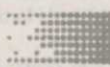
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THIS AND THAT

D.C.-AREA GREEN INDUSTRY STATISTICS

- **Average hourly wages for landscape and similar trades:**
hourly labor rate, estimate: \$9 without supervisor; \$11.50 with supervisor¹
- **Annual wages for 1998:**
Landscape and horticultural services: \$20,360
Building construction general contractors and operative builders: \$34,402
Retail nurseries, lawn and garden supply stores: \$17,875
Miscellaneous general merchandise stores: \$15,239
Eating places: \$11,173
Building cleaning and maintenance services, not elsewhere: \$13,069²
- **Average single family lawn size:**
Overall average is about 7,000 sq ft; in DC area close to 5,500 sq ft.³
- **Number of area landscape equipment and product dealer/distributors:** 1264
- **Number of lawn/landscape companies in the area:** 783⁴
- **Landscape Contractors Association of MD VA and DC member firms:** about 210⁵
- **Number of certified chemical applicators for lawn/landscape:**
VA: 322 in the Arlington-Fairfax area⁶
DC: 240⁷
MD: 306 statewide: 1,2258

SOURCES:

¹JEFF TOLPEY, THE BRICKMAN GROUP AND CURRENT PRESIDENT, LANDSCAPE CONTRACTORS ASSN OF MD VA AND DC;

²US DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS; MIKE WALD, REGIONAL ECONOMIST, ATLANTA

³CHRIS FORTH, REGIONAL AGRONOMIST FOR TRUE GREEN CHEMLAWN;

⁴AMERICLIST, NORTH CANTON, OH (800/790-0096; WWW.AMERICLIST.COM)

⁵LANDSCAPE CONTRACTORS OF MD VA AND DC;

⁶VIRGINIA OFFICE OF PESTICIDE SERVICES;

⁷WASH, DC BUREAU OF TOXICITY, PESTICIDE PROGRAM;

⁸MARYLAND DEPARTMENT OF AGRICULTURE, PESTICIDE REGULATION SECTION

Humdinger of a prize

Irritrol Systems is making buying its products pay off in a big way. Just ask irrigation contractors Chad Bagley and Linda Rast, who were the first two winners of five Hummer safari trips Irritrol Systems will give away through its No Limits contractor program. Bagley, from Bagley Lawns, Pasco, WA and Rast, from Star Irrigation, Arlington, TX, were selected from thousands of No Limits entries in a random drawing. Three additional Hummer safaris will be awarded in monthly drawings to be held in July, August and September 2000. In addition, one Hummer vehicle will be awarded to one grand prize winner in September 2000. The grand prize winner will be selected from all entries received during the five-month promotion. The deadline to turn in entries for the grand prize drawing is August 31, 2000. The No Limits program is open to owners and principals of landscape and irrigation contracting companies headquartered in the U.S. Participants earn one drawing entry for every Irritrol Systems product they purchase between April 1 and August 31, 2000.



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And the winner is...



Lou Kobus of Village Turf, Mount Vernon, VA, supported the Evergreen Foundation out of the goodness of his heart. After all, the non-profit group provides greenway projects around the country with cash support and gift-in-kind contributions of work, machinery or materials. But by signing up as a member during a recent membership drive, he got more: a weekend for two at the John Deere Classic PGA golf tournament in Moline, IL last month. Way to go, Lou! Anybody interested in helping the Evergreen Foundation should call Den Gardner at 877/758-4835 or log on to www.evergreenfoundation.com.

Labor talk

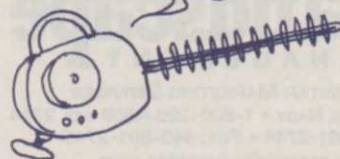
"It's no longer a question of just 'Get me some labor,' it's more specific. Contractors want good workers whose legal status is solid. H2B addresses those needs."

— Scott Evans, C. Scott Inc., Bay City, TX, talking about how federal audits can turn up illegal immigrant workers, and how, if a worker repeatedly fails to produce a question-proof Social Security card, he or she can be barred from working in the U.S. again.

SMART TRIMMER

M. J. [Signature]

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WATCH YOUR FINGERS





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