National Survey on Athletic Turf

Also: Plant growth regulators
Computer-aided design
"We Do See Eye-to-Eye on PennLinks"

Frank Gill III, Superintendent
The Fields of Rosemont, LaGrange, GA
- Public 18 hole course
- Sand base greens
- Open prairie design
- Triplex-mowed greens
- Organic nutrients

"When the word was out that we had bentgrass greens, our numbers went up considerably. Players tell us our greens are fast and smooth as glass when compared with bermuda. PennLinks is the icing on the cake!"

Paul Cheplick, Superintendent
Highland Country Club, LaGrange, GA
- Private 18 hole course
- Soil push-up greens
- Dense trees, limited air movement
- Walk-mowed greens
- Granular and sprayable nutrients

"The members and guests at our club have raised their perception of our facility dramatically since converting to PennLinks bentgrass. And we don't go through the inconvenience or transition of Winter overseeding."

Frank W. Gill, III  Paul S. Cheplick

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Circle No. 115 on Reader Inquiry Card
A little bit of Santa Claus, not much of Ben Franklin

“When you assemble a number of men, to have the advantage of their joint wisdom, you inevitably assemble with those men all their prejudices, their passions, their errors of opinion, their local interests and their selfish views. From such an assembly can a perfect production be expected?”—Benjamin Franklin

WE THE PEOPLE of the United States, in order to form a more perfect union... demand an end to oppressive government influence over our right to life, liberty and the pursuit of happiness.

Forgive me for plagiarizing the first few words of the U.S. Constitution. But that message came through, loud and clear, to our legislators during the general election last month. By throwing a number of incumbents out of Washington on their ears, the people spoke.

I hope that the small-business community—the green industry in particular—was part of this collective voice. Some of what Congress legislated during the '80s and '90s has had a dramatic impact on our industry, if not through the EPA, then through FIFRA, OSHA or any number of other alphabet-soup agencies and laws that continue to sprout like weeds in Washington.

When I contemplate these problems, the memorable words of ABC-TV consumer reporter John Stossel often echo in my mind: “The market works in mysterious ways. Leave it alone, and it will regulate itself.”

Certainly, if you tried to run your small businesses the same way the government tries to run itself, you’d be sleeping in cardboard boxes and dining on someone else’s table scraps by now.

How is it, I wonder, that the government of the world’s richest nation went belly-up more than 20 years ago? How can our per capita earnings be among the highest in the world, our income tax rate hover around 20 percent, and our government still not have a penny to its name?

One of the reasons—appropriate to the coming holiday season—is that our federal government is the biggest Santa Claus in the world. We send millions of dollars to Somalia, Bosnia and other less fortunate countries. We break the bank sending U.S. troops to Haiti or the Middle East. We even play Robin Hood (rob from the rich, give to the poor, infirm and aged) here within our own borders.

We put up with porkbarrel spending, fraudulent welfare claims, and a massive bureaucracy that is buckling under its own weight.

No, these are not the words of a latter-day Ebeneezer Scrooge. They’re your own words—words I’ve heard while visiting you and chatting with you on the phone. Words that echoed in the halls of Congress as you were casting your votes.

Certainly, we all realize that occasions arise when the United States must help less fortunate people, both here and abroad. But you and I (as patriots first and small business men and women second) realize the folly of trying to be all things to all people.

With the 1994 elections, we have drawn the proverbial line in the sand. But our job isn’t done yet. We must continue to closely monitor our newly-elected officials to make sure they don’t often step over that line.

And you know they’re dying to.
HAPPY HOLIDAYS!

Coming next year:

January: State of the Landscaping Industry in the U.S.—third of four exclusive surveys
February: State of the Golf Maintenance Industry—last of our exclusive surveys

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The best plant growth regulator will reduce mowing requirements, improve turfgrass density, inhibit seedhead development, improve color and more.
Dr. Wayne Bingham
The public and pesticides

There’s no question in the minds of consumers about the benefits of specialty pesticides. But there are concerns about their responsible use, according to a national survey commissioned by Responsible Industry for a Sound Environment (RISE).

Small business healthy

Small businesses across the U.S. enjoyed a healthy surge in sales and profits during the second quarter of this year, according to a quarterly survey conducted by Padgett Business Services. Service businesses in the Midwest, however, were down.

ON THE COVER: Wrigley Field in Chicago, home of the Cubs, is one of the oldest and most respected athletic fields in the nation. Photo by Dr. Kent W. Kurtz.

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Jack Robertson
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Steve Wightman
Jack Murphy Stadium
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Environmental Ldsc. Services
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Landscaper Retailer (ISSN 0894-1254) is published monthly by Advanstar Communications, Inc. Corporate and editorial offices: 7500 Old Oak Blvd., Cleveland, OH 44130. Advertising, accounting, advertising production and circulation offices: 131 West First St., Duluth, MN 55802; 1333 N.W. Norcross, Seattle, WA 98177.

Subscription rates: one year, $39; two years $58 in the U.S.; one year $68, two years $99 in Canada. All other countries: one year $130, two years $195. Current issue single copies (pre-paid only): $4 in the U.S., $7 in Canada: elsewhere $12; add $3.50 per order for shipping and handling (pre-paid orders only). Office of publication: Advanstar Communications, Inc., 131 W. First St., Duluth, MN 55802. Second-class postage paid at Duluth, Minnesota, and additional mailing offices.

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Postmaster: Send address changes to Landscape Management, P.O. Box 6198, Duluth, MN 55806. Revised date: November 30, 1993.

Printed in the U.S.A.
The climate is right for a fertilizer revolution

The introduction of ESN precision controlled nitrogen represents the latest in scientific advancements that now allow you a vastly improved method of maintaining healthy, vibrant turf.

Developed in the laboratories of Exxon Chemical, ESN represents a major advancement in nitrogen management made possible by the most sophisticated scientific resources available.

Much more than a slow release fertilizer, ESN’s patented polymer coating allows the release of nitrogen based entirely on temperature. The same temperature pattern that regulates a plant’s demands for nutrients.

**ESN’s Temperature Sensitive Polymer Membrane - the Secret for High Performance**

The secret to ESN’s innovative technology is the polymer membrane surrounding a high quality urea granule. Once exposed to moisture, the inner nitrogen remains encapsulated and will only be released when the surrounding temperature is sufficient for plant growth.
You Control the Duration of Nitrogen Release

To allow you complete control of your fertilizer program, you may choose different ESN longevity formulations. For example, in some applications a two month material may be appropriate, while in others a 4-6 month material is more suitable.

ESN comes blended with other essential nutrients vital for a well rounded fertilizer program.

Controlled Release for Maximum Results

Since temperature is the only environmental factor determining nitrogen release, the ESN technology greatly reduces the potential of wasted nitrogen associated with other traditional fertilizer products.

With the precision of ESN's controlled release of nitrogen the volume of clippings is greatly reduced while overall turf color and vigor improves.

Turf trials and university research across the U.S. have demonstrated ESN's ability to outperform all other fertilizer technologies on the market today.

ESN represents a quantum leap in fertilizer technology and is setting new standards for fertilizer performance.

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1-800-847-6417

United Horticultural Supply
Working To Enhance Our World

ESN is a registered trademark of Sherritt, Inc.
How to control purple nutsedge  
**Problem:** Is there anything to control purple nutsedge? *(Texas)*  
**Solution:** Your best approach would be to use Image. According to Lesco Co. representatives, Image plus MSMA along with a spreader/sticker provides better control of purple nutsedge than Image alone in your area. In this combination treatment, MSMA has been shown to reduce the phytotoxicity effect on desirable turfgrass from Image.

Image is slightly slow to respond to treatment. I suggest using a tank mix of one quart/acre of Image plus 2 lb. ai/acre of MSMA plus a spreader sticker. Do not use MSMA on St. Augustine turf-grass.

Make sure the turfgrass is not under moisture stress to reduce the possibility of phytotoxicity. Apply during the cooler part of the day, such as early morning or late evening, two to three days after mowing. Also, do not mow for another 48 hours after the treatment application. This would improve translocation and systemic movement of Image. Avoid watering for 24 hours after the application of treatment.

Generally, two applications of Image at 14-day intervals should be sufficient to help manage the purple nutsedge plants during the season. Often, these treatments may not be sufficient to manage the nutsedge problem the following year. Reports indicate that new nutsedge plants can emerge from the underground bulbs which are not killed the previous year. Depending upon the situation, you may find 50-to-70 percent of new nutsedge plants during the second year. Therefore, monitor the area and consider using Image treatment the following year as needed. If the problem reappears the third year, it may require further treatments. With this approach, the objective is to eliminate the new plants emerging from underground bulbs every year. Within two to three years of treatment, the problem should be eliminated satisfactorily. A new nutsedge material from Monsanto, Manage, is currently pending EPA registration at this time for most warm- and cool-season turfgrasses. Read and follow label specifications for better results.

Sod webworm/grub trouble  
**Problem:** We are finding lots of sod webworms and grubs in lawns. We are thinking of using Sevin insecticide for managing both. Would this work? *(Ohio)*  
**Solution:** Yes, you can use Sevin insecticide to manage both sod webworms and grubs. Sod webworm larvae hide in the silken cocoons during the daytime and come out at night and feed at the base of tillers. Generally, they do not cause serious problems since sod webworms do not kill crowns. With the onset of cool and moist weather, turfgrass normally recovers well. Recovery can be further supported with proper fertilization. Insecticide treatments can be provided as needed if the problem is severe.

With grub control, the situation is slightly different. If the grub population is not very big with onset of good weather and lots of rain, the turf may recover and the damage symptoms may not be very apparent. However, if the grub population is high, their extensive feeding on roots can cause severe injury. Turfgrass may not recover in spite of good growing conditions. For this reason, grub activity should be detected early, preferably around late July to early August, and registered insecticides applied as needed.

There are a number of good products in the market, but since you are interested in using Sevin, I will limit my answer to that product. After applying the insecticide, post-application watering is very important. This practice would provide about 80 to 85 percent control of grubs when treating with Sevin. The key is to apply early and water it in.

Read and follow the label specifications for better results.

Persistent poison ivy  
**Problem:** A 30,000 sq. ft. field I manage is inundated with poison ivy. Until I took over, the field was cut twice each year at about six inches. From May 15 through August 15, I cut the field at 3 inches with a rotary mower. The leaves are smaller, but the ivy persists. The field is in full sun. *(Massachusetts)*  
**Solution:** The problem with poison ivy is that it may be coming from a nearby wooded area. Poison ivy can spread primarily by vegetative viny stem growth, as well as from seeds. Once established, they can gradually keep spreading into larger and larger areas.

A perennial, poison ivy survives the winter and returns the next year. Its seeds remain viable in soil for several years. When conditions are favorable in spring, seeds can produce new plants.

Selective management in a turfgrass field is difficult, if not impossible. Growth regulator products such as trichlopyr or dicamba would be needed for selective control. Consider using herbicides such as Confront (at a high label rate), Turflon II amine (which contains trichlopyr and 2,4-D) or dicamba plus Weedone DPC combination.

Fall application may be advantageous. At that time, the sugar from the leaves moves down to the root system for storage. If the treatments are done before the leaves change colors and before defoliation, fall application may be good. Try in a small area to see how it would manage the problem. Another option is to treat the field in early spring when plants unfold. It may require at least two applications. Consider a third application as needed to help manage the problem.

---

Dr. Balakrishna Rao is Manager of Research and Technical Development for the Davey Tree Co., Kent, Ohio.

Mail questions to “Ask the Expert,” LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, OH 44130. Please allow two to three months for an answer to appear in the magazine.
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Circle No. 117 on Reader Inquiry Card
Benefits among the best in the green industry for athletic field managers

Ah, the joys of being an athletic field manager! Forget the weeds. Forget the complaints from irate parents. Besides the feeling of accomplishment that often accompanies watching a bunch of kids knock around on a safe, beautiful field, another of the business’s true attractions is the list of financial benefits provided by employers.

From 401k plans to paid sick leave to partial or full retirement, these benefits are unequalled in the green industry.

Almost 100 percent of athletic field managers who responded to an LM survey last month get paid holidays and paid vacations. In addition, more than 90 percent of the sample receive paid sick leave, and health insurance that is at least partially paid by the employer.

(By contrast, less than half of all lawn care companies offer paid vacations and holidays, and less than one-third offer paid sick leave.)

It is no wonder, then, that 65.4 percent of our sample has been involved in maintaining athletic fields for 10 years or more. Just 18.2 percent has been involved for fewer than six years.

“It’s pretty easy to get up and go to work in the morning,” notes Steve Wightman, field supervisor for Jack Murphy Stadium in San Diego.

Part of the reason for lack of turnover is because of the job’s very nature, he says. “It takes at least three to four years before you feel comfortable preparing a field, regardless of how much you know. It takes a while to grow accustomed to your job because of all the variables.”

John Michaiko of Case Western Reserve University in Cleveland thinks students on college campuses are a factor. “Here, the customer changes every four years,” he says. “I think the reason people stay around is security and dedication.”

In August, LM’s survey questionnaire was mailed to 750 athletic turf managers who subscribe to the magazine. By mid-September, we had received 174 valid answers, a response rate of 23.3 percent.

The average respondent maintains 10.8 baseball or Softball fields, 6.9 football or soccer fields. Other fields maintained include intramural, practice, lawn bowling, all-purpose, rugby, parade and band, disc golf, radio aircraft, field hockey and volleyball. Average acreage is 104.7.

Diane Gildemaster, district supervisor for the Sioux Falls (S.D.) Parks and Recreation Department, is on the high side of being a typical respondent. Her department maintains 33 baseball or Softball fields and 41 football or soccer fields.

“We’re finding that our existing leagues would like to expand,” she reports, “but we just don’t have the facilities. People are demanding more quality and more use.

Thankfully, the associations are starting to pick up some of the maintenance costs.”

As might be expected, nearly all the survey respondents reported mowing and fertilizing fields. However, a surprisingly high 94.0 percent reported aerating

THE NATIONAL SCOPE...

Projecting the average (mean) responses obtained in our survey to the national scope, we are able to come up with some useful figures for the size of the total domestic athletic field maintenance industry.

There are approximately 12,000 park systems and 20,000 high schools, colleges and universities in the U.S. with football, soccer and/or baseball programs. Therefore, the total dollars spent on athletic field maintenance in the U.S. each year—including employee wages, salaries and benefits—appears to be very close to $2.0 billion. (This figure adjusted for abnormal survey responses.)

Dollars spent on purchased supplies breaks down something like this:

- High-end equipment (aerators, trucks, tractors) $499 million
- Fertilizers and pesticides $434 million
- Mowing equipment $322 million
- Irrigation $178 million
- Turfseed/sod $112 million
at least one of their fields on at least an annual basis.

"Our school is not big enough to have a football team, so our soccer fields are being used constantly," notes Denton Smith of Lenox (Mass.) Memorial High School. "We have huge leagues, spring summer and fall; and our fields are being pounded. But aeration does a hell of a job" of keeping them safe and usable.

Another respondent, Jim Robinson of the Garner (N.C.) Parks and Recreation Department, has even tried deep-tine aeration, a procedure that is becoming more popular on golf courses but is not yet being used on a widespread basis by athletic turf managers.

"We had problems with overuse and abuse on our football and soccer fields," Robinson says. "We contract the Verti-Drain aeration from a local golf course. It's an expensive operation.

"The jury's still out on it because we had to get right back on the fields this year, so it was not a fair test. However, damage sustained this year was kept to a minimum."

Weed control, reseeding/overseeding

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<table>
<thead>
<tr>
<th>TYPES OF FIELDS MAINTAINED</th>
<th>% of sample</th>
<th>Mean</th>
<th>Projected to readership</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASEBALL/SOFTBALL</td>
<td>95.0</td>
<td>10.8</td>
<td>50,843</td>
</tr>
<tr>
<td>FOOTBALL/SOCCER</td>
<td>87.1</td>
<td>6.9</td>
<td>29,665</td>
</tr>
<tr>
<td>OTHER</td>
<td>42.1</td>
<td>3.6</td>
<td>7,481</td>
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<tr>
<td>TOTAL FIELDS MAINTAINED</td>
<td>100.0</td>
<td>21.2</td>
<td>87,789</td>
</tr>
<tr>
<td>TOTAL ACRES MAINTAINED</td>
<td>100.0</td>
<td>104.7</td>
<td>516,800</td>
</tr>
</tbody>
</table>

1 Total athletic field readership of Landscape Management magazine, June 1994 = 4,936

2 "Other" types of fields mentioned in survey: intramural, practice, lawn bowling, all-purpose, field hockey, volleyball, recreational, open turf, passive play, parade, band, rugby, playground, disc golf, radio aircraft

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<table>
<thead>
<tr>
<th>Type of Maintenance Performed (by percent of sample)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOWING</td>
<td>98.2%</td>
</tr>
<tr>
<td>FERTILIZATION</td>
<td>96.4%</td>
</tr>
<tr>
<td>AERATION</td>
<td>94.0%</td>
</tr>
<tr>
<td>WEED CONTROL</td>
<td>87.4%</td>
</tr>
<tr>
<td>RESEEDING, OVERSEEDING</td>
<td>83.8%</td>
</tr>
<tr>
<td>IRRIGATION</td>
<td>81.4%</td>
</tr>
<tr>
<td>INSECT CONTROL</td>
<td>52.1%</td>
</tr>
<tr>
<td>DISEASE CONTROL</td>
<td>47.3%</td>
</tr>
</tbody>
</table>

(Other maintenance performed: topdressing, dethatching, painting, dragging infields, sod installation, levelling, litter control, safety control, fence maintenance, light maintenance, bleacher maintenance)
and irrigation are other tasks performed by more than 80 percent of our sample readers. Athletic field maintenance, however, doesn't end with the turf. Most respondents report being responsible for infield maintenance, and many report painting, levelling, safety monitoring and fence, light and bleacher maintenance as allied duties.

"We've got state-of-the-art infield maintenance equipment," boasts Tim Stubbs of the Bowling Green (Ohio) Parks and Recreation Department. "We use our Bannerman Diamond Master to level our infields on a daily basis, and we've been told we have the best infields around. Bowling Green State University's athletic department has even borrowed our equipment to use on their varsity baseball field."

Gildemaster says Sioux Falls rolled its fields for the first time this year after a recent regrading program. "It took out some of the little ruts we wouldn't have normally been able to rake out," she says, "and the community is really proud of the fields now."

According to the survey results, athletic field managers are major purchasers of mowers of all sizes, aerators, irrigation equipment and compact tractors. In addition, three out of four managers purchase dry-applied fertilizer and turfseed on an annual basis.

Average annual budget for athletic field maintenance was more than $162,000, but that was skewed upward by four respondents who reported budgets of $2 million or more. More typically, the annual budget for materials is around $30,000, the median response.

Budgets, the survey notes, are growing incrementally. More than half of our respondents reported no growth or negative growth in their budgets from 1993 to 1994, though the overall average was plus 0.5 percent. Next year, there will be about a 1.6 percent increase in budgets overall, our survey reports.

By far, the greatest portion of the respondents were affiliated with public parks—58.7 percent. An additional 32.3 percent work for schools or universities. —Jerry Roche

### NEXT MONTH:

State of the Landscape Industry
WHEN IT COMES TO GUARDING AGAINST WEEDS, THINK OF US AS MAN'S BEST FRIEND.

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For more information about our Professional Turf products, call toll-free 1-800-225-ANDY.
Green industry discovering CAD

Today's design software is affordable and easier to use, but it still takes a pro with a plan to make it work.

- Computer-aided drafting, drawing, or design—call it whatever you want. Most people refer to it by its acronym, CAD. In the landscape business, it allows knowledgeable users to produce draftsman-like landscape plans more efficiently than they can by hand.

The key word here is efficiency. It's a tool that can make the landscape design/sell/implantation process more efficient.

Almost all professional users also describe it as a time-saving tool. This is particularly true when they revise landscape plans. It's easier to make changes on the computer rather than with a pencil.

But perhaps the real benefit of using CAD is its ability to more efficiently "marry" designs with their real-life financial parts. In a very real sense, it acts as a calculator, starting by providing material takeoffs of designs. Most programs can quickly provide volume calculations for cubic yards of mulch, crushed granite, or other landscape material, too.

Actually, you did the hard work prior to the design process by pricing your materials and figuring specific labor hours for each type of task. You inputted this data into the program before you made your first design.

But it's CAD's ability to turn out neat, colorful designs quickly that attracts most attention in the industry.

"I'm competing with guys who do sketches on a yellow note pad," says one contractor who claims he turns out full-blow, detailed residential plans in three hours where it used to take him almost a day. "When I hand a potential client one of my designs, who do you think is going to get the job?" he asks.

Explains another landscaper: "Two contractors come to your home. Both of them walk around your property, and you tell them all the things you want done—a brick walkway, a deck, flower beds.

continued on page 14
Landscapers agree: they’re more efficient, accurate with CAD

- Patrick Burrier considers himself an artist.

He likes the feel of a drawing pencil in his hand. For years he drew meticulous and colorful landscape designs for clients. He learned the art at Michigan State University, and refined it at his own landscape business in northeast Ohio. He still dusts off his tee-square and pencil. But not often. Burrier designs landscapes mostly on his computer screen now.

The computer, and particularly the Landcadd design software, are tools that allow him to:

- Reduce the time it takes for designs and revisions, often in half. Clients usually spend less on design fees. Burrier himself can make more presentations and land more jobs.
- More efficiently and accurately calculate costs for designed projects.
- Bring customers more directly into the designing process.

Sometimes on a Saturday morning, in fact, he invites a prospective client to his office. Burrier encourages suggestions as he directs the computer’s cursor in building a design on the electronic screen. Almost effortlessly he can widen a walkway, change the color and texture of pavers, or add a flower bed.

“Before, if I took a master plan out to client in pencil and the client decided to change some details, I had to go home and redraw the whole plan,” says Burrier. “With the computer I can make changes in minutes. Then I just reprint it.”

That’s just one of the benefits that computer-aided design (CAD) provides Burrier’s Mentor Landscapes & Supply Co.

“When I visit a property now I put a tape measure on it. We can be right on the money with the computer, down to a quarter of an inch on a design,” he says. This allows Mentor Landscapes to bid and estimate projects accurately. Once the design is complete, and all of the design elements are in place, the computer calculates the exact amount of materials needed—plant material, mulch, pavers, retaining walls, all materials, in fact, needed for the job.

Then, using real-life prices that Burrier has assigned (and periodically updates) for each of these elements, the computer calculates his cost for materials based on each design, and also the labor. It also figures an estimate for the client. Almost at the touch of a button.

“I’m not going to end up saying to a client, ‘we forgot to figure these materials and we’ve got to charge you another $2,000.’ We don’t make those kinds of mistakes,” he says.

Burrier attended classes at nearby Lakeland Community College to learn how to use AutoCadd, the drawing/designing software for designing everything from widgets to buildings. He then piggybacked the more specific Landcadd land planning software into his system.

By adding custom touches, like his own intricate and colorful plant symbols and an impressive company title block, Burrier makes his designs stand out even more.

Burrier estimates he’s spent about $20,000 on his computer, a 486-series coprocessor with 66 mhz and two drives including a 540-megabyte hard drive, a 24-by-36-inch digitizing tablet and a plotter, plus his design software.

He plans to incorporate more 3-D into his designs. He’s also investigating using animation.

But some landscapers say they don’t need all the designing capacity of AutoCadd. They say newer stand-alone programs fulfill their design needs fine.

Robin Cloetens of Garden Keepers, a small design/install company in Lake Port, Mich., designs distinctive perennial gardens, rose gardens, water gardens, Japanese gardens and herb gardens.

Cloetens uses a PC and LandDesignerPro software.

“When we design a project, we design what it’s going to look like in 10 years,” she explains. “We do a full-blown design and then, when we find out what the client’s budget is for this year, we back the design down to what they can afford. Most clients love it.”

Designs on the computer screen can be held in a client’s hand after coming off a dot-matrix printer. They can be done on translucencies layered and put into a binder to show the project broken into its various phases, too.

Bruce de Wit of Rosemont Nursery, Grand Rapids, Mich., puts together booklet-sized presentations containing several different views of a client’s property with his software from UDS. Moreover, each computer drawing is accompanied by a materials list and prices.

“I think AutoCadd is too difficult for a small landscaper who doesn’t do designing or estimating every day,” says de Wit, adding that he found the UDS program relatively simple to master.

“But convincing people that they can do this, too, can be difficult,” he admits.

De Wit says that since he combined the computer drafting package with the UDS estimating software he’d been using for several years, he almost doubled the number of estimates he can prepare.

—Ron Hall
CAD from page 12

“One hands you a little drawing he’s just done along with a business card. The other comes back the next day. He’s got a cover letter kicked out on his laser printer, a drawing done on his computer. He’s got a plant list, a reference list, a whole portfolio of information, including a professional estimate.

“Who’s going to look more professional?” CAD is finally seeping into the landscape industry, although some landscape pros still approach it like it’s a snake in a shoe box. That’s changing as design software gets easier to operate. Programs are also becoming more affordable. This is catching the attention of landscapers, most of whom run small companies.

Most CAD-type programs for the professional market come, thankfully, from people who know the landscape business, then developed programs for it.

Their advice to landscape pros: forget the “rinky dink” stuff costing $59.95 at the local builder supply store, software targeted primarily for do-it-yourselfers. Most of it was written by computer people who think they know landscaping.

The good landscape design software starts at about $400. In fact, landscape pros—including but not limited to landscape architects—who do a lot of designing can easily spend $20,000 and more for both their hardware and software. That’s a lot of computer-related power, enough, in some cases, to moonlight as a rocket designer. No kidding.

Many landscape contractors don’t need all of these accessories. Many can incorporate CAD—in 2-D plan views—for under $2,000 if they’re already computerized.

To run CAD programs easily, your IBM-compatible computer system should be at least as large as a 486-DX, claims one knowledgeable user. Smaller systems like 286, 386 and 4786-SX lack the math co-processor chip and speed needed to do calculations required by CAD software.

Whatever the software, your computer designs should not end up looking like they’re done by a 13-year-old with too much free time. In fact, most landscapers customize their programs, particularly plant symbols and title blocks. They want their designs to be distinctive.

“We want to see drawings that look hand-drawn, except we do them on the computer where we have this spectacular editorial capability,” says the owner of a small landscape firm. “Our designs serve as the calling card for our work.”

But CAD, apart from its value for designs and presentations, can be a powerful business management tool, inasmuch as it has to work in tandem with all the other information related to running your business—costs, estimates, schedules, work orders.

“It’s nice to have a drawing, and that adds to your professionalism, but the fact of the matter is you still have to count up how many plants there are. And you still have to put a price on those plants. And you still have to calculate how many hours are going into the job,” says a Michigan contractor and CAD user.

With today’s constantly evolving landscape CAD software it’s just getting easier to do.

—Ron Hall

Salt-tolerant grasses to the rescue

Georgia researcher rediscovers long-neglected seashore paspalum; seed firms screen traditional turfs.

Salt kills or weakens most turfgrasses. It wilts and desiccates them because salt in the soil solution creates a high osmotic pressure that restricts absorption of water and nutrients by turfgrass roots. But managers cursed with maintaining high-quality turf in saline environments can smile. Help is on the way in the form of a growing selection of salt-tolerant turfgrasses.

These grasses possess many of the characteristics of fine turf. In fact, they are fine turf, but they remain healthy in locations where turfgrass traditionally struggles:

- areas irrigated with recycled water (some effluents have high salt content),
- along highways “salted” during winter storms, and
- ocean-side golf courses.

While traditional species are being rescreened for salt tolerance, some scientists like Dr. Virginia Lehman at Loftus have been developing a newer alkaligrass, Salty. And others are readying grasses you may not be too familiar with yet.

Ronny R. Duncan, Ph.D., has collected—and is evaluating—270 ecotypes of seashore paspalum in turf plots at the University of Georgia, Griffin, Ga. He seeks varieties that thrive on golf courses with high salt levels.

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Circle No. 105 on Reader Inquiry Card
es,” says Duncan. “It’s a matter of getting them evaluated for the fairways, the greens and the tees, then finding the best ones and going from there.”

Actually, seashore paspalum has been found on U.S. courses since the mid-1960s when Pacific Sod introduced a cultivar, Adalayd from Australia, says Duncan. Initially used on golf courses in southern California, superintendents in the Southeast worked with it, too. It probably didn’t find greater favor, he believes, because few superintendents knew how to manage it. Most treated it like a hybrid bermudagrass and encountered scalping and thatch problems.

“If you manage it like centipedegrass with very low fertility and cut back on the water, then it does extremely well,” says Duncan. “We’re developing management protocols for this grass for specific sites like a green, a tee, for fairway use and for roughs too.”

Duncan calls seashore paspalum “the year 2000 grass,” although he acknowledges it generally takes eight to nine years to get specific varieties into production.

“I told the USGA I wasn’t going to sit back and wait for things to happen,” says the University of Georgia professor. “In another two to three years we’re going to know what’s going to work. We will then evaluate them on many, many sites prior to release.”

Beyond its ability to tolerate high salt levels (some cultivars will withstand up to 14,000 ppm salt), seashore paspalum requires much less fertilizer than either bentgrass or bermudagrass. So far, Duncan says he’s encountered no major insect or disease problems. His major investigations have focused on winter hardness. He says that shouldn’t be a problem either and predicts the grass will be used on golf courses as far north as the coastal Carolinas.

“From an environmental standpoint, this grass is looking very good,” says Duncan.

Although seashore paspalum has seed production capabilities, initially it will have to be vegetatively propagated. Duncan says the species has a complex called self-incompatibility—it must have pollen from plants with a different genetic background.

“It’s a problem that will have to be worked out,” he admits.

Other turfgrass breeding programs have identified other turfgrasses with increased salt tolerance. Some are already being marketed. Expect more to become commercially available.

This past season Turf-Seed Inc. harvested one field of Seabreeze slender creeping fescue that, according to plant breeder Crystal Rose Fricker, was both salt tolerant and performed admirably in shade trials.

“We’re trying to put out more acres of Seabreeze this fall,” she says.

“We have a group of tall fescues that we’re cycling (for salt tolerance),” she adds. “In fact, I did all the cool-season species. We have the survivors planted out now.” Particularly promising: salt tolerant bentgrasses collected by Dr. Joe Duich on golf courses located along the Eastern seaboard.

“We have a slender creeping red fescue, Marker, that does very well at 5000 ppm,” says Craig Edminster, director of research, International Seeds. He’s been examining turfgrasses growing in solutions with 1500, 2500 and 5000 ppm of salt.

“We plan on screening virtually all the species that we have in our program. Our next group will be our new, improved perennial ryegrasses,” adds Edminster.

Having identified salt-tolerant varieties, the company can then offer mixtures that establish rapidly and maintain good persistence along roadways that get winter road salt. “Of course, some of these will be used on golf courses or in areas that irrigate with effluent water too,” says Edminster.

Lofts Seed says its new alkaligrass developed by Virginia Lehman performs extremely well under high salt and/or alkaline soil conditions. Aptly named Salty, it’s described as a slow-growing, cool-season turfgrass with fine-leaved texture. It can be cut to as low as ½” or allowed to grow about 1½”, creating a natural-looking low-maintenance turf.

Lofts is targeting it for full sun at sea shores and along roadways and sidewalks with salt problems. In fact, says Lehman, it performed admirably on an oceanside hole at famed Pebble Beach, providing healthy turf when the overseeded ryegrass failed because of salt.

It can also be used for winter overseed ing of dormant bermudagrass where soil conditions dictate use of alkaligrass, says Lehman. Quantities are available.

—Ron Hall

Relative salinity tolerance

<table>
<thead>
<tr>
<th>Good</th>
<th>Medium</th>
<th>Poor</th>
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<tbody>
<tr>
<td>Bermudagrass</td>
<td>Tall fescue</td>
<td>Meadow fescue</td>
</tr>
<tr>
<td>Zoysiagrass</td>
<td>Perennial ryegrass</td>
<td>Red fescue</td>
</tr>
<tr>
<td>Creeping bentgrass</td>
<td></td>
<td>Kentucky bluegrass</td>
</tr>
<tr>
<td>St. Augustinegrass</td>
<td>Colonial bentgrass</td>
<td>Centipede grass</td>
</tr>
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Source: “Turfgrass Science & Culture” by Dr. James B. Beard
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This former teacher takes delight in showing others how to be more efficient and useful.

Kevin Clunis, superintendent at Stillwater (Minn.) Country Club, believes in education—everyone’s, including his own.

It’s only natural: Clunis received a bachelor’s degree in education in 1981. He even taught school for a while before pursuing a two-year degree in turf so that he could return to one of the part-time jobs he had once treasured—working on a golf course. He was assistant superintendent at Stillwater for just one month before being promoted.

“I enjoy teaching people new things,” says Clunis. “Everyone on staff has to know how to operate a weed whip and a walking greensmower. In our profession, you can’t stop learning.”

The training program Clunis devised is basically hands-on instruction, though videotapes on safety procedures are also used.

He has 19 employees, including a full-time mechanic and a full-time assistant. “I let part-timers do some thinking, and they take pride in that,” Clunis reveals.

His assistants are normally hired from the ranks of newly-graduated college students in golf/turf studies. After hiring them, Clunis teaches them everything he knows and, “in two or three years, I move them on” to, perhaps, their own course.

Clunis is also very active in educating his fellow superintendents. He was one of a large group of supers who helped formulate a loose-leaf binder about environmental considerations for members of the Minnesota Golf Course Superintendents Association. The binders were received so well that the Golf Course Superintendents Association of America (GCSAA) is considering a similar project on a national scope.

Clunis has a very laid-back managerial style. “I feel very comfortable allowing people to make mistakes. That hits home a lot more.

“Keep a list of jobs that have to be done posted. I let them pick and choose what they want to do. I’m not always a dictator, and they respond to that.”

His philosophy of course management is day-to-day consistency, which is working well. “A long time ago, a member told me that a player should be able to shoot the course record any day of the week,” he notes. “I don’t know what the greens stimp at. I know I don’t get any complaints, so why worry?”

His worst problem is the damage done by snow mold. “You have one chance before the snow comes to apply product. In Minnesota, you don’t get another chance,” he says. “Plus, the things that go with it are also problems: ice damage, desiccation—things like that.”

Clunis closes the course at the beginning of November every year, then he starts evaluating “what went good and what went bad. We plan through the end of the year and make mid-course corrections. continued on page 4G
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STILLWATER from page 1G
We stay focused on everything involved.” Stillwater is an 18-hole private club founded in 1925 as nine holes. The second nine was built in 1959.

“I can honestly compare my course to the exclusive clubs,” says Clunis. Prospective members have taken note, too. The club’s membership cap is 415, but the waiting list is 400 names long, even though it was the last private club in Minnesota to admit females as stockholding members (1993).

Members must live within five miles of the golf course. Membership is just $750 per year, and every penny of the club’s membership dues (almost $400,000) goes toward course maintenance.

“I get the dues money, and the clubhouse is set up to break even,” notes Clunis. “Money from the pro shop, guest fees and golf car rental balances all other expenses.”

Members—43 percent of whom are retired—“have done a lot of work for the club,” Clunis observes. “Three times last summer, they had ‘seed & soil’ days where they seeded fairways for me. They have a lot of equity in the club.

“Compliments are always wonderful. They go a long way toward getting me through the season.”

Kevin Clunis is doing what he loves, and is happy and content being what he is. Every morning, he walks onto the course and watches the sun rise. “In 11 years, there has never been a day that I didn’t want to go into work.” —Jerry Roche

‘Unique’ parks coax downtown rebirth
Here’s how one community used tropical gardens, floral mounds and fountains to draw people back to a long-slumbering downtown.

—Exciting parks can help reinvigorate a downtown. A perfect example is Sandusky, a lakefront city of about 35,000 in north central Ohio. Five acres of uniquely landscaped city gardens in the city’s Washington Street Park seem to be coaxing its long-sleeping downtown to life again.

Its keeper is Tom Ott, parks and greenhouse director for the city. He and six other city employees design, plant and maintain parks that are as unique and inviting as you’ll find in any city.

Ott is a self-admitted “plant” person. He and his family run a small commercial nursery specializing in evergreens on a farm outside the city, too. Although neither he nor any of his co-workers possess degrees in horticulture, he describes them as dedicated landscape professionals. “They really get into what they’re doing. They care about really care about our parks.”

In his early 40s, Ott is just old enough to remember when downtown Sandusky was the area’s cultural and retail mecca. That’s when families lined up in front of the city’s two downtown theaters after shopping its two major department stores.

Or when teenagers “buzzed the ave.” Sandusky Bay on Lake Erie anchored the north end of the downtown cruise; Washington Street Park, with its fragrant gardens, the southern. The kids gathered at the Frisch’s Big Boy Restaurant on balmy summer nights. They arrived in ‘Vettes and souped-up Fords, but mostly family sedans. Merchants complained bitterly of the parade of brake lights and polished chrome. Friday night, after all, was a busy shopping night.

But the complaints dried up 20 years ago, as did downtown retail business—just after developers smeared a shopping mall over 40 acres of bean fields about five miles south of the city.

They left behind a shell of a downtown, and incredibly quiet summer nights there. To hear Tom Ott tell it though, people are returning to downtown Sandusky although it’ll probably never again be the retail center it once was. About 5,000 turned out for the 1994 July Fourth bash. Many thousands more visit the city’s annual Holiday of Lights celebration in the parks Thanksgiving through New Years.

Day-to-day evidence of the downtown’s rebirth lies in the restored, ornate, 60-year-old State Theater; the trendy new apartments and condos along Sandusky Bay; the renovation of the former Lasalle’s Department Store building into county offices. The building overlooks the park’s gardens.

These parks are diverse and inviting with their lush gardens of tropical plants (palms, bananas, bird of paradise, elephant ears, castor beans), a Japanese-style sunken garden, succulent/cacti garden, fountains, intricate floral mounds. Many plants are used season after season, like several 75-year-old Phoenix palms.

Tom Ott, Sandusky Parks/Greenhouse Director, spent just $700 on seeds and plants this season in creating a downtown wonderland.
Ott is thankful that the city has never abandoned its downtown parks.

This year Sandusky budgeted just over $300,000 for its greenhouse and parks. "The city's been very fair with our budget. I've been real happy with the way they've treated us. Our division's never been cut," says Ott.

Parks include five acres downtown and smaller sites in other areas of the city, including flowers and beds at city offices and fire stations. Most of the budget goes for salaries. It's a bargain considering the dedication of his crew, believes Ott. "I keep getting better and better people," he says.

Realizing the budgets are always tight, Ott's crew saves money where it can.

“We only spent about $700 on plants and seeds this season,” says Ott. “We propagate almost all plants from seeds that we harvest ourselves or from cuttings. In fact, we probably couldn't even buy the amount of alternanthera (Joseph's coat) that we use.”

By mid-August, co-workers begin taking cuttings of the dark-leafed alternanthera for 1995 beds. They usually prepare 400 flats—60,000 plants—used mostly as lettering or background in Washington Park's six floral mounds. Lighter green santolina forms the borders of these displays which proclaim significant events in the community—for instance, the 75th Anniversary of the American Legion. Or the 150th year of Emmanual United Church.

“Some of the mounds are reserved up to the year 2018,” says Ott, admitting that they take lots of maintenance. To climb onto the mounds without damaging the plants, workers use wooden "chicken ladders."

“We trim them every 1½ or 2 weeks. It takes all of us two days. Three of us take off with gasoline hedge shears. We've really gotten good with those shears. They can trim just about anything. And what we can't get with the gasoline shears, we get with manual shears.”

In fact, if it weren't for power shears and string trimmers, Ott says he and his crew could never keep up with the maintenance. "I'm actually kind of a plant rat. I hate to throw a plant out. Sometimes my co-workers get upset with me because we have to water, fertilize and spray everything. And it gets real tight in the greenhouse every winter.”

Warm-weather specimens like the Phoenix, kentia and sago palms are gathered just before the first heavy frost in early November, trimmed (roots particularly), potted, then packed into the city's 20-year-old, 6,500-sq.-ft. greenhouse.

It gets very crowded in the city greenhouse through the winter, but the work goes on for the next season.

"The park system here started about 150 years ago and it's been growing ever since," says Ott. "I'm just trying to add something to it."

—Ron Hall

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Bringing golfers back to your course

If you're interested in making sure that golfers who visit your course return some day soon, maintenance and design tricks can help guarantee repeat play. According to Laurence A. Hirsch, president of Golf Property Analysts, Harrisburg, Pa., here are some things to look for:

1) Course conditioning: Are players inclined to return because greens are in great shape? Are fairways wide enough, or too wide? Has the course's appearance been enhanced with mulched beds, ornamental grasses and flowers? Do amenities such as tee signs, ball washers, benches and hole liners add to the course's overall image?

2) Pace of play: A brisk pace increases the enjoyment of most players. Large tees quicken the game, while providing adequate areas for all levels of players. Hazards should not penalize novice and average golfers too severely or constantly create bottlenecks. Rangers and yard markers also help keep the game moving.

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A golf hole like this one encourages repeat play. It makes use of multiple tees and varied landing areas to test skill and strategy, plus bunkers, trees and a pond for a beautiful playing environment.

rough maintenance and bunker appearance and consistency to see that you are providing as high quality as the budget will allow.

The key to promoting repeat play is developing a course that provides a challenge, maintains a player's interest and remains in peak condition, adds Tom Clark, former president of the American Society of Golf Course Architects.

"The courses that are able to meet these criteria are usually quite successful in attracting new golfers, developing long-term loyalty and generating strong revenues," Clark says. "They also offer an outstanding drawing card for the community or surrounding development."

When designing a course that encourages repeat play, architects use multiple tees and design greens large enough to accommodate several pin settings.

"Using multiple tees and pin settings creates variety," says Clark. "The key is to make sure the golfer is not playing the same course every time."

A course in top condition promotes repeat play because golfers can depend on the course to be more playable more often than a course in less-than-peak condition.

"If golfers know a course is in good condition and will generally be open for play, they'll plan to return," says Clark. "For example, a course with good drainage will be open for play more often than a course that drains poorly. This is critical to the many dedicated golfers who want to tee off as soon as the rain stops."

"The architect, superintendent and golfer all share a role in keeping a course in top condition," says Clark.

The only permanent control of moss and algae is to correct the conditions which reduce turf growth. The following cultural practices can accomplish this:

1) Maintain good soil fertility. Have the soil tested to determine proper lime and fertilizer needs.

2) Improve drainage. Soils which stay moist because of poor drainage should be contoured so that water will drain off the area. In some cases, tile drainage may be necessary to correct wet conditions.

3) Increase light penetration and air circulation. Trimming back low branched trees may allow for better light penetration and movement. In some cases, removing some of the least desirable trees may be justified. Areas surrounded by buildings and vegetation with limbs close to the ground require considerable effort to provide adequate air circulation and light penetration. Using a shade-tolerant grass such as St. Augustinegrass, zoysiagrass or tall fescue will help. However, if direct sunlight does not reach the ground during the day, a groundcover may be more appropriate.

4) Cultivate compacted soils. Aerification with a machine the removes plugs of soil will help reduce compaction. Drainage in fine-textured soils can be improved by cultivation and adding large amounts of organic matter and sand.

5) Avoid excessive irrigation. Keeping the surface moist will only increase problems.

Moss and algae problems will recur unless growing conditions are improved, even though you might elect to use the following chemicals:

- Copper sulfate: 2 to 3 oz./1,000 sq. ft.
- Hydrated lime: 2 to 3 lbs./1,000 sq. ft.
- Ferrous sulfate (moss): 4 to 7 oz./1,000 sq. ft.
- Ferrous ammonium sulfate (moss): 10 oz./1,000 sq. ft.
- Non-selective herbicide: apply only to spots covered by moss, according to label directions, and reseed or resod the damaged areas.

Once controlled, sodding is the recommended means of establishing turf under heavily-shaded conditions.

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Controlling moss, algae in golf course turfgrass

by Gilbert Landry Jr., Ph.D., University of Georgia

- Moss and algae are found in turf areas because conditions are not good for growing dense healthy turf.

  "Mosses are small plants which have a mass of fine stems. Algae are thread-like green plants which form a thin dense green scum over the soil surface. Neither moss nor algae are thought to be parasitic to turfgrasses. The green scum formed by algae is relatively impermeable and once it dries out, forms a tough black crust."

  Factors favoring the growth of algae:
  - wet or humid full sun locations;
  - compacted waterlogged fertile soils; and
  - thin, weak turf.

  Factors favoring the growth of moss:
  - wet or humid shady conditions;
  - acidic, infertile, poorly drained, waterlogged soils;
  - excessive thatch; and
  - thin, weak turf.

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Lofts
Crenshaw Creeping Bentgrass was formally introduced this year by Lofts Seed. It was developed at Texas A&M University where it was known as SYN 3-88. The research project was supported by the USGA and Bentgrass Research, Inc.
Crenshaw displays excellent heat resistance. It produces a bright green, dense, upright turf with less grain. Limited supplies will be available with the 1994 harvest.
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MERIT 75 WSP insecticide is a new broad-spectrum, systemic insecticide that is extremely effective at very low use rates. It offers less risk to applicators, man and the environment. Imidacloprid, the active ingredient in MERIT, delivers superior season-long control of turf and ornamental insects without the need for repeated applications.
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The Millcreek Topdresser / Spreader provides landscapers and grounds managers with a valuable production tool for numerous landscaping functions, including: topdressing athletic fields with sand-peat mixes, application of compost to landscaped areas and fields, building compost piles with grass clippings, leaves and wood chips, dispersal of grass clippings as a disposal alternative, application of de-icing materials on paved areas, spreading baseball infield mix, mulching large area planting beds, large area lime application, general bulk materials hauling and unloading functions and more.
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The GF1800 front mower delivers a constant driving force and smooth power transfer to the wheels, even during sharp turns. The GF1800 4WD features an 8.4-mph maximum forward traveling speed and a 4.1-mph maximum reverse speed. The GF1800 offers a choice of three shaft-driven, off-set mowers: a 48-inch mulching rear-discharge mower, 54-inch side-discharge mower or 60-inch side-discharge mower.
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Walker Manufacturing
Walker introduces larger area mowing capability with a 62" side-discharge deck. This is the largest deck offered for the mid-size Walker Tractor, fitting on either Model D (16.5-HP diesel) or Model T (20-HP gasoline). The deck is specifically designed for mowing rough areas as well as fine turf, using belt driven blades and reinforced deck housing to handle rough conditions. Also new for '94 is a Power Dump Option for the grass catcher.
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Lesco's LGR-7400 commercial rotary mower finds steep hills or wet conditions no problem. The LGR-7400 features automatic or full-time four-wheel drive, powered by a proven and reliable Perkins 27 HP diesel and has two-speed transmission with differential lock. Independent turn-assist brakes allow tight radius turns with minimal turf damage. Its high-lift deck easily clears curbs and simplifies transport. Its 60- or 72-inch deck flips vertically, making it easy to service. Contact your LESCO Sales Rep or call (800) 321-5325 (in Cleveland, 333-9250).

**MELROE**

The capability of utilizing several different attachments allows Bobcat® skid-steer loaders to handle a wide angle of snow-removal jobs. Choose a bucket for scooping and loading snow, an angle blade for pushing snow several inches deep, an angle broom for sweeping a few inches of snow or a snowblower for clearing the real deep white stuff.

The loader’s pivot turnability and 4-wheel drive traction make the machine great for snow removal. With its narrow width and good operator visibility, the Bobcat loader keeps lawns, shrubs, trees and fences safe from damage often caused by larger machines.

**JOHN DEERE**

The new John Deere 220 Greens Mower features a new operator-presence safety system, smooth, aluminum traction rolls, loop-style handle bars, a more powerful engine, 11-bladed reel, machine-grounded front roller, and easier-to-reach controls. For the name of your nearest distributor, or free literature, call (800) 537-8233.

**THE GRASSHOPPER COMPANY**

Grasshopper’s new combo mulching deck also collects or side discharges. The new Grasshopper Quick-D-Tatch® Combo Mulching Deck™, available for all Grasshopper outfront zero-radius mowers, switches from mulching to side discharge to collection using the Quick-D-Tatch Vac® grasscatching system on the 44", 48" and 61" decks. The 72" deck mulches or side discharges. A new Quick-D-Tatch feature lets the operator change decks and attachments faster than ever before.

**SPRAYING SYSTEMS, CO.**

Announces a spray tip for custom applicators that combines the precision and uniformity of flat fan nozzles with the clog-resistant, wide-angle pattern of flooding nozzles. The patented Quick Turbo FloodJet® self-aligning spray nozzle, patterned after the popular Turbo FloodJet tip used by farmers, is now available in an array of sizes for custom applicators.

Quick Turbo FloodJet nozzles feature a molded coupling that makes for quick, easy nozzle changes and automatic spray pattern alignment with any quick-connect coupler and are available in standard sizes from 1.5 gal. per minute up to 12.0 gal. per minute.

**EXCEL**

Fine grooming of large maintained areas requires the extra wide cut of the Hustler Range Wing™ attachment. With over 12 feet of efficient cutting in a single pass, you can mow as much as 60 acres in an eight-hour workday. You save time, labor, and money when you put a Hustler Range Wing to work!

**TORO**

The Toro Company announced that it has added three-wheel drive to the industry’s leading greens mower to create the new Greensmaster 3100-3WD model. The popular, riding greens mower now has broader applications with the ability to reach and mow the most challenging greens terrain improving playability and after-cut appearance throughout the golf course. Features include Toro’s Turf Guardian® Leak Detector which prevents major turf damage by detecting small hydraulic oil leaks.
SANDOZ AGRO, INC.
Sandoz Agro's Barricade® gives turf managers and landscapers season-long control of the most weeds of any leading pre-emergence herbicide — at rates much lower than other products. Available in water-soluble packets for sprayable applications, and in dry granulated fertilizer formulations. Barricade effectively controls weeds on turf and landscape ornamentals — with no staining concerns.
Circle No. 154 on Reader Inquiry Card

TERRA®
Terra Thalonil 90DF, Thalonil 90DF WSP and Thalonil 4L are proven, chlorothalonil fungicides that fight even the toughest turf and ornamental plant diseases. In fact, major university tests prove that Thalonil meets or beats the competition when comparing Dollar Spot and Brown Patch control. Ask for Thalonil from your nearest Terra product representative.
Circle No. 155 on Reader Inquiry Card

CIBA
Primo, a turf management tool from Ciba, reduces turf growth by 50% for up to four weeks. Labeled for warm- and cool-season grasses. Primo saves you time—mowing is faster and / or less frequent. Primo reduces clippings, makes grass denser and a darker color green. For more information, contact your local distributor.
Circle No. 156 on Reader Inquiry Card

DOWELANCO
Announces Dursban Pro insecticide to control chinchbugs, cutworms and a variety of other insects. Dursban Pro, an emulsifiable concentrate, was designed to provide turf and ornamental professionals with the same proven performance they’ve come to expect from Dursban in a new low-color formulation. Dursban Pro will replace other Dursban formulations including Dursban 2E, Dursban 4E and Dursban Turf Insecticide. Compared to previous Dursban formulations, Dursban Pro has: low odor, two pounds of active ingredient Chlorpyrifos per gal., an expanded label, and a “Caution” label. For information call 1-800-352-6776.
Circle No. 159 on Reader Inquiry Card

AGREVO
Finale is a broad spectrum nonselective herbicide that provides effective control of broadleaves, grasses, sedges, and woody species. Finale’s unique Transmodal Action (TMA) provides both speed of activity and mode of action. Unlike burndown or slow acting herbicides, Finale's TMA provides fast, but long-lasting weed control.
Circle No. 157 on Reader Inquiry Card

TORO
Whatever the mowing condition, the TORO ProLine Height-of-Cut feature on every ProLine deck adjusts to deliver a greener and healthier-looking lawn. Adjust the height-of-cut on your ProLine deck from two to five inches to get the same great cut in deep, tall grass on tough terrain as you would expect under normal mowing conditions. Call 1-800-348-2424 for a free ProLine Products Brochure.
Circle No. 158 on Reader Inquiry Card

THE ANDERSONS
Barricade® Plus fertilizer has “dial in” length of control. The active ingredient BARRICADE offers turf managers the longest pre-emergence herbicide residual, with up to eight months of control. Based on applied rates, applicators can determine the length of control through a single application (follow Andersons recommendations by region).
Circle No. 160 on Reader Inquiry Card
Plant growth regulators in turfgrass management

Some PGRs may cause discoloration of turf. The trade-off is in reduced labor costs. Spring fertilization can help improve color, but may also reduce PGR efficacy.

by Wayne Bingham, Ph. D., Virginia Tech

- The best plant growth regulator will reduce mowing requirements, improve turfgrass density, inhibit seedhead development, improve color and more.

The practical uses of turfgrass require that topgrowth be kept within specific heights, which may vary with the turf's purpose and function. So mowing management must take into account the detrimental effects upon the growth and long range health of the root system, as mowing reduces leaf area and the carbohydrate production necessary for adequate root growth.

A general rule-of-thumb in mowing management is “mow frequently enough so as to remove no more than one-third of the foliage at any one time.”

Cool-season turfgrasses have a peak period of shoot growth associated with spring green-up. Applying readily-available nitrogen at this time can stimulate excessive shoot growth.

Fall fertilization tends to improve root growth and does not stimulate this spring flush of leaf growth with excessive carbohydrate use.

However, a slow-release fertilizer may be needed in spring and is more acceptable than soluble forms. Earlier spring green-up without lush peak growth occurs with fall fertilization.

**Inhibitors and suppressors**—Plant growth regulators (PGRs) are used to reduce excess shoot growth in spring while conserving energy in the crowns and roots of cool-season turfgrasses. After the initial effects, turfgrasses become darker green and generally contain high amounts of protein in the leaves.

Type I PGRs inhibit or suppress turfgrass growth. Inhibiting compounds are foliarly absorbed and require a period for uptake before irrigation or rainfall.
Examples include maleic hydrazide (Slo-Gro) and mefluidide (Embark). These compounds inhibit cell division, meristem development and seedhead elongation.

Suppressor compounds are absorbed through crowns and roots. They work best with some rainfall or irrigation after application. Amidochlor (Limit) is root absorbed and requires rainfall or irrigation to achieve maximum suppression. The crown meristems appear to be the main site of action. Seedhead reduction will occur only if the product is applied before seedhead elongation. Root growth may continue while shoots are suppressed.

Inhibiting compounds reduce shoot growth within one week and are effective for 4 to 10 weeks. The number of mowings required are generally reduced during this time.

PGR injury symptoms may include foliar discoloration, reduced density and initially low quality, which appears to result from inadequate growth to replace senescing plant parts.

Spring fertilization, especially with nitrogen, may enhance the quality of turf through reduced injury. However, in many instances the PGR effectiveness is also reduced.

Turfgrass thinning caused by PGRs may also be reversed by nitrogen application at the time of treatment. Even though fall fertilization is preferred for cool-season turfgrasses to reduce the peak shoot growth in spring, the effectiveness of PGRs may also be reduced.

Weed control and PGRs—Turfgrass density is generally low after inhibitor PGRs have been applied, and turfgrass is prone to weed invasion.

Annual grasses such as crabgrass, foxtail and goosegrass are found to invade and become very competitive in the thin turfgrass. Broadleaf weeds are quick to emerge and/or spread into turfgrasses following inhibitor Type I PGRs. In many cases, management programs include weed control treatments along with the PGRs for maintenance of improved turfgrass quality.

Growth retardants—Growth retardants reduce the height of plants by inhibiting biosynthesis of gibberellins which regulate cell enlargement in plants. Growth retardants reduce the extent of cell elongation, resulting in the control of canopy height. They also inhibit subapical meristems rather than apical meristems as described for Type I PGRs.

Examples of Type II growth retardants currently in use in turfgrass management programs are flurprimidol (Cutless), paclobutrazol (Scotts Fertilizer with TGR) and trinexapac (Primo). These PGRs do not inhibit seedhead development to the extent obtained with Type 1 PGRs. Flurprimidol and paclobutrazol are absorbed by turfgrasses through roots and crowns while trinexapac is absorbed through the foliage. Biosynthesis of gibberellin is inhibited early in the synthesis cycle by flurprimidol and paclobutrazol and late in the cycle by trinexapac.

Although trinexapac is rapidly absorbed, there are some concerns about rainfall immediately after application.

Although not widely accepted, some research indicates that a small amount of mefluidide may be mixed with growth retardants to obtain improved seedhead control.

Weed invasion is not as pronounced following the application of growth retardants. Growth retardants are used in golf course fairways to reduce mowing requirements, annual bluegrass encroachment and spring and summer color.

Increased tillering has generally improved the turfgrass density after using a growth retardant. Weed invasion is not as pronounced following the application of growth retardants. Growth retardants are used in golf course fairways to reduce mowing requirements, annual bluegrass encroachment and spring and summer color.

Essentially, PGRs regulate turfgrass growth by inhibiting or suppressing cell division in apical meristems and crowns (Type I) and by interfering with gibberellin biosynthesis (Type II). Inhibitor PGRs reduce growth by interfering with cell division and reduced seedhead emergence.

—Dr. Bingham is a professor of weed science at Virginia Tech, and an extension weed scientist for turfgrass and aquatics.
IF THIS IS WHAT YOU THINK PRIMO DOES TO YOUR GRASS,

IT'S TIME WE SET YOU IN THE RIGHT DIRECTION.

Lots of people know that Primo® regulates the growth of grass. But not as many understand how.

Primo doesn't stunt turf. Instead, it redirects the grass's growth.

Unlike other growth regulators, which actually stop cell division, grass treated with Primo will still be actively growing, producing the same amount of new cells. Only now the cells will be smaller. Smaller cells mean a more compact plant.

Nutrients that otherwise would be needed above ground are now channeled into the roots, giving you a thicker stand, and up to 25% more root mass. So the grass can more efficiently take up water and nutrients.

And Primo is foliar-absorbed, so there's less risk of inconsistent uptake. The result? The easiest-to-manage, best-looking turf you can imagine.

It's easy to see why all roads lead to Primo.

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WASHINGTON—There's no question in the minds of consumers about the benefits of specialty pesticides like those used on golf courses and home lawns. But there are concerns about their responsible use, according to results of a survey commissioned by RISE (Responsible Industry for a Sound Environment).

The survey, undertaken by Charlton Research of San Francisco, focused on attitudes of the general public rather than consumers who specifically purchase and use pesticides.

Eight focus groups were held in Pittsburgh, Seattle, Milwaukee and Birmingham. Each group was composed of 9-10 adults of mixed age, gender, area of residence and location.

Focus group information was combined with a national telephone survey of 1,000 adults.

“Our research shows that we need to help the public better understand several issues relative to the value of pesticides, as well as their responsible use,” says Alan James, RISE’s executive director.

“As the official voice of the pesticide industry, RISE will work with audiences (ranging) from government and industry influencers to the media and consumers, to increase understanding of the value of pesticides as pest management tools which help enhance the quality of life and the environment when used responsibly.”

Several of RISE’s planned initiatives are educating consumers on responsible pesticide use, promoting the benefits of pesticides, and increasing awareness about the training certified applicators must undergo.

SURVEY REVELATIONS

- Many Americans are willing to balance their personal and environmental health and safety concerns with the perceived benefits of pesticides.
- Respondents think pesticides are used more by other people in their local government than by themselves or their neighborhood circles.
- Most people use some form of pesticides.  
  64% use pesticides to control household insects/rodents
  48% use pesticides to control garden insects
  38% use pesticides on their home lawns
  10% currently use a lawn care company
- Controlling termites, insects and bacteria with pesticides is seen as an important personal health and safety protection issue. It is more important then having a beautiful lawn or the public cost of highway maintenance. If a personal protection issue is at stake, a large majority of people will override their initial concerns about pesticides.
- People strongly believe pesticides are safe when used as directed. But they are not certain if their neighbors are using pesticides safely. They also believe that professional applicators use stronger pesticides, but are trained to apply them safely.
- Only about 50% believe pesticides made available to the public are thoroughly tested.
- The most trusted source of pesticide information is from independent local government agencies like extension agents, poison control centers and health departments.
- “Maintaining public health” was the reason given by almost 80% of the respondents for applying pesticides to control pests and weeds in public areas.
PAYBACK TIME

THINK OF IT AS A CUSTOMER APPRECIATION DAY THAT LASTS FIVE MONTHS.

Be sure to check the January '95 issue.

CYANAMID

Agricultural Products Division
Specialty Products Department
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Small business sales and profits healthy last spring

ATHENS, Ga.—Small businesses across the U.S. enjoyed a healthy surge in sales and profits during the second quarter (April-June) of this year, according to the most recent quarterly survey conducted by Padgett Business Services USA here.

Traditionally, second quarter numbers are the strongest for small business, and 1994 was no exception, the report notes. Overall sales were up 13.2 percent and profits showed a healthy 33 percent climb over first quarter numbers.

"Second quarter numbers generally tell us how the rest of the year will go," says Padgett chairman Dan Sautner. "This year looks better than 1993 or 1992 in this respect, but—more importantly—expenses are down and under control."

Small businesses are stretching their profits by keeping expenses down, the survey says. Reduced spending—up only 4.4 percent over last year—indicates that small business owners are watching their bottom line very closely.

The entire study is published as “Small Business—The Engine of Our Economy” by Padgett. Highlights:

- A 4.4% wage increase shows small business is producing more jobs than other economic sectors.
- Inventories are up 12.7%.
- Nearly half of those polled believe now is not a good time to start a business.
- 72% said they don't think small business should be required to contribute any portion of the health care tab that was proposed during the survey's time frame.
- Not one person believes the Clinton administration has helped the situation for small business.
- The Midwest saw the greatest sales growth in the country, up 8% from the same period last year.
- The East didn't reach expected sales levels, posting the greatest increase in inventory over last year at 17.3%.
- The South showed the highest wage increase in the country at 8.8%, indicating confidence in the economy.
- The West was the only region in the country to experience a decrease in sales over last quarter.

For more information on the report, contact Padgett Business Services USA, 160 Hawthorne Park, Athens, GA 30606; (706) 548-1040.

DANE SCAG was happy with LM reader ratings of his mowers (LM, October). In a letter to LM, he wrote:

"I am flattered and pleased to see that my years of personal dedicated efforts in trying to please the commercial landscaper has been recognized and accepted."

"Until a few months ago, I was enjoying my third retirement. I now have a drafting pencil in hand and shortly, with the support of engineers and a major manufacturer, will be producing commercial lawn mowers with innovations exceeding my award-winning zero turn walk-behind.

"This is an exciting and challenging industry. I truly look forward to renewing the relationship with my many friends. And look forward to the opportunity to offer them something new and simply better than available today."

WINNERS OF CD PLAYERS at the Green Industry Expo were Gina Neher, manager of Lawn Pride, Inc., Indianapolis, and Bobby Snook, owner of Snook Lawn & Landscape, Oologah, Okla.

Each of the attendees won a Radio Shack Tandy portable compact disc player from LANDSCAPE MANAGEMENT magazine.

LM held two drawings—one each day—during the trade show, held in St. Louis, Nov. 13-17. Two hundred show visitors entered the contest.

Neher and Snook both enjoyed the show as well as winning our drawing. "It was the best I attended," said Snook. "And the outdoor equipment demonstrations were great." This was Neher's first GIE show. She told us she found the seminars to be helpful. "Anyone who attended had something to see," said Neher.

TESTS GIVEN by the Outdoor Power Equipment Technician Certification Testing program now number more than 2,000, according to Virgil Russell, director of certification for the Service Dealers Association.

"The addition of testing on compact diesel engines has created considerable interest in the commercial cutter and golf course industries," says Russell. For more information: OPE Certification, 1946 IH 35, Suite 100-A, Austin, TX 78704; (512) 443-7999 or fax (512) 443-7997.
NATURALLY, 38 HORSES CAN EAT MORE GRASS THAN 29.

INTRODUCING THE EXCEL HUSTLER 4600 RANGE WING™ DIESEL. WE'VE ADDED NINE MORE GRASS-CUTTING DIESEL HORSEPOWER TO THE HIGHEST-RATED* FRONT-MOUNT MOWER EVER BUILT, AND HUSTLER PRODUCTIVITY NOW COVERS AN EVEN BIGGER TERRITORY.

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The Hustler 4600 Range Wing™ from Excel: speed and simple dependability extended one big step further in a mower with 40% more grass-gobbling power.

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Circle No. 104 on Reader Inquiry Card
HIRE & FIRE WITHOUT FEAR...Rightful Termination: Defensive Strategies for Hiring and Firing in the Lawsuit-Happy 90s was written to help employers and business owners regain control of their businesses with proven techniques for hiring and firing. The book is written by James Walsh. To order, contact Nolo Press, at (800) 992-6656.

GOLF & THE ENVIRONMENT...RGF Environmental Systems, Inc. is offering a free booklet entitled Environmental Guidelines for Golf Course Maintenance Facilities. The booklet is offered as a public service to golf course superintendents. It includes information on how to reduce the risk of contaminants entering the environment: EPA laws, maintenance shop housekeeping, mix & load operations, storm water run-off, managing hazardous waste on site and pollution solutions. Contact RGF at 3875 Fiscal Court, West Palm Beach, FL 33404; (800) 842-7771.

ARCHITECT LISTING...The American Society of Golf Course Architects’ 1994-95 membership list features all the names, addresses, telephone and facsimile numbers of the 122 members. To receive a free copy of the list, send a stamped, self-addressed business-size envelope to The American Society of Golf Course Architects, 221 N. LaSalle St., Chicago, IL 60601.

KNOW THE PLAYERS...The Associated Landscape Contractors of America (ALCA) has published its 1994 directory, Who’s Who in Landscape Contracting. The directory is a reference source for landscape contractors, landscape designers, building owners and managers, facilities managers and more. It contains a complete listing of ALCA members and other industry-related contacts. For a copy, contact ALCA, 12200 Sunrise Valley Dr., Suite 150, Reston, VA 22091; (703) 620-6363.

IPM GUIDE TO PESTS...The University of California has published Pests of Landscape Trees and Shrubs. Included is emphasis on IPM methods of pest controls, hundreds of illustrations, and 50 pages of tables. Cost is $32. Contact ANR Publications, 6701 San Pablo Ave., Oakland, CA 94608-1239; (510) 642-2431.

SOIL & PLANT ANALYSIS...The Handbook on Reference Methods for Soil Analysis is a laboratory technique manual for the more common soil testing procedures. The latest edition includes several new procedures and new sections on nitrate and heavy metals. Cost is $49.95, and is available from St. Lucie Press, 100 E. Linton Blvd., Suite 403B, Delray Beach, FL 33483; (407) 274-9906.

IRRIGATION MANUAL...Troubleshooting Irrigation Control Systems, by irrigation consultant Bill Derryberry, covers electricity, meters and valve operation, simple electricity, how meters work and how they are used to diagnose typical problems. Contact Irrigation Publishers, 5818 East Oak St., Scottsdale, AZ 85257; (602) 423-0542.

GREEN INDUSTRY EVENTS

What’s going on in the industry

JANUARY


5: GrowerExpo, Business Conference ’95, Sheraton Chicago Hotel. Phone: (800) 456-5380.

5: Cook College/Rutgers Cooperative Extension Short Course: Pest Management of Ornamental Landscape Plants. Phone: (908) 932-9271.

9-11: Nebraska Turfgrass Foundation Annual Conference, Holiday Inn, Omaha, Nebraska. Phone: (402) 463-5418.

9-12: Eastern Regional Nurseries’ Association Trade Show, Concord Hotel, Kiamesha Lake, N.Y. Contact: ERNA, P.O. Box 117, Vernon, CT 06066.


12: Cook College/Rutgers Cooperative Extension Short Course: Pest Management of Ornamental Landscape Plants. Phone: (908) 932-9271.


17-18: Nevada Landscape Association Conference & Trade Show, Reno-Sparks Convention Center. Phone: Brian Dean, (702) 852-6349.


18: Professional Turf and Landscape Conference, Westchester County Center, White Plains, N.Y. Phone: Carol Mueller, (914) 636-2875.

19: Tropical Plant Industry Exhibition, Broward County (Fla.) Convention Center. Phone: (407) 345-8137.

22-25: Associated Landscape Contractors of America Executive Forum, Disney Grand Floridian Beach Resort, Orlando, Fla. Phone: (800) 395-2522.

23-24: National Golf Course Owners Association Trade Show, Orlando, Fla. Phone: (909) 393-4262.

23-25: Ohio State University Nursery Short Course, Greater Columbus Convention Center, Columbus, Ohio. Phone: Holly Bartholomew, (614) 392-7699.


27-28: Professional Landscape Service Association Trade Show & Equipment Expo, Greater Jacksonvile Fairgrounds, Jacksonville, FL. Phone: Kirk Rust, (904) 573-9632.

31-Feb. 2: Professional Lawn Care Association of Mid-America Convention, Kansas City, Mo. Phone: (816) 561-5323.
'Living' wall a nice landscaping niche

Milwaukee’s Kuehne Co. beautifies unique traffic barrier with landscape plants.

By Ron Hall, senior editor

- The Milwaukee Journal described the unusual landscape project along I-94 as a huge “Chia Pet.” That description of a “living” highway noise barrier is pretty accurate.

The job of constructing this barrier, and then of making it both green and flowering, belongs to the Kuehne Co. (formerly the Kuehne Landscape Co.), Oak Creek. The project is unique in the Midwest, although a similar noise barrier was built in New Jersey. Another in Colorado should be done next spring.

This fall, Kuehne workers built the 515-foot-long soil wall out of huge, notched, A-shaped plastic sections. Beams were placed in the notches to give the structure strength. The wall stands 22 feet tall and is 7½ feet wide at its base, tapering to 18 inches across at the top. They filled it with earth and top soil.

Then they beautified its 5,318 built-in, terraced flower boxes with more than 14,000 plants. They planted the north side, which faces a neighborhood, with shade-loving hostas. The south side along I-94 contains a striking assortment of creeping evergreens, small deciduous shrubs, prairie plants, groundcovers and wildflowers.

Kuehne will maintain the plants for the next two years, replacing those that die. The company, whose main offices are nearby, will water the plants from water tank trucks. After two years, the plants—a vegetative support for the wall—are on their own.

How do you bid such a job?

"You estimate your labor," Kuehne President Charles Johanneck tells Landscape Management, "You know what the price of your materials are. That's a given. Then you take an educated guess, based on past experiences on others jobs, and you figure it from there."

Johanneck started with the Kuenhe Co. in 1968. He and two other veteran employees, Andy Nalewajko and Charles “Chuck” Wolter, bought the company in 1992. Actually, it was known as the Kuenhe Landscape Co. then. "We took the word 'landscape' out. It didn't accurately describe all that we do any more," he says.

The company does a lot of work for the Wisconsin Department of Transportation, but it takes on other large jobs too. It’s built several soccer fields and, more recently, several outdoor volleyball courts too.

"You have to be ready to accepts new ideas, otherwise you're left by the wayside," says Johanneck. "It's hardly ever dull around here because you never know what you're going to be involved with next."
Soil moisture sensor helps plan irrigation needs at low cost

The Horizon irrigation controller from Automata is based on soil moisture measurements.

Irrigation takes place on demand, in all types of soils at all moisture levels.

Horizon uses the Aqua-Tel soil moisture sensor for monitoring soil moisture content. It has an integral set point adjust. When the moisture level drops below the set point, it closes a relay which allows irrigation to take place.

The relay may be used to directly energize a valve to irrigate on demand, or it may be put in series with a timer or controller to limit the time of day an irrigation may take place.

Circle No. 191 on Reader Inquiry Card

Tackifier applicator needs no hydroseeding gear

The new TA-150 tackifier applicator from Reinco can be used with a garden hose to apply tackifier to hay or straw.

The TA-150 sprays virtually any powdered or liquid tackifier up to 180 feet from the machine to stabilize soils, hold seed in place and bring remote plantings into easy reach for watering.

With a 150-gallon tank, the portable TA-150 provides the maximum capacity allowed by law for transport and operation with most common half-ton pickups.

Circle No. 193 on Reader Inquiry Card

Boring attachment installs irrigation and sprinklers

A new boring attachment from McLaughlin attaches to skid-steer loaders.

The M-4500 is designed for use by landscape and general contractors for irrigation pipes, sprinkler systems, CATV and utility lines under landscape areas, lawns, sidewalks and other areas where surface restoration is time-consuming and costly.

The tool slides into a mounting plate attached to the inside surface of the skid-steer bucket and is pinned into place. Hydraulic lines with quick-disconnects from the loader are attached.

Circle No. 194 on Reader Inquiry Card

Products improve water, pesticide movement in soil

New from United Horticultural Supply comes Turfgo LI 700, a premium penetrating surfactant that maximizes pesticide efficacy in turf; and Turf Wetter, a water wetting surfactant.

According to UHS, Turfgo LI drives control products through a plant’s natural protective barriers. This, says the company, results in better and more consistent pest control.

Turfgo LI can be used as a wetting agent to give uniform coverage of a plant’s surface area. It is also effective as a pH adjuster for those products that are sensitive to high pH water.

It adjusts the pH level of alkaline water to prevent pesticide loss and improve compatibility.

The Turf Wetter enhances water flow through the small pores of finer textured soil, resulting in deeper water penetration and better root development.

Circle No. 195 on Reader Inquiry Card

Electric trimmer comes in three sturdy blade lengths

Little Wonder electric hedge trimmers are available in 16-, 24- and 30-inch blade lengths and are guaranteed to cut any growth up to 1 inch thick.

The double-insulated motor is sealed in a metal gear box and is surrounded by high impact material to increase the durability of the product.

The double-reciprocating blades are activated by dual-action switches located in each handle to automatically stop when either handle is released.

Circle No. 196 on Reader Inquiry Card
Walk-along trencher available with two engine options, Honda or Kohler

The Model 1220 walk-along trencher from Ditch Witch comes with two 12-hp engine options: a Honda GX390 and the Kohler Command CH12.5.

Both engines are quiet, fuel-efficient and meet all current California emission standards.

The 1220's standard outboard bearing support and longer head shaft help make the 1220's digging drive assembly more rugged and trouble-free. The trencher also features a new ground drive gearbox that's integrated with the engine, to eliminate mounting and coupling parts.

The gearbox features larger gears, O-ring cover seals and increased capacity.

There is no drive chain to adjust and there are only three grease service points, for easy routine maintenance.

Circle No. 197 on Reader Inquiry Card

Software tells which regs apply to your inventory

Gaia Systems of Menlo Park, Calif. now has a PC-based ChemCheck computer software program. The program lets environmental, health, or safety professionals to determine which federal and state environmental regulations may apply to their own hazardous materials inventories.

ChemCheck 2.0 cross-references user-created chemical inventories to more than 10,000 hazardous chemicals listed in federal and state environmental regulations. The user can also select a particular regulation to view the list of chemicals covered by that regulation.

In the new release, the number of chemicals has been expanded and the number of regulatory lists increased from 30 to 48. The program now includes parameters for regulations—exposure limits, reportable quantities, threshold planning quantities and federal waste codes.

Circle No. 198 on Reader Inquiry Card

Root growth regulator improves root quality, reduces shock

Spin Out root growth regulator from Griffing Industries of Houston, Texas can be used by wholesale and retail nurseries to produce a higher-quality nursery stock, reducing risk of plant loss.

Spin Out is a liquid formulation applied to the inside of plastic nursery containers. As the plant grows, Spin Out prevents root spiraling and matting, which can cause contain-grown plants to become root-bound, increasing the risk of plant death once they are transplanted.

Plants grown in pots treated with Spin Out begin growing almost immediately after transplanting because their root systems are healthy, more fibrous and ready to move into "new soil."

This fibrous root system allows the plant to absorb water and nutrients more efficiently and establish themselves in a garden quickly.

Circle No. 200 on Reader Inquiry Card

Walk-behind has 14 hp engine, high lift blades

Encore's Eliminator walk-behind mower 36- and 48-inch models with gear-drive and 14 hp Kawasaki engines.

These mowers offer many standard features:

- five-speed transmission with reverse assist;
- heavy-duty reinforced steel decks and high-lift blades;
- matching dual V-belts and taper lock pulleys;
- yoke-style casters; six-inch brake drums; parking brake.

Circle No. 199 on Reader Inquiry Card

Mask pesticide odors with wintergreen spray scent

Terra International, Inc. has introduced Riverside Spray Scent W to the green industry.

Spray Scent W features a "wintergreen" scent that can be added to weed and brush sprays to mask objectionable pesticide odors.

Spray Scent W can be used in ditch banks, and around residential and industrial areas. The product is packaged in one-gallon jugs.

Terra recommends 2 to 4 ounces of Spray Scent when used with a water carrier and 8 to 10 ounces per 100 gallons of oil or oil emulsion.

Circle No. 202 on Reader Inquiry Card

Insecticide soon available in a new low-odor formulation

DowElanco Specialty Products announces the introduction of Dursban Pro insecticide to control chinchbugs, cutworms and a variety of other insects. Dursban Pro, an emulsifiable concentrate, was designed to provide turf and ornamental professionals with the same proven performance they've come to expect from Dursban in a new low-odor formulation.

"By using Dursban in a new, state-of-the-art formulation, turf and ornamental professionals can continue to rely on the effectiveness they've come to expect from Dursban and still respond to public desire..."
for low odor, says Mark Neterer, DowElanco product marketing manager.

Dursban Pro will replace other Dursban formulations, including Dursban 2E, Dursban 4E and Dursan Turf Insecticide.

The company will continue, however, to support formulators with their formulations of Dursban 2E and 4E.

According to the company, Dursban Pro has low odor due to its unique carrier system.

Other benefits include two pounds of active ingredient—chlorpyrifos—per gallon; an expanded label, allowing for more uses and a broader-spectrum control of insects; a "Caution" label signal word.

According to Neterer, Dursban Pro is a more effective product, but is safe to use near sensitive plants outside the application area. There are also improvements in Department of Transportation compliance, which makes it easier to transport to the job site.

Dursban Pro is slated to be released in February.

Circle No. 203 on Reader Inquiry Card

New bentgrasses feature better heat tolerance

From E.F. Burlingham & Sons comes Syn92-1 and 92-5, varieties developed at Texas A&M's breeding program in conjunction with the USGA and Bentgrass Research, Inc.

Syn92-1 has a moderately fine leaf texture with very good genetic color. It is anticipated that it will be an excellent performer in golf greens as far as the transition southern zone. The parents' root systems of both varieties were screened for survival at temperatures of 120 degrees Fahrenheit for heat tolerance.

Circle No. 204 on Reader Inquiry Card

Expanded label broadens herbicide use to 70 plants

The Environmental Protection Agency has approved an expanded label for Pendulum WDG herbicide from American Cyanamid.

The new label enables landscapers, nursery growers, lawn care operators and golf course superintendents to use the product over the top of an additional 70 species of ornamental plants.

With the new label, Pendulum WDG herbicide may be used to control grasses and broadleaf weeds in more than 260 species of trees, shrubs, flowering beds and ground covers.

Circle No. 205 on Reader Inquiry Card
Fence guard protects against injury, looks good

Athletic field managers at Northwestern University have installed Fence Guard, by Oly-Ola Recreational Edgings, Villa Park, Ill., on the fence at Well's Baseball Field and Anderson Softball Field.

Fence Guard, a yellow vinyl safety cover, is attached to the top of the chain link fence surrounding the fields. The product protects against possible injury to a player who leaps for a fly ball, and adds to the aesthetics of the field.

Fence Guard is available in three colors—yellow, orange and white—and is easily installed in 8-foot sections.

Circle No. 206 on Reader inquiry Card

Pipe, cable locator tells placement of buried lines

The new Spot D Tek II Pipe & Cable Locator by McLaughlin pinpoints buried utilities to avoid the often devastating consequences of accidentally cutting through electrical lines, fiber-optic telephone cable, gas and water lines or other existing services.

This microcomputerized detection system takes the guesswork out of locating buried utilities, and even non-metallic PVC pipe with the use of a remote probe. You can quickly determine the precise location of services at depths to 14 feet below the surface, using any of four active detection frequencies. Live power and telecommunication lines are located without the need of a transmitter in any of three passive modes.

Circle No. 207 on Reader inquiry Card

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BOX NUMBER REPLIES: Mail box number replies to: LANDSCAPE MANAGEMENT, Classified Ad Department, 131 W. 1st St., Duluth, MN 55802-2065. Please include box in address.

HELP WANTED

PRODUCTION/OPERATIONS MANAGER: One of Atlanta's leading full service landscape management companies has an immediate need for experienced commercial maintenance manager. The Design Group was established in 1978 and is one of the largest firms in the region. We seek a candidate with a great eye for detail and strong organizational and leadership skills. We provide a stable environment, formal training and competitive salary and benefits. Please fax (404)242-1745 or send resume to EDG, Human Resources Dept., P.O. Box 1302, Norcross, GA 30091. EOE/Drug Free Workplace. 12/94

MAINTENANCE MANAGERS & SUPERVISORS: One of the nation's largest and fastest growing full service landscape companies has an immediate need for experienced maintenance managers and supervisors as well as entry level maintenance personnel. This is a top notch individual to manage operations of our commercial Horticultural Services Division. Our reputation is second to none for quality and service in our market area. This individual would be responsible for: directing and overseeing project managers; scheduling; hiring, training and motivating personnel; coordinating all resources including arborist, chemical applicators, mowing crews, special service crews; etc. If you are the type of individual that thrives on responsibility and challenges, and can operate with little direction, we would like to hear from you. Please submit or fax your resume to: Torre and Bruglio, Inc., 850 Featherstone, Pontiac, MI 48342. Attn: Stuart Pohl, Fax: (810)452-9293. Equal Opportunity Employer. 12/94

Landscaping Maintenance Foreman-KT Enterprises, Inc., a large Northern VA landscaping firm, is currently seeking highly qualified individuals to supervise within our commercial maintenance division. Candidates must have strong supervisory skills, solid horticulture background, CDL licensing and certified pesticide applicator license. Excellent wages, complete benefit package, 401K retirement plan and unlimited advancement. Submit resume with salary history to: Human Resources Department, 4001 Westfax Drive, Chantilly, VA 22021. (703)222-0449, fax (703)222-0278. EEO/AA. 12/94

Manager of Grounds and Horticulture, Monmouth College seeks individual to direct, plan, coordinate and supervise all grounds functions, with special care to be given to formal gardens and athletic fields. The manager will be responsible for overseeing landscaping projects, turf management and maintenance of vehicles and equipment, recyclables collection and removal. In addition, the successful candidate will be responsible for coordinating all work as well as training and supervising all grounds personnel. The manager will be responsible for purchasing, budget development, maintenance of inventory, identification of vendors, operation and maintenance of irrigation systems, delivery of equipment and furniture and snow removal. Ensure compliance with all federal, state and local codes and regulations related to grounds management. Successful candidate must be able to lift loads at up to 50 pounds. Must be able to effectively lead members of this department. Familiarity with equipment operation and maintenance to ensure safe and effective use of vehicles and equipment required. Minimum of seven years experience in horticulture and grounds management with at least five years in a supervisory capacity. Valid New Jersey Automobile Driver's License required. Candidate must hold or be able to obtain an NJ Pesticide Applicator License. Bachelor's degree in Ornamental Horticulture preferred. Excellent interpersonal, organizational and communication skills required. Excellent fringe benefits, including tuition waiver for employee, medical and IRS dependent children. Application and/or resume should forward a current resume no later than December 16, 1994 to Kathleen Hauck, Personnel Officer, Monmouth College, Cedar Avenue, West Long Branch, NJ 07764. An Equal Opportunity/Integrative Action Employer. 12/94

Key positions available with an expanding full-service landscaping operation in Cleveland, Ohio. Designers, Salesperson, Supervisor and Branch Manager opportunities. Send resume to: Yardmaster, Inc., Landscape Architects & Contractors, 1447 North Ridge Road, Painesville, Ohio 44077, Phone (216)951-9100, Fax (216)357-1624. 12/94

LANDSCAPE MAINTENANCE & GENERAL SUPERINTENDENT: Largest landscape maintenance company in the nation seeking individuals with 3-4 years experience. Must be able to make decisions, be creative, self-motivated, organized with strong supervisory skills. Also hiring Supervisory trainees. San Francisco Bay Area location. EOE. Please send resume to: Environmental Care, Inc., 825 Mabury Road, San Jose, CA 95133. Fax (408)437-1817. 1/95

Looking for resources and references on the landscape industry? Call 1-800-598-6008 for our FREE Fall/Winter Book Catalog! Outside the U.S. call 216-826-2839

Lawn Technician and Salesperson - Join fast growing company in start-up of a new outlet in Central N.J. College Town. Must be self starter, motivated, sales oriented and field experienced. $40k plus full benefits. Send resume to Mr. Bellis, P.O. Box 158, Mt. Freedom, N.J. 07970. 12/94

LANDSCAPE MAINTENANCE Large Delaware company has opening for aggressive self-motivated individual to work directly with owner. Position responsibilities would involve all aspects in maintenance, scheduling and customer interaction. Agromonic horticultural degree or equivalence required. Please send resume to LM Box 515. 12/94

GROUNDS MANAGEMENT SALES: Central N.J. area, Background in sales to corporate clientele. Strong motivation, proven sales experience. Must be articulate, organized, aggressive. Duties: prospecting, estimating, sales. Send resume, Control Services, 737 New Durham Road, Edison, NJ 08817, Fax (908)548-4359. 12/94

Ornamental Horticulture Instructor. Primary duties include landscape construction and design, irrigation systems, turf management, and soils and fertilization. Secondary includes disease and insect control, plant pathology, entomology, weed control, plant identification, greenhouse, nursery management, and botany; student recruitment, and fund raising activities. Act as liaison between the college and professional organizations. Coordinate maintenance of horticultural facility and equipment, community advisory committee, and program schedule; curriculum development. BA required, or equivalent. MA preferred. Degree in Horticulture or related field is preferred. Two years occupational related experience. Application and complete job description may be obtained from: Employment Services, Foothill-De Anza Community College District, 12345 El Monte Road, Los Altos Hills, CA 94022. A vita or resume may not be substituted for a completed application. Open until filled with a first review date of January 6, 1995. Announcement #95013. AA/EOE. 12/94

.operations manager - Horticultural Services Division. Our continued growth has necessitated us to create this new position. We are seeking to hire a top notch Branch, West Long Branch, NJ 07764. An Equal Opportunity/Integrative Action Employer. 12/94

To create this new position. We are seeking to hire a top-notch Branch, West Long Branch, NJ 07764. An Equal Opportunity/Integrative Action Employer. 12/94

Landscape Management, December 1994 39
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PIPE LOCATOR INEXPENSIVE! Locates, traces underground drain, water pipe lines of clay, PVC, ABS, steel, cement. Finds sprinklers, valves, clogs. Bloch and Company, Box 18058, Cleveland, Ohio 44118. (216)371-0979. TF

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WANTED: Old SPYDER forklifts and/or forklift frames. Mobile Lift Parts, Inc., 5402 Edgewood Rd., Crystal Lake, IL 60012. (800)397-7509. 12/94


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**DECEMBER 1994**

This card is void after February 15, 1996

1. BUSINESS & INDUSTRY

MY PRIMARY BUSINESS AT THIS LOCATION IS:

(PLEASE MARK ONLY ONE IN EITHER A, B OR C)

A. Landscaping/Ground Care at one of the following types of facilities:
   - 01 Golf courses
   - 05 Other type of facility (please specify)

B. Contractors/Service Companies/Consultants:
   - 01 Landscape contractors (installation & maintenance)
   - 07 Lawn care service companies
   - 09 Custom chemical applicators
   - 16 Other contractor or service (please specify)

C. Suppliers:
   - 11 Sod growers
   - 12 Other supplier (please specify)

Which of the following best describes your title:

(mark only one)

- 13 EXECUTIVE/ADMINISTRATOR
- 14 MANAGER/SUPERINTENDENT
- 15 MANAGEMENT OFFICIAL
- 16 SPECIALIST
- 17 OTHER TITLED AND NON-TITLED PERSONNEL (specify) __

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**HAVE A SALES REP CALL ME 18 (A)**

**December 1994**

This card is void after February 15, 1995

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<tr>
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<td>02 Sports Complexes</td>
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<td>03 Parks</td>
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<td>04 Schools, colleges, &amp; universities</td>
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<tr>
<td>05 Other type of facility (please specify)</td>
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**B. Contractors/Service Companies/Consultants:**

| 06 Landscape contractors (installation & maintenance) |
| 07 Lawn care service companies |
| 08 Custom chemical applicators |
| 09 Extension agents/consultants for horticulture |
| 10 Other contractor or service (please specify) |

**C. Suppliers:**

| 11 Sod growers |
| 12 Other supplier (specify) |

**Which of the following best describes your title:**

(mark only one)

| 13 EXECUTIVE/ADMINISTRATOR |
| 20 MANAGER/SUPERINTENDENT |
| 30 GOVERNMENT OFFICIAL |
| 40 SPECIALIST |
| 50 OTHER TITLED AND NON-TITLED PERSONNEL (specify) |

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Circle No. 116 on Reader Inquiry Card
Designing and developing a golf course has many aspects. But when it came to the turf for the Atlantic Golf Club, Rees Jones knew he could depend on the service and technical support from Lofts. How to create the “links land” look. What grasses would do best in different areas. The agronomic techniques for establishing the grasses. And a suggested maintenance program Bob Ranum could consider following for the continued success of the course. All with cost-saving tips included.

Lofts is the world's largest marketer of turfgrass seed. So you can expect the finest varieties available. The professional service and technical support are bonuses. Get it all from Lofts and realize the difference!

Bob Ranum, Golf Course Superintendent, Atlantic Golf Club located in Southampton, Long Island, NY, and Dr. Richard Hurley, Director of Research, Lofts Seed Inc.