

cont. from page 30

"All we want is a compromise. We know that there's no reason to have four blowers going on one property at the same time," Tinelli concedes. "But the other side is becoming absolutely ridiculous. It's getting to be a trendy thing to get involved with, like 'Save the Whales.'"

Echo Manufacturing—which is planning to release an ultra-low-noise backpack blower before the end of the year—recommends that commercial power blower users follow these operating tips to avoid upsetting homeowners and thus decreasing the possibility of further government intrusion into their livelihoods:

1) Use the blower at less than full



Echo PB4600, with tube-mounted throttle.



Little Wonder has an 11 hp engine.

throttle, if possible. Remember, it's not how far you're blowing debris but how the job looks when it's done.

2) Operate power blowers only at reasonable hours (not early in the morning or late at night).

3) Avoid open windows and other places where dust and noise might be a

nuisance.

4) Develop skills in using accessories such as misters and nozzle attachments.

5) Clean up debris that has been assembled by the blower—promptly.

6) Keep the blower in good working order. Routinely check the muffler, air intakes, air filter and fuel filter. **LM**

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Circle 120

[YOU'RE FIRED!]

by RON HALL / Sr. Editor

Call it getting the pink slip, terminated, pushed out the door, fired, let go, sacked, kicked out, dismissed, downsized...what else?

However you say it, it all means the same thing: your employer is getting rid of you, probably in short order.

Say goodbye to your work-a-day schedule, to co-workers, to regular paychecks (at least for awhile anyway). Say hello to uncertainty.

What do you do?

Ed Walsh, a certified golf course superintendent, learned some things firsthand after he got fired a few years ago. He admits it wasn't pleasant, but now, looking back, he views it as being "a very positive experience."

Walsh, who now manages the golf course at Essex County (N.J.) Country Club, offers these five suggestions:

1) Remain visible. "It's embarrassing to be fired and you may not want to see your peers, but the worst thing you can do is drop out of sight," says Walsh. Continue to attend and be active in association meetings, continue to meet with friends, continue your social life.

2) Get professional help. This may include legal and/or psychological help.

Walsh says that, on the recommendation of his wife and another close friend, he met with a psychologist. "It helped me take two steps back and look at myself. It



helped me assess my strengths and weaknesses."

If you're concerned with information that your former employer is providing to prospective employees, or if you feel that you're not receiving adequate compensation from your former employer, you may need legal help, too. Consult with an

attorney that's versed in labor law, advises Walsh.

3) Assess your financial situation. Don't wait; you may not find new employment right away.

"How far can you go on what money you have?" asks Walsh. "What assets can you sell to generate cash?"

Also, examine your pension plan and do financial planning—while you're employed.

4) Evaluate your performance at your former employment. This is probably the most difficult thing to do, Walsh says. It's easy to make excuses why you were let go. But, if you're honest, you'll find things you could have done much better. Learn

from this.

5) Don't burn bridges. That means not criticizing former employers.

"When you do that, you reduce the biggest assets you have for future employment. You want these people to still become positive influences," says Walsh.

How did you find another job the last time you had to go on the unemployment rolls? How long did it take you to find something? Did you have to settle for a job that was lower on the totem pole than your previous job? Let us know. If we publish your observations and hints, we'll mail you a free LANDSCAPE MANAGEMENT ball cap. □

Your turn

Every other month, we report what readers think about current topics. Tell us how you found a job last time you were **FIRED**. Tear out or photocopy this page, and fax or mail your response to: Talk Back, Landscape Management, 7500 Old Oak Blvd., Cleveland, Ohio 44130 • Fax: 216/891-2675 • E-mail: 75553.502@compuserve.com

Have you ever been fired before? Why?

- Yes COMMENTS _____
- No _____

After getting fired, was your next job a better or worse one?

- Better COMMENTS _____
- Worse _____

How did you go about finding a new job?

COMMENTS _____

GOLF/GROUNDS

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Greens warm up to U.S. Open

PAGE 8G ▶

IPM on fields tough to tackle

PAGE 12G ▶

How to find the best interns

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Hills and weather test mowers

A recent symposium sponsored by RISE (Responsible Industry for a Sound Environment) reviewed the latest on "ideopathic environmental intolerances" (IEI), the phenomenon once known as "multiple chemical sensitivities."

There is no known cause of IEI. Symptoms include dizziness, headaches and nausea. Persons so affected insist it is caused by perfumes, structural or turf pesticides, or other airborne, man-made substances.

Judges now say that causal "suppositions" against manufacturers' products are no longer

valid in courts, but it is expected that scientific testimony will become more complicated as medical experts try to explain how these products might be causing the various ailments.

Attorney William Custer, a guest at the RISE symposium, predicts that IEI cases will continue to

be filed in courts, and the green industry will have to address each case as it comes along.

Lisa Drake, director of public affairs for Monsanto, explains that it's essential that you show compassion to those who claim to be adversely affected by the products you apply to turf.

Drake has had phone conversations with some IEI sufferers who call the Monsanto hotline. It is not fun.

"They feel like you're going to kill them [by continuing to market the products]," says Drake. The callers are also worried about the health of their children.

"I've had [women] beg and plead, mother to mother, 'don't let them continue.' It's a very difficult, highly emotional issue."

Drake says that, to respond to IEI complaints properly, a person needs research findings, intuition and "a great deal of insight."

The downside is that the media want simple "sound-bite"-sized answers.

"If you're not as quotable as you should be,"

says Drake, "it's much more difficult to handle at the media end."

First and foremost on Drake's list of advice:

Apply products safely.

Then, "establish your own personal and media credibility, and the credibility of the applicators who are on the front lines.

"The way you handle people who are suffering will be observed by others: lawyers, the public, legislators and the media. Show credibility when getting your viewpoint across."

Dr. Vince Cavell, of the Columbia School of Health and Medicine, says there are four ways to establish credibility with others:

- 1) Honesty
- 2) Dedication
- 3) Competence
- 4) Empathy

Empathy is the most important, during a telephone call or in-person encounter.

"Listen to the caller," says Drake. "Find out what they want you to do." If you are confronted in person, Drake says to remember that non-verbal communication is important when there is a low level of trust. Do not lose your temper or call them names, and do not give medical advice. Let the person know you're trying to help, but without implicating yourself.

For information on IEI, and advice on how to talk to people who might confront you about the products you use, call RISE at (202) 296-6085. **LM**

Questions, comments? Call Terry at (216) 891-2709, fax at (216) 891-2733 or e-mail at 75553.502@compuserve.com.

A public relations tip: keep your cool



Terry McIver

TERRY McIVER
Managing Editor



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T-O-160

2/96



Greens 'warm up' TO THE U.S. OPEN

by TERRY McIVER / Managing Editor

Steve Glossinger says he's "taken down the rear-view mirror," to help himself forget about the heat wave that was the summer of 1995.

He prefers to set his sights on a far more enjoyable prospect: preparing the South Course at Oakland Hills Country Club in Bloomfield Hills, Mich., for the 1996 U.S. Open Championship, June 10-16.

His main concern is to fine-tune a championship golf course for the arrival of the world's best players. Consequently, 60 to 70 percent of Glossinger's time is U.S. Open-related. Superintendent Jon Cuny manages the North Course, with Glossinger's supervision.

Warm the soil

As of April 2, Glossinger was trying to warm the soil beneath two greens in shaded areas.

"The turf on those two greens is in a more dormant state than the rest, and they usu-

ally lag behind in warming up. I put some covers on them to warm them, and to get some soil activity started. The problem with covers is, once you put them on you can't pull them off during this cold weather. So you take them off during the day, and put them on at night. We've had an unusually cold March and first part of April."

The course sustained very little disease damage from the snow and cold of 1996. "I would say we had a little desiccation,

but it hasn't appeared to injure the plant at all," says the GCSAA-certified superintendent. Greens were left uncovered during the winter, even with a top-flight championship on the way.

"We made a decision not to cover greens in winter," says Glossinger. "We knew what our results would be *without* covers, but not *with* them. I've seen these things backfire. You can leave the covers on too long, get some turf growth, take the cover

► 'Normally, you don't want a bus road going down the middle of your golf course,' laughs Steve Glossinger. The 12-foot-wide strip was installed on the North Course to help ease the transport of spectators. It will be removed after the championship.



◀ The Oakland Hill South Course was designed and built by Donald Ross. It opened in 1917. Shown is the No. 18 fairway, approaching the clubhouse.

off, and the cold air hits them, shocks the plant and brings in a little more disease pressure."

Greens maintenance

The typical Oakland Hills fairway is pinched in the middle with multiple sand bunkers. The fairways are 70 percent bentgrass and 30 percent *Poa trivialis*. The tees are close to 50/50 poa/bentgrass.

The native soil "push-up" greens are a 70/30 bentgrass/*Poa annua* (or annual bluegrass) mixture. That *Poa annua* was a challenge for Glossinger last year.

"It was tough, with the heat," Glossinger recalls. "When you get a summer like last year, it's hard to grow [*Poa annua*]."

"We tried to keep as much *Poa annua* alive as we could. In some areas, the weather took over. We saw poa die virtually right before our eyes. We'd syringe, and two hours later it was gone. Then the rain came late in the summer and drove all the oxygen out of the soil and the greens became saturated and had shallow rooting because of it; and then anaerobic conditions set in. It made for a terrible growing environment."

Relief from future heat waves may be in sight, thanks to a new bentgrass coming onto the market.

"We're looking at maybe re-grassing with one of these newer bents, specifically the Penn G-2 variety. We may seed a practice green with G-2 after the U.S. Open."

Glossinger says the new bent has shown an aggressive growth quality that would be able to

▼ Steve Glossinger brought in these driving cages from the Pacific Rim company of Seattle, as temporary practice tees. Corporate tents cover the driving range during the championship.



crowd out the poa and be more resistant to heat stress.

Glossinger controls the poa with plant growth regulators and cultural practices.

"I prefer not to have it," admits Glossinger, "but one thing nice about poa, when you lose it, it comes back! You're never without a crop. And it's actually a pretty good putting surface at certain times of the year."

Tees are mowed at $\frac{3}{8}$ of an inch; fairways at $\frac{1}{2}$ and greens at $\frac{1}{8}$. Collars are cut to a half-inch. Greens and collars are mowed with walk-behind units. Primary rough areas are

Green speed is up there

Glossinger's stimpmeter goal for the U.S. Open championship is between 10 and 11. "Any faster is unnecessary because of the contour of the greens," he says. "At those speeds, you can't do it for more than a short period of time. It puts a tremendous burden on the plant. Fortunately, we're [holding the championship] in mid-June, when plant root activity health are probably at their

peak. To host the U.S. Open in the Midwest, you couldn't ask for a better date. The *Poa annua* has finished its seeding; it's standing upright, the roots are still healthy, everything's good. After the championship, we'll take the speed back to about 9."

—TM

"We have two golf courses, which means you have two staffs," explains Glossinger.

"The North Course will be used for parking. We'll still have to maintain it somewhat, but we'll back off [from full-scale North Course maintenance]. We'll have about 50 people in-house."

Special teams—one led by Dr. Trey Rogers of Michigan State University—will be on standby during the tournament. They must be ready to assist with landscaping duties within 10 minutes' notice.

Glossinger says certain areas of the golf course will have reduced wear, even with all the pedestrian traffic.

"The pros will be hitting from different [fairway] areas than the members hit from, they're not going to be using the members' tees, and there will be no golf carts on the course," which Glossinger calls "the superintendents' number one headache." □

four- to six-inches high.

Plenty of help

As is the case for all the major golf championships, committees handle duties unrelated to golf course turf, which removes much of the weight of the preparatory duties from Glossinger's shoulders.

"I have to attend the meetings, and I need to know the role of each committee," he explains. "But my main job is to make sure we have a championship golf course."

Extra help is ready to work the championship turf operations.

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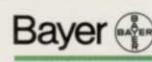
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IPM:

a real workout for field supers

The rigors of integrated pest management must be balanced against constant demand for athletic fields.

by MIKE SCHILLER / Rolling Meadows (Ill.) Park District

You can't please all the people all the time, yet that's a challenge that most athletic field managers face every day of the year. One of the newer challenges we face is working Integrated Pest Management (IPM) into the mix of field management duties. IPM is smart. It makes sense to help turf fight its own battles by providing optimum growing conditions and adopting maintenance procedures to enhance turf health.

Standards of "acceptable" levels of pest infestation are fairly easy to establish. Observation is a bit more difficult, but can be managed by properly training personnel and issuing timely "pest alerts."

Alternative methods of defending against pest attacks include cultural practices and using control products.

People at play

So why is IPM any more difficult for athletic field managers?

For starters: no other turf has the same "up-close-and-personal" connection with people as an athletic field during a sporting event.

Sports activities take place on the turf and frequently in the turf. As golfers



Schiller: Make sure to keep accurate records of what was done, when, why and how.

stroll across the fairways and peer closely at the greens, baseball players dive for balls and slide into bases. Soccer players hurl their bodies into a play, and football players are downed more often than the ball.

Athletic fields that are safe, highly playable and aesthetically pleasing are the expected—and often, demanded—“right” of all players, and the goal of every athletic field manager who cares about the profession.

The goal—the image the public expects—is the beautifully-manicured field that appears on the TV screen. But the costs of building and maintaining such premium fields are seldom announced to the general public.

Many mandates

Regulations to control the handling and application procedures and use-notification requirements for pest control products and other turf and landscape care products come from more than one governing body:

- 1) Federal, state, county, or city governmental agencies or by government-related regulatory agencies.
- 2) City or county boards in charge of parks and recreation facilities; these include school boards, a board of regents or even the owners and board of directors of a privately owned facility.
- 3) Athletic field users. Generally their mandates are formulated and issued by the supervisory personnel who coordinate the activities of the players. This may be the athletic director and group of coaches for a school system; the organizing board and coaches of league players for a park and recreation district or the coaching staff of pro-level teams.
- 4) “Unofficial” mandates of the community. These may be expressed by media “watchdogs,” neighborhood action committees or individual activists.

Community mandates may also come from team supporters, even those far removed from the region geographically or at the college level, from alumni groups or individual alums.

5) The players. Adult teams are usually represented by team spokespersons; booster clubs speak for the condition of the children’s playing fields.

All these groups have legitimate concerns about athletic field conditions and about the safety and environmental impact of products and procedures used in field management.



User groups must understand that field use in certain conditions may put players at risk for injury.

often used for physical education classes, and those fields serve as overflow space for afternoon recess. They’re the site for team practices before and after school hours and on weekends, when no games are scheduled. At the high school and college level, they’re used for club and intramural practices and games and for marching band practice.

On weekdays, parks and recreation fields host scheduled practices and games from after school or after work until dark. Weekend play takes up entire days, and evenings on lighted fields.

With tight budgets and limited staff levels, it’s hard for the sports turf managers at these facilities to find non-use time to fit in necessary procedures and ensure the fields stay empty during the posted or non-posted intervals.

Many IPM-related procedures require special training or certification. Most procedures are limited by rain, wind or temperature extremes; some require irrigation before and after. It’s a juggling act to coordinate field use schedules with weather conditions, equipment acquisition and training, especially when you factor in unexpected changes in field use schedules due to weather-related adjustments or increased playing time.

The sports turf manager often becomes the communications director. He or she personally contacts coaches and scheduling personnel to plan schedules that will satisfy demand.

Ideally, all user groups understand that field maintenance procedures, including those that are IPM related, are in their best interest.

Groups that refuse to cooperate with schedule changes or who insist on using fields during restricted periods may cause damage that will take extensive field down-time to repair.

The athletic field manager communicates to the public and keeps precise records of all IPM-related activities. Any IPM-related action or procedure may be questioned at any time by one of the above-mentioned groups. □

Time constraints

Professional fields and most college-level game fields have a built-in window of opportunity for cultural and other pest control procedures.

Team travel to away games provides a time for field work. During these periods, activity on the field is often limited to that directed by the sports turf manager.

Most other fields are used by the public.

School fields are



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The secrets to attracting top turf students

by RON HALL / Senior Editor

Today's turf students want more responsibility and broader on-the-job experience. It's up to you to provide that—if you want to keep the good ones coming back.

Competition for top turf students to work as "interns" on golf courses is growing. Superintendents who want these valuable seasonal employees will have to work harder to get them. That might mean offering higher wages or providing affordable housing or other perks like uniforms, meals, or playing privileges.

But what most students really want is better and more varied learning opportunities, believes certified golf course superintendent Jim Harris.

This Memphis native is one superintendent who has been successful in attracting interns to his golf course. "I don't think I've ever had a bad experience with one of these students," he says.

Harris, 11 years at Chickasaw Country Club before moving to Stonebridge Golf Club in Memphis in 1994, says he's used interns for the past six seasons. He says they're welcome additions to his regular crew.

But they're also a big responsibility.

"They're coming with this question on their minds: 'What am I going to learn?' So you've got an obligation to these people," says Harris. "If you're not going to help develop these students, don't hire them. Let them go somewhere where they can learn."

For his part, Harris developed a written, three-phase student training program. It outlines specific tasks to be mastered during the intern's stay which may be seasonal, or as long as six months.

As each student masters a specific duty or the operation of a particular piece of machinery, Harris says he records it on a checklist he's prepared.

"When students arrive, you (superintendent) have to be able to tell them what you expect out of them, and what they can expect out of you," says Harris. It should be in writing.

Getting involved...

Harris says he gives each student as much of his own time as he can, but his time, like all superintendents', is limited. Most of the training comes from his veteran workers at the course.

"The people on my regular crew are the best at what they do. They're the people with the experience and, usually, they take pride in training these students," he says.

Harris says students working at his course are expected to attend Memphis Area Golf Course Superintendents Association meetings, and to undertake a special project at the course.

Tony Mancuso of New Albany (Ohio) Country Club, says about 10 turf students will be working at his course this season.



At New Albany Country Club, turf interns work hand-in-hand with veterans, says Tony Mancuso.

cont. on page 14G


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Golf Course Superintendent
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cont. from page 12G

Mancuso, like Harris a certified superintendent, has a written training program in place. In fact, he used the former's program as a template and modified it to suit conditions at the New Albany course.

Mancuso, also like Harris, requires each student intern to be responsible for a special project. To date, the projects have involved seeding or sodding, disease and insect monitoring, or the club's on-going fairway fertilizer study.

University, trade school sources

Where do you find interns for your sports field or golf course? You find them at almost all universities with strong turf management programs, say Mancuso and Harris.

One hotbed for top sport and golf turf management interns is Mississippi State University in Starkville.

In the fall of 1993, that turf department mandated that all students in the four-year program gain one year of on-the-job work

experience to earn a degree. This includes two summers and one non-summer term. The students work through MSU's co-op department which acts as a liaison between potential employers and students.

"A Mississippi State student can start in mid-May and work all the way through December," says Scott Maynard, assistant director of MSU's cooperative education program. "This is a big advantage to employers. They've responded by giving the students more responsibility."

Although MSU felt that making the work requirement mandatory might reduce the number of turf students, the opposite occurred. In 1993, the turf department had about 70 students. There are 124 this year.

Even so, Maynard says he's had no trouble placing students at golf courses. Typically they earn between \$6.50 and \$7 per hour during their internships, and about 25 percent get free lodging, too.

But the real eye-opener, says Maynard, is that graduates with on-the-job experience start at salary levels \$4,000 to \$6,000 higher than turf graduates with no experience.

Last summer, Mississippi State's co-op program had students working in 36 different states. But other universities and trade schools, offering both two- and four-year turf programs, are also good sources of competent eager interns.

"Right now we've got four schools represented and maybe five," says Mancuso of the 1996 season at New Albany.

He says he makes annual trips to places like Penn State, Ohio State, the Agricultural Technical Institute (ATI, a two-year program in Wooster offered by Ohio State), and Mississippi State to participate in student career days and to speak to turf clubs.

Both Harris and Mancuso say that by being offering a structured learning environment, and by providing interns with challenging and varied tasks at their courses, they can continue to attract top seasonal employees.

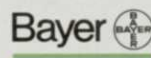
"Once a student comes and has a successful time at your course, it gets easier to attract more. They go back and tell other students," says Mancuso. □

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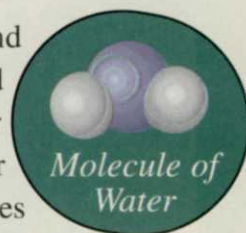
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Hills, weather play havoc with mowers

by LESLEE JAQUETTE

A J. Pratt finds that having all new equipment can be a problem: it wears out at the same time. He also says the difficult, hilly terrain of Chateau Whistler Golf Course puts much greater stress on the mowers and utility vehicles than if they were used on a flat course.

Pratt estimates the extra wear caused by hills decreases equipment lifespan by about a third. This year, he is looking at an investment of about \$300,000 in equipment through a combination lease/buy plan. About \$8,000 is earmarked to rebuild two fairway mowers and \$48,000 for two additional mowers while leasing two more.

Pratt hopes to reduce equipment wear by planting three acres of unplayable land with wildflowers.

He will also beautify out-of-play areas with rocks and native plants.

Unpredictable weather

The very elements that shape Chateau Whistler into one of Canada's premier courses—Pacific climate, mile-high mountains and unpredictable weather—are also the source of many other challenges.

Whistler is located at the base of Blackcomb Mountain in the resort town of Whistler, British Columbia. It was designed by Robert Trent Jones, Jr., who could do nothing about the Alpine-type weather.

"The winters are different every year, and the summers are volatile," says Pratt. "The weather can change in five minutes, so we have to be prepared."



As a result of annual and radical spring run-off, the course was built with drainage in mind. Beyond thousands of feet of underground pipe, two major creeks run through the course. Still, every year new drains are built to accommodate millions of gallons of water from rainfall and melting snow. And sub-surface drainage was extended on two holes last fall.

Pratt is looking at a new Rainbird Freedom irrigation system. A 300-foot change in elevation complicates irrigation, creating different weather patterns at varying points on the course. A comprehensive system with different weather stations, if it weren't too expensive, would have been nice. However, the Freedom System will give Pratt the expanded ability to adapt to abrupt changes in the weather.

"This way I will be able to call the computer and tell it we have a dry spot on one hole, so pull up the sprinkler heads and start the water," says Pratt. "At the same time, it may be snowing on number four and irrigation is unnecessary."

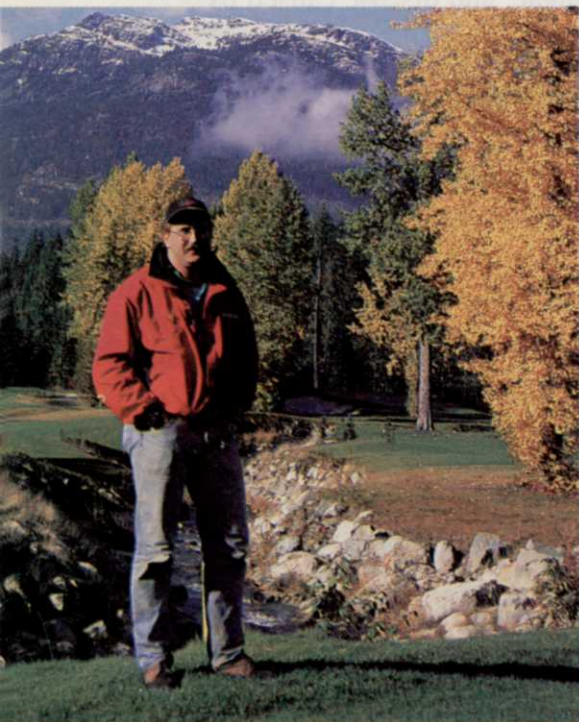
The fall season of 1994 is a good case in point. Pratt recalls the elegant, crisp, sunny October. It only made sense to keep the course open to accommodate guests and the public interest.

However, the maintenance staff was caught in the middle of winterizing activities, and an unusually early and heavy storm covered the course with three feet of snow on Halloween.

Then, heavy rain the following spring activated serious snow mold. Three greens had to be resodded and another 15 covered with tarp. The opening was delayed until June 1.

In the midst of all this craziness, Pratt's biggest challenge is to make sure his staff—some of whom have chosen careers in golf course maintenance—can learn as much as possible.

Weekly meetings allow workers to share their ups and downs, discuss what's happening at the course, and go over problems. **LM**



Let your workers know that every little contribution they can make is significant, says A.J. Pratt.

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Not all add-on services make sense

PAGE 5 L ▶

'Starting over' in lawn/landscape

PAGE 9 L ▶

Tapping the renovation market

'Spring' now—to avoid falling this fall



Ron Hall

RON HALL
Senior Editor

The inviting aroma of barbeque and the sounds of down-home country music greeted customers and the curious to Allentuck Nursery & Landscape in Potomoc, Md.

Bruce Allentuck's annual April shindig at his full-service operation just outside Washington, D.C., took on the air of a rain dance, except that the object of everyone's prayers, including Bruce's, was spring's arrival.

Rows of ornamentals in the nursery teased eager gardeners as Allentuck wished for a gradual build-up of warmth, sunshine and showers.

Blessed, blessed news.

Spring did arrive. It was a month late for us in the East, but who was counting?

The new season brings renewed optimism, and not a moment too soon, considering 1996's cold, stumbling start.

Gene D. Pool in northwestern Ohio told us in mid-spring that his Emerald Green Lawn Care production was 7 to 10 days behind schedule. Bob Andrews of The Greenskeeper in Indianapolis said the same. So did Don Tannahill of Tridon Lawn Services near Kansas City.

"Why worry?," asked Jim Leszuk of Heritage Lawns in Connecticut. "Everybody was behind this spring."

"Why worry?," asked Jim Leszuk of Heritage Lawns in Connecticut. "Everybody was behind this spring."

Given a favorable stretch of weather in May, lawn/landscape pros always feel they can catch up their production—if they haven't already.

"But please, Mother Nature, don't make it as rough on us this season as last," they're thinking—even if they're not saying it. "At least give us more time at the end of the year."

Winter's bite this past November took a chunk out of the lawn/landscape industry's back pocket—the one holding the wallet.

The work was there, but cold and snow, par-

ticularly in the East, shooed green industry crews off of client properties weeks too early.

Enjoying a string of relatively mild winters, maybe we got complacent. It really didn't matter, though. There was nothing we could do.

"Sometimes you just have to stand there like a jackass in a hail storm and take it," says

author/philosopher Robert Fulgham.

Even so, leaving money on the table always hurts.

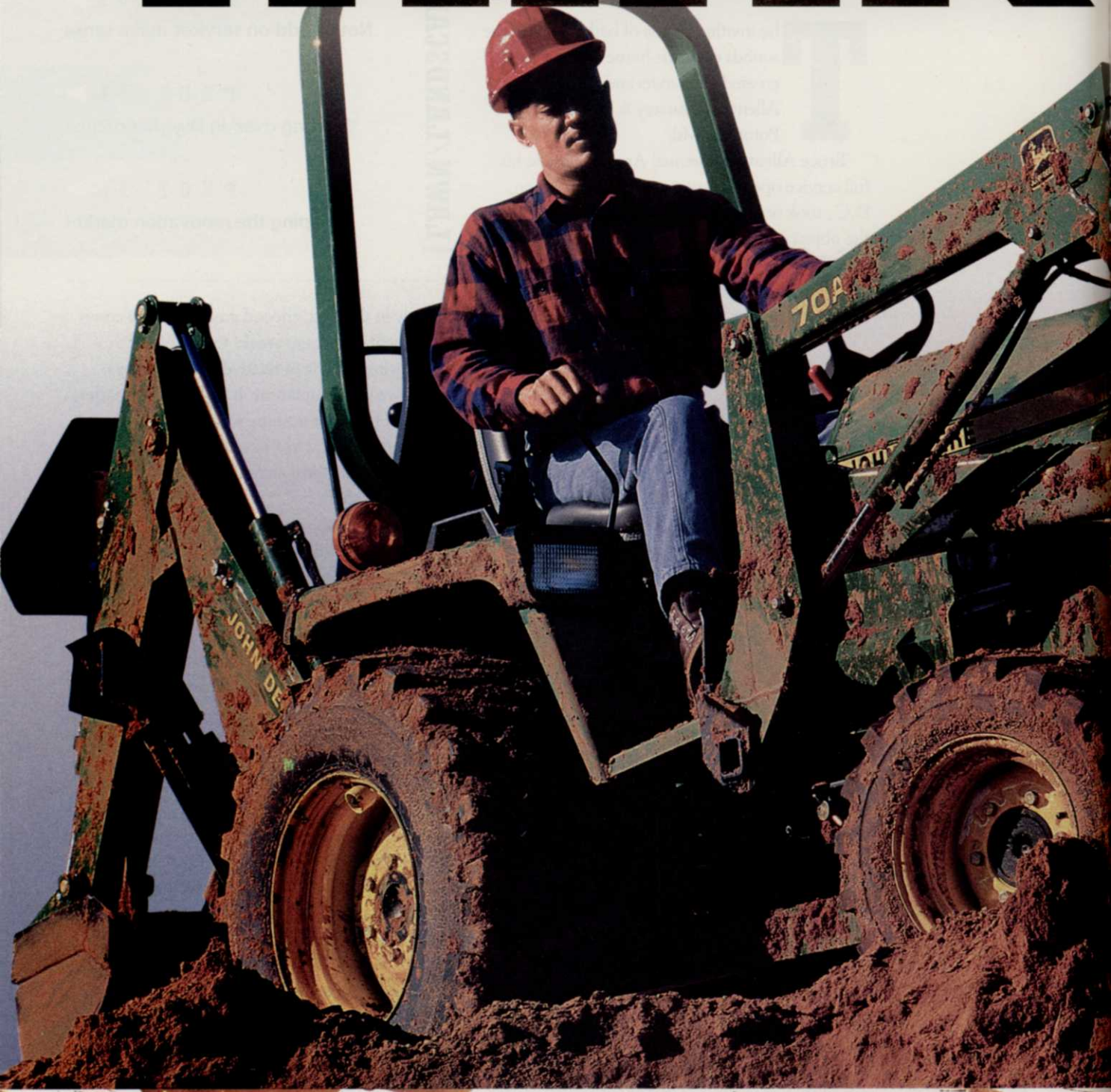
Service work not completed by season's end means one thing: lost revenue. It can't be recovered. Production done in the few final weeks of any year can, in a very real sense, mean the difference between "making it" or "just making it."

That's why we start service as early as possible each spring, and why we put in such long hours through early summer. **LM**

Questions, comments? Call Ron at (216) 891-2636, fax at (216) 891-2683 or e-mail at 75553.502@compuserve.com.

'Why worry?,' asks Jim Leszuk in Connecticut. 'Everybody was behind this spring.'

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Ten years ago, virtually every trade journal in the lawn care industry shouted the praises of add-on sales, supplemental income and diversification.

We were encouraged to get into mowing, become an irrigation contractor, do landscaping and more. I remember going to a trade show where one exhibitor explained the profitability of chimney sweeping!

I think there were three reasons for this push toward building sales outside of chemical lawn care. First was the perception that our days were numbered because legislation that was just around the corner was going to put us out of business.

Second, "organics," whatever they are, were seen as the next great wave in lawn care.

Third, and probably the most legitimate, was concern over the seasonal nature of our businesses, and the need to have year-round cash flow.

Ten years later, I see lots of firms still seeking diversification. At the same time, I see many

firms reducing add-on offerings and spending more time focusing on traditional lawn care service. Successful people pursuing both avenues offer some sound advice that we all should consider before offering another service.

1) Is it profitable in and of itself, or will its cost need to be supported by the rest of your business?

2) What is the primary purpose of the add-on as far as the rest of your business is concerned? Why are you considering this? What will it actually contribute to your overall mission?

3) Does the add-on complement your current scheduling by providing an income source in slack periods? Or does it make a busy period even more hectic?

4) Does the new add-on require more man-

agement time, work hours, administration, and customer service than it's worth? In other words, does it bring in enough revenues to justify the extra work?

5) Will someone in your organization take "possession" of it? Someone needs to be enthusiastic about the new service to the point where they act as a ramrod for it.

6) Do you, or anyone on your staff, have expertise in the add-on service? Have you studied its ins and outs? Have you interviewed others who have been successful in adding this service? Do you have the equipment, or is significant capital outlay required to initiate the service?

7) If the service is to be sold to current lawn care accounts, do your turf specialists know how to identify customers who are possible candidates for such service?

8) Do not let your customers dream up add-on services for you. Either offer the service, or don't. Lots of energy can be spent on trying to provide something on a hit-or-miss basis when you're better off to simply refer the customer to a qualified firm.

Probably one of the key points in considering add-on services is to make certain that adding them does not distract from your primary purpose. Many firms have found that adding such services detracts from their ability to deliver basic lawn care. If basic lawn care is your bread-and-butter, do not jeopardize it by adding another service which you simply cannot perform without doing a lesser job at your primary source of income. In other words, keep your eye on the ball!

One final point. Every business owner should always be on the lookout for a new opportunity. Do not walk away from adding a new service until you have completely researched its possibilities. Look to both your customers and your employees for suggestions on what services you might add to your menu. Give all such ideas the attention they deserve. □

Extras, extras... read all about 'em!



BOB ANDREWS
Contributing Editor



'You've got to be different and sell the sizzle,' says Jerry Moland of Turfscape Landscape Corp.

Born-again business

Cut loose from corporate America in the mid-1980s, Jerry Moland learned to sell 'the sizzle' and built a million dollar landscape maintenance company in Phoenix

by JERRY ROCHE / Editor-in-Chief

It's been a long and—at times—dark journey, but Jerry Moland, owner of Turfscape Landscape Corp. in Phoenix sees a light at the end of the tunnel.

"Nineteen ninety-five was our most successful year," says Moland. "We took eight years to hit \$1 million. We wished we would've hit it sooner, but about two years ago we had to back off and re-organize because we just weren't making any money."

It's no wonder. When Moland established the new company in 1986, he was changing careers and didn't know diddly-doo about lawn care. He was 50 years old at the time and licking his wounds from being cut loose by a large marketing company.

"After seeing we had to start over, I spent a few months laying on my back feeling like it was all over," Moland remembers. "Well, that's just not the way to do it. The American dream still exists, but you've got to make it work yourself."

His knowledge of marketing has, at times, been an

asset to his lawn care company. At other times, he's not had the opportunity to use all that knowledge.

"I truly recommend that people research their market," he notes. "At the time we were coming into this industry, though, we didn't. Sure, I knew better—but we didn't have many options."

Moland always uses "we" when referring to the company—not the royal "we" but the happily-married "we." His long-time wife Maxine is "the book-keeper and the brains of the company," which now employs 40 people and mows more than 3 million square feet of turf per week.

Turfscape was originally 100 percent residential maintenance. But because of changes in marketing strategy over the years, it has evolved into 60 percent commercial maintenance (mostly multiple-residence properties), 15 percent residential maintenance, and 15 percent construction and "extras."

Turfscape's number one marketing message is curb appeal.

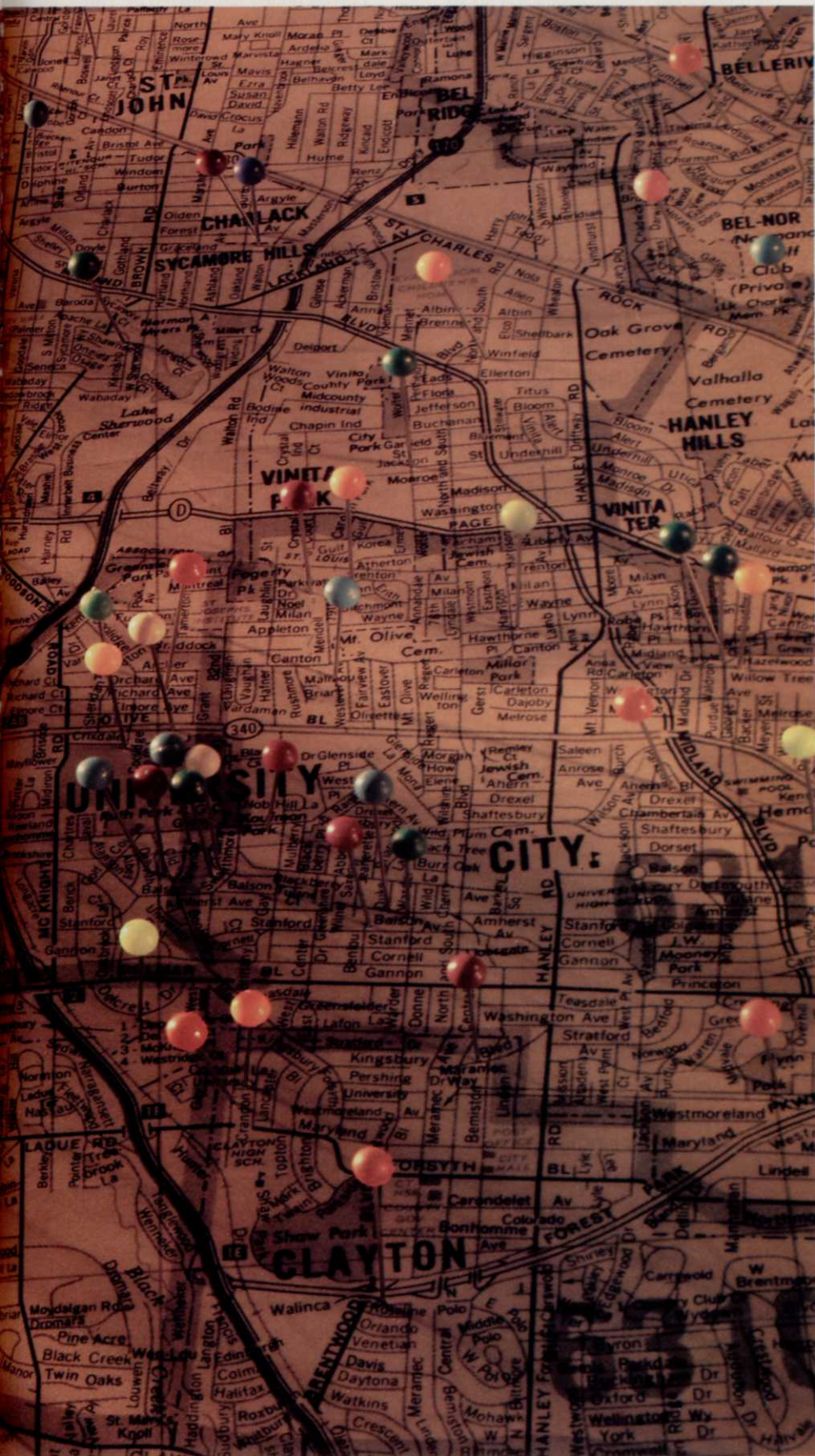
"You've got to be different and sell the sizzle," Moland observes. "We sell curb appeal, and even in the real estate crunch three years ago we did okay. We told clients they'd have lower vacancy with curb appeal than without it. We know traffic is higher on our properties than others."

One of the positive aspects of using this strategy is that Turfscape normally works with more property

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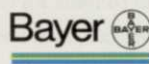
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No drugs, fewer bugs

Jerry Moland says that his drug-free policy saves Turfscape Landscape Corp. more than \$50,000 per year. Productivity is up, and the firm has greater revenues with fewer employees to share the profits. Also, the quality of work has improved, resulting in better customer retention and referrals.

"Our labor costs have always run high, but we found that solving the drug problem was the largest step we had to take to get labor costs down," Moland observes. "We're now doing 2 1/2 times the volume with only one-third more workforce."

Moland first tried pre-employment testing to weed out drug abusers. It didn't work.

"It didn't do a thing," he notes. "These kids are street-wise, and they know when they have to be clean."

Problems had originally surfaced when an irrigation worker submitted to a drug test and tested positive for marijuana, cocaine and amphetamines. Moland was also informed of occasional on-the-job marijuana smoking by some employees. Clearly, the failed drug test was not an isolated incident.

Moland contracted a drug testing firm, which provided a consultant to assist in drafting a written policy. He then called a general meeting to explain the policy and announce that it would go into effect after a six-week waiting period. The drug testing program would include pre-employment screening, and random and for-cause drug and alcohol tests.

Moland offered his employees a one-time opportunity to enter treatment at Turfscape's expense. He recommended that abusers use this waiting period to clean up or find another job. Over the next six weeks, Moland lost one-third of his workforce.

He likes to think his workers are loyal because of "our discipline and our 'tough

managers than homeowners. Since property managers demand that bidders carry unemployment compensation and Social Security, "low-ball" landscapers (which can normally offer prices 35 percent less than Turfscape) are left out in the cold.

"It's so nice to hear, 'We know you cost more, but it's the kind of service we have to have,'" says Maxine.

Problems...solutions

The biggest problem at first—Moland being fairly new to the lawn/landscape industry—was pricing. It took years to get it right, he says.

"We finally had to accept the fact that we can't have good quality and bid the lowest price."

There were also cash flow problems when the company had to spring for new equipment. But those were minor compared to another problem.

"I didn't have a fix on our labor costs," Moland admits. "Landscaping is very labor-intensive. I cannot get below about 40 percent labor costs here. It blew my mind."

Maxine adds: "Someone who doesn't understand the service business and looks

love.' Our best source of labor is our crew—when they tell their friends."

The improved quality of employees has also made things easier on the equipment. It lasts longer as a result of better care, reducing both maintenance and replacement costs. In fact, the four years following the initiation of drug testing, Turfscape has had no vehicular accidents. A similar reduction in industrial accidents has netted Turfscape a discount on workers' compensation costs. Because of the program's success, Moland was able to negotiate a 10 percent discount on general liability insurance.

Employee performance has improved as well. Tardiness and absenteeism are no longer a problem, and employee morale and attitude are exceptional.

"If I couldn't have my drug-free workplace program," says Moland, "I'd just lock up my doors and go out of business." □

at our profit-and-loss statement says our labor is all out of whack."

Lowest hourly rate offered by Turf-Care is \$5. After 90 days, the pay is \$5.50. Any non-English-speaking employees who study English as a second language get 50 cents per hour extra. Any employee who gets a driver's license receives another 50 cents per hour extra.

"We have a pretty good labor pool when we need it," Moland observes, "except for highly-skilled workers. We've got tons and tons of California license tags here in Phoenix. But that's unskilled labor."

Thankfully, customer turnover has not been high.

"Coming from a sales background, customer relations have not been a problem," Moland says. "Ninety-nine percent of the time, the nastiest property manager knows enough about landscaping to understand our point of view."

"It's also important for us to have foremen who have something from the neck up. My foremen are with the clients at least once every two weeks. If the customer has a complaint, we take care of it and don't let it fester. Having an on-site gardener in this kind of situation really saves you."

Volume counts

Two of the most important lessons Moland has learned in the past eight years:

1) "If you tell someone you're going to do something, you have to do it. The small landscapers' only asset is integrity."

2) Volume counts.

"Our magic dollar number is around \$70,000 a month. That's mowing a lot of grass, but that's when we start to make money."

He foresees Turfscape getting even larger, judging by the amount of growth in the Phoenix/Chandler area.

"But right now, I'm happiest that all of our growth is coming from our current customer base," says Moland.

Then it's time to enjoy some of the fruits of the couple's efforts

"Our goal is to position Turfscape so we can start taking some four-day weekends by summer," he sighs. □

RESIDENTIAL UP-GRADES get an 'A+'

When these home owners decided their property needed a facelift, they called Green Thumb to restore its landscape, too. The final package greatly increased the home's worth but—more importantly—provided the family with a more pleasing and functional living environment.



by RON HALL / Senior Editor

R
Green Thumb Nursery of Canton, Ohio, renovates and replaces landscapes that homeowners have outgrown.

Residential design/build is one of Green Thumb Nursery's strengths: a few big jobs and lots of challenging residential work.

The landscape division of this full-service company in northeast Ohio was at its busiest in 1995 and looks for a better 1996, designing and installing landscapes but updating many more residential jobs.

Managers feel this is mostly because of a quirk in their primary market area which includes Canton (pop. 90,000) and its sister city to the north, Akron (pop. 200,000). Because home building there has been strong in recent years, developers often don't partner with Green Thumb—or any other quality landscaper—before starting their next development. They're too busy building houses.

"Since the landscape is the last thing done on a new home project, sometimes its budget is cut if, for instance, the homeowner wants better kitchen cabinets or a better grade of carpeting," says Duane Klein, a Green Thumb designer. Consequently, the landscape doesn't get the consideration it should, he believes.



"The best way to give homeowners what they want is to work with them from the very beginning," explains Klein. "Although we'd love to do every project like that, unfortunately it doesn't work that way—not enough anyway."

Even so, Green Thumb, 40 years in business, is doing quite well in this niche of the design/build market.

In 1995, about half of its \$2 million in revenues came from landscape installations and maintenance, the remainder from its garden center/retail nurs-

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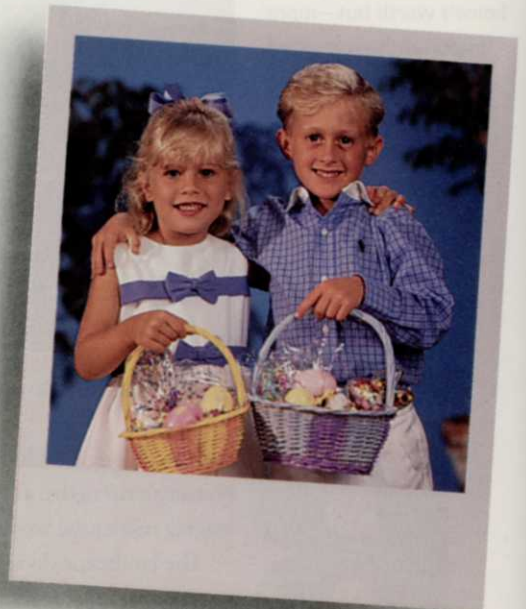
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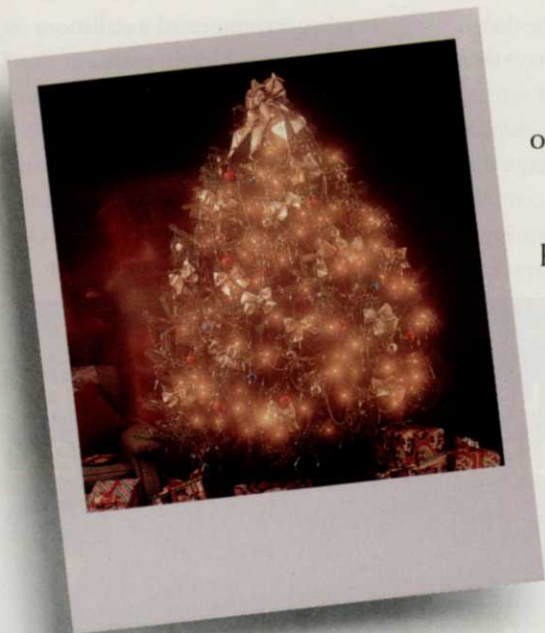
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cont. from page 9L

ery. The renovation business was so brisk that a third designer, Craig Richmond, was added in mid-season.

Tom and Alice Dennis founded Green Thumb in 1956, but it's now run by sons Dan and John, and grandson John Jr. It's located on 16 acres about three miles from the Professional Football Hall of Fame (Canton's most famous attraction), and employs about 65 in peak season.

Most of the company's design/build projects are relatively small, usually in the \$5,000 to \$20,000 range. Even so, prospects are qualified by charging an hourly design fee.

Experience counts

Experienced foremen like Dean Dennis, 24 years at Green Thumb, and Vincent Depasquale, 10 years, oversee three-person build crews.

Says Klein: "After we (designers) do the drawings and put together the specifications and go over the project with the foremen, we know that the design will get in-



Green Thumb's design team of (from left) Craig Richmond, Vicki Kirkbride and Duane Klein specialize in residential landscapes.

stalled in a quality manner.

"The foremen are experienced enough to know when they need to make minor adjustments on site to make the design work better," he adds. "They have some freedom to do that if the client agrees."

But responsibility for client satisfaction remains with the designers who stay with their respective projects until each is completed.

"I think that's why people are loyal to us year after year after year," says designer



Designer Duane Klein (left) and president Dan Dennis insist on quality whether the job is a build or a renovation, large or small.

Vicki Kirkbride. "They're not seeing so many different faces."

Although Green Thumb tackles one or two larger commercial installations each season, Green Thumb president Dan Dennis says his heart has always been, and remains, in the residential market.

"We like the relationships we can build with homeowners. Generally we can communicate with them better," says Dennis.

"And it's a lot more fun." **LM**

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Disease control: lessons learned from last year

by JOHN WATKINS, Ph.D. / University of Nebraska

North

Rare red thread damage was found on bentgrass greens and ryegrass fairways.



PHOTOS COURTESY DR. WATKINS

Twenty-one years as a plant pathologist cannot temper my high regard for the challenge of growing healthy turfgrass under the stressful, ever-changing environment of the American Great Plains.

The 1995 growing season was a prime example. For much of the nation—the East and Midwest in particular—the spring weather was cold and wet, followed by a sudden onset of hot, dry weather that lasted the rest of the growing season. Several areas of the country set records for days without measurable precipitation, making it difficult to maintain quality turf.

Putting greens were thinned and did not respond to cultural practices. Residential, commercial, sports and other turfs were stressed to the limit, and irrigation bills were out of sight. In addition, the heat, drought and humidity contributed to leaf spot, melting out, dollar spot, fairy ring, necrotic ring spot, summer patch and nematode injury.

Rare maladies

Turfgrass managers were confronted with diseases that previously had not been problems or had rarely occurred in an area.

Only once in the 21 years prior to 1995 had I seen red thread. Within a two-week period in May, half a dozen golf course superintendents called to report significant red thread damage to bentgrass greens and ryegrass fairways.

Drizzly days with cool temperatures slowed the turf's growth rate, allowing red thread to establish. Fortunately, once it was diagnosed, fungicide applications restricted further turf damage. Although red thread is not a drought-related disease, in 1995 it seemed to set the stage for the rest of the summer.

Also in 1995, many Nebraska superintendents observed a lack of response and recovery of the turf to fungicide applications, fertilization, aeration or increased irrigation. If brown patch was involved, the green usually responded to fungicide treat-

ment. But in many situations, disease was not the culprit.

With air temperatures in the 90s and soil temperatures at a two-inch depth in the low 100s, putting greens died merely because the turf did not have a sufficient root system to maintain transpiration and tolerate the heat.

Because of the cold, wet spring, root depths were shallow (two to three inches), and the roots could not supply sufficient water to compensate for water lost to hot, dry, windy conditions. Plants died from drought stress and the greens were thin in areas.

Other factors contributed to the demise

of putting greens as well:

- low mowing height,
- nitrogen-starved turf, and
- rootzone layering.

Golf superintendents faced with similar problems this year could aerify and topdress with appropriate sand or mixes to overcome rootzone layering and support good root system development going into summer.

Providing a balanced fertility program to prevent starvation and raising the mowing height also would help. These practices may decrease putting speed, but rolling, topdressing, grooming, double-cutting or using plant growth regulators can help re-

gain some speed. Light, frequent irrigation in the afternoon to keep the rootzone moist may inhibit root pathogens and root-feeding nematodes.

Drought strikes

Diseases and plant pathogenic nematodes also injure turf during drought periods.

The symptoms of leaf spot and melting out, which are fungal turf diseases, range from small oval spots on leaf blades to fading out of the turf, to extensive crown and root rotting. The leaf spot stage is most evident during wet weather with temperatures between 70° and 90° F.

At temperatures above 80° F, necrosis

cont. on page 36

'Little worms' destroy golf course greens, home lawns

Some bentgrass golf greens and home lawns were injured by nematodes last summer in eastern Nebraska.

Nematodes are wormlike animals, one of the more abundant forms of animal life. Plant pathogenic nematodes that attack turfgrasses live in thin water films on soil particles. About 18 genera attack turfgrasses, which vary in their ability to support certain nematode species.

The nematode as a turfgrass pest often tends to be one of the last things you might consider when diagnosing a problem that doesn't respond to fertilizer, fungicides, irrigation or other cultural practices.

Such was the case last summer with one Nebraska golf course and several home lawns, when the turf continued to decline in spite of efforts to reverse the problem. No evidence of disease was found and the affected turf didn't respond to fungicide treatment. Symptoms were a non-descript yellowing and thinning of the bentgrass and a decline and death of the bluegrass.

After ruling out disease, we found high populations of the ring nematode in the golf green and the spiral nematode in bluegrass lawns. The added stress of the nematodes on top of heat, drought and traffic was more than the turf could tolerate.

Unfortunately, nematicides registered for turfgrass—fenamiphos and ethoprop—are highly toxic, restricted-use materials. The only option for residential turfs is a chitin-based product registered as an organic nematicide.

On golf greens, supers decided to rely on cultural practices and then re-sample the area in two or three weeks. As a general rule, nematodes do not tolerate soil temperatures above 90° F, and often, their numbers decline during mid-summer. A golf green sample three weeks later showed that the ring nematodes were below the damage threshold level. The decline was probably due to continued heat and drought that caused "lethal" temperatures.

Not all nematode species are equally damaging at a given level on a given host. Threshold levels will therefore vary for different nematodes and different grass hosts.

Sample!

The key to diagnosing nematode injury is in the sampling. Use a standard one-inch soil probe and take a composite sample of 20 cores per 1000 square feet. Make certain that the composite samples are collected from the affected area. It's a good idea to also collect a composite sample from a healthy, non-affected area as a basis for comparison.

The composite sample volume should be at least one pint. Label the sample and keep it in a cool site until it can be transported to a laboratory for nematode analysis. Proper sampling and interpretation of the results are important factors for managing the situation.

The two primary objectives in turfgrass management are to suppress the pathogen's growth and to alter the turf environment so that it favors the host and not the disease. These goals can be accomplished by:

- **raising the mowing height during the summer stress period,**
- **providing a balanced fertility program,**
- **promoting root growth through aerification,**
- **preventing drought stress,**
- **planting adapted and disease-resistant cultivars, and**
- **integrating a well thought-out fungicide treatment plan into the overall management design.**

The goal is to promote healthy turf. These general principles apply to a normal year and—with some modification—to a hot, dry year.

—Dr. Watkins

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of the entire leaf blade causes leaf blight. As leaf blighting progresses, the turf fades to brown. During hot, dry weather, leaf sheaths, crowns and roots become infected, causing thin, open areas in the turf. Plants with severe crown and root rot usually die from the heat and drought stress.

Symptoms on bentgrass differ from those of Kentucky bluegrass and fine fescues. When bentgrass golf greens are infected, they have a smoky blue cast that progresses to a yellowing and, finally, complete blighting of the leaves and thinning of the turf. Injury to the bentgrass usually is more severe when it is growing under soil moisture stress or when it has been over-fertilized with nitrogen.



Summer patch may appear when wet weather is followed by hot, dry periods.



Nematode damage: a non-descript yellowing and thinning of bentgrass and a decline and death of bluegrass.

Unightly nuisance

Last year produced many interesting challenges for turfgrass managers, like fairy ring on bentgrass greens—especially newly-constructed ones.

Because of the current trend in golf green management toward lower nitrogen

rates, the darker green fairy rings were quite visible during May and June. They used the peat in the greens mix as a nutrient base and were abundant because of the extended cool, wet spring.

At that stage, fairy ring on the green is more an unsightly nuisance than a threat to the turf. The real problem comes from the fairy ring mushroom's mycelium that infiltrates the soil below the ring. It is hydrophobic and impervious to water, causing the grass immediately above the ring to die from lack of moisture during droughty periods. Aerifying the green and applying the fungicide flutolanil (ProStar) suppresses fairy ring and prevents turf loss.

Drought stress also can predispose even well-managed turf to dollar spot, which can affect its aesthetics or recreational use. Warm days, heavy dews, dry soils and nitrogen-deficient turf are ideal conditions for dollar spot. Persistent drought periods accentuate dollar spot injury and hinder recovery when control measures are implemented.

Dollar spot can often be managed with little or no fungicides. In a two-year field trial, we obtained satisfactory control of dollar spot on bentgrass with 4-6 lbs. of N/1000 sq./ft. The nitrogen was a slow-release fertilizer applied monthly from May through October. Although 6 lbs. of actual N per season is too high for a putting green, it is not too high for residential turfs. In this trial, dollar spot suppression at the 6-lb. N rate was comparable to that obtained by fungicides. This illustrates how a balanced fertility program can manage dollar spot.

Turf destroyers

Necrotic ring spot and summer patch are two of the most destructive, stress-re-

SYMPTOMS OF COOL-SEASON TURFGRASS DISEASES

Disease	Key symptoms	Control strategy
Leaf spot/ melting out	<ol style="list-style-type: none"> 1) dark spots on leaves 2) yellow, thinning turf 3) brown roots and crowns 	<ol style="list-style-type: none"> 1) use resistant cultivars 2) fertilize properly 3) irrigate properly 4) apply fungicides
Dollar spot	<ol style="list-style-type: none"> 1) bleached lesions on leaves; reddish-brown margins 2) four- to six-inch patches of straw-colored turf 3) silver dollar-sized, bleached spots on bentgrass greens 	<ol style="list-style-type: none"> 1) use resistant cultivars 2) increase the nitrogen level 3) irrigate properly 4) apply fungicides
Fairy ring	<ol style="list-style-type: none"> 1) circles of dark green grass some with dead areas in the ring 	<ol style="list-style-type: none"> 1) remove infested sod and soil; replace with clean soil and reseed 2) aerify and irrigate 3) spot treat with flutolanil
Necrotic ring spot	<ol style="list-style-type: none"> 1) pockmarked circular depressions in turf with healthy tufts of grass in centers 2) brown to black roots and crowns 	<ol style="list-style-type: none"> 1) use resistant cultivars 2) raise mowing height 3) use light, frequent irrigation 4) apply organic fertilizers 5) aerify 6) apply fungicides
Nematodes	<ol style="list-style-type: none"> 1) yellow, wilted, thinning turf 2) reduced root system with brown lesions on roots 	<ol style="list-style-type: none"> 1) sample the affected area, obtain a nematode analysis 2) fertilize properly 3) irrigate properly 4) raise the mowing height 5) apply a non-fumigant nematicide, if available

lated turf diseases. Necrotic ring spot destroys root systems during cool weather; summer patch destroys them when wet weather is followed by hot, dry periods.

Symptoms of either disease are virtually indistinguishable. Turf will show 6- to 12-inch circular or semi-circular patches, giving the area a pockmarked appearance. The dead grass is light tan and matted, and many of the patches will have a tuft of healthy grass in the center—the "frog-eye" symptom. Diseased roots will appear dark brown.

On established turfs, the most important control is to eliminate plant stresses that favor disease development. Avoid management practices that promote rapid top growth at the expense of root development, and keep adequate moisture in the rootzone by lightly and frequently irrigating.

Keep thatch and rootzones moist. Applying compost materials or organic fertilizers can increase microbial activity, and cer-



When you scout for nematodes, take 20 core samples per 1000 square feet.

tain microbes partially inhibit fungus that causes necrotic ring spot or summer patch. Also, other naturally-occurring fungi that compete with the pathogens for food help keep diseases in check. During extended dry spells, beneficial microbe activity is slowed or even suppressed, giving the pathogen a distinct advantage. A moist rootzone helps to reduce the stress of dry spells.

Other practices to control necrotic ring spot or summer patch include a balanced fertilizer program with slow-release nitrogen fertilizers and a fungicide program. Benzimidazole-type fungicides can be applied curatively. Other fungicides can be used preventively in early fall or mid-spring. Apply them with sufficient water to drench them into the rootzone.

If you're establishing new turf, avoid planting pure stands of susceptible Kentucky bluegrasses. Use a blend of improved drought-tolerant cultivars or mix in 15 to 20 percent, by weight, of the newer brown patch resistant turf-type perennial ryegrasses with the Kentucky bluegrass blend.

The improved drought-tolerant cultivars will be less prone to stress and thus, less prone to summer patch. Remember, blends or mixtures are only as good as their components, so choose your cultivars carefully. □

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For warm-season disease control: know your turf!

by BRUCE MARTIN, Ph.D. / Clemson University

South



PHOTOS COURTESY DR. MARTIN

Dollar spot can be severe on nitrogen-deficient or drought-stressed turf.

Diseases can seriously limit the successful culture of warm-season turfgrasses. Fungi are most of the living causal agents of disease in warm-season grasses, but nematodes are a problem, too, particularly in sandy soils. Successfully managing diseases in warm-season grasses depends on knowing the requirements of the particular grass in question, the biology of the pathogens, and good turf horticultural practices. Pesticide applications can be a valuable component in an overall integrated pest management system, but they must be used responsibly.

Brown patch

A major disease of cool-season grasses, brown patch also commonly attacks warm-season grasses, including bermudagrass, St. Augustinegrass, centipedegrass and zoysiagrass. The primary causal agent is *Rhizoctonia solani*, but the strain which causes the disease differs from those encountered as

pathogens of cool-season grasses.

Brown patch symptoms appear in the spring, as the turfgrass is breaking dormancy, or in the fall, as the turfgrass approaches dormancy. Individual disease patches may be 20 or more feet in diameter. Shoots along the outer border of patches usually are yellow due to rotted leaf sheaths near the soil surface.

Dollar spot

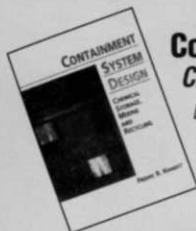
This disease occurs on all of the warm-season turfgrasses, but gets severe in bermudagrass and zoysiagrass. Best conditions for dollar spot are warm, humid weather. Dollar spot can be more severe on nitrogen-deficient turf or turf that has become drought stressed before rain or high humidities occur.

Symptoms differ depending on the grass's height of cut. On turf cut low, patches of about one to two inches in diameter develop. On higher-cut turf,

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patches may exceed five inches in diameter. Characteristic leaf lesions are a bleached tan with distinct reddish brown or purplish margins. Leaves may become girdled. In early morning, it is not uncommon to see a gray mycelial growth.

Spring dead spot

Spring dead spot of bermudagrass occurs in transition zone areas of the U.S. It is common in the Piedmont and mountain areas of the Carolinas and Georgia, but rare in the coastal regions. Hybrid bermudagrasses are particularly susceptible, but common types may also be afflicted. Several fungi are possible causal agents of this disease. All are relatively slow-growing, root-colonizing fungi.

Brown patch symptoms—shown here in bermudagrass—appear in the spring.



Symptoms include dead circular areas of turf, two or three feet in diameter, found in spring as bermudagrass breaks dormancy. Patches of diseased turf may

persist for several years. Older patches develop a "frog-eye" symptom with healthy grass in the center, and patches that look like donuts.

Generally, spring dead spot develops in turf that is three to six years old. Excessive thatch, late-summer nitrogen applications, and low temperatures in winter predispose turf to spring dead spot.

Gray leaf spot

Gray leaf spot is caused by *Pyricularia grisea*, a very common disease of St. Augustinegrass occurring in hot humid weather. It is more severe in newly-established turf, in shady locations with poor air movement.

Infections occur on leaves and stolons, first as small brown spots with a distinct brown color, to a purple border around the infected tissue. Lesions may become very numerous and expand to completely consume leaves and girdle stolons. Severe infections may leave turf with a scorched appearance. The disease is sometimes called "blast" due to this symptom.

Leaf spot

Bipolaris sorokiniana causes leaf, crown and root diseases of bermudagrass and zoysiagrass during warm, wet weather in mid-summer. The diseases start as leaf spots, and may progress to crown and root rots. *Exserohilum rostrata* has been reported to cause a leaf spot of St. Augustinegrass and bermudagrass. However, these diseases are rarely severe where these grasses are

CONTROL PRODUCTS FOR WARM-SEASON TURF DISEASES

Brown patch	Eagle WSP; Daconil 2787F; Daconil 90WDG; Daconil Ultrex; Prostar 50 WP; Bayleton 25 WP; Banner 14.3EC; Rubigan AS; Chipco 26019 50WP; Chipco 26019 23.3%F; Fore 37%F; Fore 80WP; Terraclor 75 WP; Turfside 10G; Curalan 41.3% F; Curalan DF; Cleary's 3336 50WP; Cleary's 3336 46%F; Sentinel 40WG
Dollar spot	Eagle WSP; Daconil 2787 F; Daconil 90WDG; Daconil Ultrex; Banner 14.3 EC; Bayleton 25WP; Curalan 50WP; Curalan DF; Rubigan AS; Chipco 26019 50WP; Chipco 26109; 23.3%F; Fore 80WP; Cleary's 3336 50WP; Cleary's 3336 46%F; Vorlan DF; Vorlan Flo; Sentinel 40WG
Spring dead spot	Rubigan AS; Eagle WSP
Gray leaf spot	Daconil 2787F; Daconil 90WDG; Daconil Ultrex; Banner 14.3%EC; Sentinel 40WG
Leaf spot	Daconil 2787F; Daconil 90WDG; Daconil Ultrex; Chipco 26019 50WP; Chipco 26019 23.3%F; Banner 14.3%EC; Curalan 50WP; Curalan Flo; Vorlan DF; Vorlan Flo; Fore 37%F; Fore 80WP; Eagle WSP
Pythium diseases	Aliette 80WP; Koban 30WP; Subdue 2E; Subdue 2G; Banol 6E
Fairy rings	Prostar 50WP
Nematodes	Mocap 10G; NemaCur 10G; NemaCur 3E

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