Sure Thing #2:

THREE OF A KIND BEATS TWO PAIR.
Larry Pratt (left) learns the art of bunker raking. "I'm just doing something with my time," he says.

Continued from page 30

"I never liked it before, but this absolutely got me interested in golf," says Madison, who wants to start playing.

But Ken Gannon, 16, has no desire to play and prefers to stick with track and cross-country.

"I'm not too interested in hitting a golf ball and chasing it down a big, long, narrow fairway," he says taking time out from raking a bunker.

As the morning moves on, Vogts zips around the golf course checking up on the students. He chats with his staff. With the course soaked from days of heavy rains, Vogts decides to forgo mowing fairways and concentrates the crew on rebuilding washed-out bunkers.

He is informed that a group of students did not show up today because of a disciplinary problem in one of the housing units. A transgression by just one student can lead to problems for many others.

For instance, Vogts said if even the smallest bit of graffiti is found anywhere on the grounds, the entire school comes to a standstill until the culprit is discovered. That means every student working on the course is taken from his job and returned to campus. In one instance, Vogts said it took eight hours before the staff discovered who committed the offense.

On the opposite end of the spectrum, students are also rewarded for excelling, whether it is in the classroom or the living quarters. At the course, if his crew has gone through a particularly tough month, Vogts might give members the afternoon off, roll out the grills and cook up hamburgers and hot dogs.

An even better reward is when Vogts grabs the fishing poles out of his office and takes the students to one of the on-course ponds for some angling. Most of the students have never fished, and they revel in their chance to try.

"It's a whole different world up here," Vogts says.

It's a world where growing grass on the golf course is secondary to growing the young men who work there.

"They've all had mulligans," Weed says. "And they're taking advantage of them." •

Pioppi is a free-lance writer from Middletown, Conn.
There are some things in life you can count on. Like Dimension® herbicide. You can count on it to control all season long. You can count on it to provide early postemergent control of crabgrass. And you can count on it not to stain. With Dimension, there's never a doubt.

For the latest university trials from your region, visit our Web site at www.DimensionHerbicide.com
Editors note: You know those family-update letters people send out around the holidays? This is one of them. But remember — it's a parody, even if it is close to the truth.

Dec. 5
Holiday Update 2003

Many of you have written to compliment me on my holiday newsletters while kindly warning Ted Jr. and I about how much we'll miss the kids when they are off to college.

"Just wait Tish," you wrote in your glowing e-mails praising my annual choice of USGA-designed Christmas cards. "You'll miss the scrapes with the law, the car wrecks and the missed curfews."

Well, you were right. But don't worry, Ted Sr. and I will now get to spend most of our time running the St. Louis National Golf and Country Club green committee.

But more on that in a moment. First, some news about the little pumpkins.

Ted Jr. (27) is getting ready to enroll in medical school. We're so excited, because Ted Sr. and I are finally going to have an excuse to go play Pete Dye's Casa De Campo courses. That's right, Ted Jr. is headed for a school of medicine in the Dominican Republic next spring. He's very excited about studying to be a podiatrist after those boring stints in law school, graduate school and that dreary MBA program. More importantly, Ted Jr. and I hear the "Teeth of the Dog" course at Casa De Campo is the Pebble Beach of the Third World!

Tammie (19) has successfully completed her hazing and is now a Delta Gamma at University of Texas in Austin. During DG's Parent Weekend this fall, Ted Sr. and I had the privilege of playing the Barton Creek courses. We think Barton Creek has the best conference center golf courses in the country, though Ted Sr. felt the Crenshaw course needed some waterfalls. Oh, about Tammie. Recently she walked out of her sociology class and saw that Bush daughter who goes to UT. This life-changing brush with royalty inspired Tammie to join the campus chapter of the Young Republicans.

Ted managed to oust one long-time committee member so he could have a better-qualified replacement (me!).

Tim (17) is a senior at Our Lady of Perpetual Suffering High. He has a great chance of cracking the starting five on the golf team this year. Tim couldn't have done it without the help of a sports psychiatrist who diagnosed him as having Severe-First Tee-Tremble-Syndrome. Tim was also diagnosed as having Acute Distance Disorder. However, he's started using Tetrahydrogestrinone (THG), which has worked so well for our U.S. track and field athletes. This should get our Timmy that extra 10 yards he needs to crack the starting lineup.

Ted Sr. continued to do his course rating work for Golf Digest and tells me that if I get my handicap under 20, he believes the editors will give me a panel position for my 50th birthday. Ted Sr. is a nationally recognized expert on golf course design, which is why the club members at St. Louis National rejoiced when he became green chairman this year. Ted managed to oust one longtime committee member so he could have a better-qualified replacement (me!). We're very excited about a pompous-grass revegetation program that we've started for the roughs. In 2004 we hope to oust our longtime superintendent and replace him with a young, willing assistant who will do what we want. It should be a fun and exciting year.

Wow, so much said and I didn't even get to tell you about my letter-writing campaign on behalf of Martha Stewart. Oh well ...

Happy holidays from St. Louis National's favorite family,

Tish, Ted Sr., Ted Jr., Tammie and Tim

You may e-mail Geoff Shackelford at geoffshackelford@aol.com as long you are not sending a year-end family update.
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**The Golfdom Report**

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Summing up the state of the industry
For superintendents, player expectations and financial pressures have never been greater than they are today.

You've seen the reports and likely experienced it firsthand — reduced rounds, increased pressure to maintain tour-quality turf, and tighter maintenance budgets. As competition for fewer players increases and budgets decrease, more critical eyes and heavier burdens are falling on the superintendent's already burdened shoulders. "At BASF, we know there's never been a greater demand in the golf industry to achieve high-quality performance," said Mike Toce, business manager, BASF Turf & Ornamental Group. "Superintendents need every advantage possible and they're looking for companies that do more than simply offer products — they're looking for committed business partners who have an equal stake in their success."

Helping superintendents succeed drives The BASF Turf & Ornamental Group. It's a commitment backed by action.

**BASF listens.**

Its sales team and distributor-focused network are on the course every day listening to local challenges and providing products and advice that offer solutions for the superintendent, while improving the turf they manage. "We understand turf issues because we listen to superintendents and university experts and solve problems by applying resources from our global network of researchers and developers," said William Strickland, senior marketing manager, BASF Turf & Ornamental. "Turf challenges are dynamic, not static, and we are committed to continuous improvement to help our customers succeed this season and years to come."

As professional development resources for superintendents become more scarce and time becomes tighter, BASF has taken leadership roles with GCSAA — at both the regional and national levels — and the Fungicide Resistance Action Committee. By sharing fungicide and herbicide research and development findings, stewardship principles, and product training, BASF is working to help superintendents become more knowledgeable and effective in shorter amounts of time.

**BASF global chemical leadership meets local turf challenges.**

With research and development investments, BASF is applying its resources to provide the golf industry with higher performance products.

The most obvious example of the BASF commitment to action is its development of new chemistries to solve golf turf's most destructive pathogen: fungi.

In the past year, BASF has registered two new fungicides - Insignia® and Emerald® — that help superintendents meet competitive market pressures, as well as control the most difficult fungi, including dollar spot. With these two new fungicides, BASF now has an arsenal of products that provide efficient use of limited budgets, time savings and, ultimately, improved professional reputations.

**Insignia Fungicide**

After more than 130 EUP fungicide trials at golf courses and years of research and testing, BASF recently received EPA registration for its Insignia® fungicide, giving superintendents a new generation of enhanced strobilurin chemistry and a new active compound, pyraclostrobin.

"The discovery of pyraclostrobin by BASF has added yet another component to the turf fungicide market," said Dr. Wakar Uddin, Pennsylvania State University. "Its control of a wide range of turfgrass diseases caused by fungi from various classes is its major strength, and such an extraordinary broad-spectrum nature of this new strobilurin will undoubtedly become a strong component in an integrated disease management program."

In course trials, Insignia is helping superintendents solve...
Wherever we used Insignia, we had no turf disease problems," said Bob Zuercher, superintendent at Blackmoor Country Club, Myrtle Beach, S.C. The course traditionally had brown patch and dwarf bermudagrass outbreaks.

Unlike some older strobilurin chemistries in the market, Insignia suppresses dollar spot, instead of flaring it, and gives users longer control (up to 28 days on select turf diseases). Longer control saves superintendents labor and material costs, and minimizes spraying time on the course.

"Adding Insignia to the BASF fungicide and herbicide portfolio gives golf course superintendents a single source for complete pathogen control," said Allison Moskal, regional sales manager, South and West U.S., BASF Turf & Ornamental. "Insignia is a foundation product for reliable disease control and, when rotated properly with non-strobilurin chemistries such as Emerald and Curalan® EG, gives superintendents the industry's most complete dollar spot control."

Emerald fungicide couldn't have arrived at a better time for golf course superintendents trying to maintain exceptional turf quality.

In recent years, the severity of dollar spot has been increasing as the disease has developed resistance to many of the fungicides traditionally used to fight it, such as benzimidazoles, dicarboximides and sterol inhibitors.

Emerald fungicide is the first all-new class of fungicide chemistry for dollar spot control in years, giving superintendents a new weapon to manage resistance issues, especially dollar spot resistance. Its active ingredient, boscalid, attacks pathogens that cause dollar spot and other turf diseases by inhibiting respiration within the fungal cell. Boscalid belongs to a class of chemistry known as anilides, which have never been used in the turf market. Because both its mode and site of action differ from other fungicides, Emerald can effectively control pathogens that have developed resistance to other chemicals.

University testing supports the Emerald chemistry's ability to control dollar spot.

"Many frustrated turfgrass managers have encountered fungicide-resistant strains of dollar spot," said Nathan R. Walker, assistant professor at Oklahoma State University. "The excellent activity of Emerald against dollar spot has great implications for disease management programs. It's a new class of chemistry for dollar spot and is effective against dollar spot isolates, which are resistant to benzimidazoles, dicarboximides and DMI (sterol-inhibiting) fungicides."

In addition to its unique chemistry, Emerald saves superintendents time by providing reliable dollar spot control for up to 28 days. That efficacy decreases spraying time and increases time for superintendents to tackle other course challenges.

Listening, innovating, acting.

BASF is enhancing the quality of today's turf and the reputations of today's superintendents. In an environment of increasing pressure, BASF is committed to being a resource for effective and reliable solutions for superintendents. By listening, innovating and acting, BASF is working with superintendents to improve the state of the golf industry.

BASF may not make the turf, but it is making it better – along with the reputations of those who manage the turf.
But there are signs that point to... dare we say... an upturn.
Let The BASF Professional Turf Team Help You Make It Better.

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Sr. Technical Specialist, Northern U.S.
Kathie Kalmowitz
Technical Specialist, South & West U.S.
Steve Hollembeak, certified superintendent at Winfield (Kan.) Country Club, is looking for solutions to problems he dealt with in a tough 2003.

Still Struggling

BY FRANK H. ANDORKA JR.
MANAGING EDITOR

For the first time in his career, Steve Hollembeak is seriously thinking about life after being a superintendent.

Hollembeak, certified superintendent of Winfield (Kan.) Country Club, isn’t worried that he’ll lose his job over something he did or didn’t do. He gets along with his general manager and the majority of members, and his golf course is in good shape. Unfortunately, the area’s economy is not.

Winfield is a town of 12,000 people located 45 minutes south of Wichita, where memberships at local country clubs are highly priced. Bedroom communities just south of the city teem with golfers who want the private club experience at a lower cost. When times were good, many golfers from those areas would drive down I-35 to play Winfield for not much more than it would cost them to play public golf courses near their homes.

But Wichita’s economy, heavily dependent on airline manufacturers, struggled as early as 2000, and Sept. 11, 2001, sent it into a tailspin. Airline giants like Lockheed Martin and Boeing slashed jobs by the thousands. As those good-paying manufacturing jobs disappeared, so did many Winfield memberships.

The club that used to have 300 members...
now boasts only 215. The remaining members have asked Hollembeak to cut his maintenance budget for the third straight year because of declining revenues, and the superintendent believes he's getting close to the point where he won't be able to keep the course in the condition members expect. He's also worried that the area airline manufacturers are planning to cut even more jobs by 2005, which could drive membership levels down even further.

"We're kind of hurting," Hollembeak says. "It's not that I think losing my job is imminent. But it's a lot harder to keep it from creeping into the back of my mind the longer the economy continues to struggle."

Hollembeak's comments echo those of his colleagues and other members of the industry around the country as they review 2003. Between an economy that continued to struggle, bad weather in some sections of the country that suppressed rounds (and therefore revenues) and an underlying sense that there are just too many golf courses to maintain adequate revenue streams for them all, the news wasn't that good for the industry in 2003.

Still, some industry players say the last two quarters of 2003 showed rounds increasing as the weather moderated and the economy showed small signs of creeping toward a sustained recovery. So 2004 could be the year when the golf industry starts its long road back to economic stability.

**Economic struggles**

In the minds of many members of the golf course industry, 2003 will be remembered as a year where everyone had to hunker down. According to Golfdom's 2003 state of the industry survey, 74 percent of superintendents say the economy affected rounds at their courses, and 57 percent of superintendents said their rounds were off between 5 percent and 15 percent.

The financial decision-makers must have had strong stomachs in the face of economic hardship, however, because only 32 percent of superintendents say they were asked to cut their maintenance budgets in the middle of the year despite the steep dropoff in revenue. Still, in a year that was supposed to mark the return of the golf industry to better form, 2003 was a disappointment.

"I thought it was going to be better than it was," says Meriam Leeke, owner of Old Channel Trail Golf Course in Montague, Mich. "There are too many courses in many areas, and the weather and the economy didn't help at all. You could see it in the bottom line."

In the case of Sodus Bay Heights Golf Course in Sodus Point, N.Y., a precipitous drop in revenue couldn't be happening at a worse time. Memberships are falling at the semiprivate course at the same time that bonds used to finance a new irrigation system seven years ago are starting to mature. That means the club has to pay them back, but the money is hard to come by.

"People just can't afford to belong to golf clubs like they used to," says Steve Boone, superintendent at Sodus Bay. "Revenues here are down considerably, and I don't know when we're going to get them back."

Maintenance budget cuts have forced Boone to put off buying new sand for the bunkers and postponing new equipment purchases, and he may have to cut at least two crew members to get to the 2004 budget number his members have given him.

Tom Bruff, managing director of Dallas-based consulting firm KPMG's golf practice, says the combination of factors currently keeping the golf industry from performing well are as bad as he's seen before.

"It's easier to register combination products with the Environmental Protection Agency than new products," Toce says. "But in June and July, normal weather patterns returned, and we finished the year on a strong note."

BASF also restructured itself after a merger with TopPro Specialties, a firm that focused on creating post-patent products. Toce says the merger of the two companies allowed BASF to expand its portfolio in ways that allowed it to smooth out what could have been a rough year. "We didn't have much disruption as a result of the merger," Toce says.

"We started the year with major concerns because the weather was a significant problem in many areas of the country," Toce says. "But in June and July, normal weather patterns returned, and we finished the year on a strong note."

Continued on page 8A
Always read and follow label directions.
WHAT OTHER FUNGICIDES DREAM OF BEING WHEN THEY GROW UP.

Insignia Fungicide

There's a reason superintendents who've tried new Insignia fungicide from BASF are calling it "The Outperformer." It's because Insignia exceeds even their highest expectations for a strobilurin-based fungicide. Insignia serves as a foundation product for reliable disease control. It controls an exceptionally broad spectrum of turf diseases—far broader than Compass®, for instance—offering dependable control of anthracnose, brown patch, gray leaf spot and many others. In addition, Insignia won't flare dollar spot the way Heritage® does. That means you won't aggravate one problem as you solve another. Best of all, Insignia controls key diseases for up to 28 days, reducing your labor and materials costs and enhancing your peace of mind. Contact your distributor or your BASF Professional Turf Sales Representative, call (800) 545-9525 or visit www.turffacts.com to learn more about how new Insignia fungicide can outperform on your course.

BROAD SPECTRUM. LONG LASTING. SUPPRESSES DOLLAR SPOT.
John Wiley, president of Turf Supply Co. in Eagan, Minn., says 2003 was a year of slow but steady growth, largely because of the relationships that exist between superintendents and independent distributors like his company.

"Superintendents are putting down fewer chemicals and fertilizers, and budgets are tight across the board," Wiley says. "That's why it's so important for distributors to have good relationships with the superintendents they serve. Good relationships can smooth out rough patches in the economy."

Wiley says he believes 2004 will be another year of steady growth for manufacturers and independent distributors. With the overall growth of the golf industry flat or declining, however, market-share growth for manufacturers will come from other companies or other markets like lawn care.

The emphasis on loyalty programs and the packaging of products to superintendents by manufacturers is causing concerns for superintendents and distributors because the idea of buying a preselected package of products may limit their flexibility.

"We're a remarkably stable segment of the industry," Wiley says. "We don't necessarily have great years all the time, but we tend to operate on an even keel. We're looking for a little upswing next year."

Continued from page 5A
in his 18 years in the industry. At the heart of the problem is that most markets in the United States remain overbuilt after the exuberant building of the 1990s.

"Supply continues to outpace demand," Bruff says. "I don't see anything on the horizon that indicates demand will grow exponentially in the near future. There's a chance we'll be in the doldrums for at least five years unless there's a huge increase in demand or significant supply is removed from the market — neither of which I see happening."

In general, Leeke agrees with Bruff's assessment. She says the number of outings at her course was down in 2003, and leagues don't have as many players as they've had in the past. She realizes that each lost golfer is lost revenue.

"We haven't done enough as an industry to create more golfers and keep them in the game," Leeke says. "We keep lengthening public courses for people who don't have time to play for six hours."

On her own course, Leeke added three short holes around her driving range that can be played in 35 minutes. She says she gets many beginning golfers and those who want to play on their lunch hours.

"For the beginners, we believe they'll graduate to the longer course when they feel comfortable enough," Leeke says. "For the others, it's a great way to bring in extra revenue and make them want to come back."

**Weather woes**
When golf courses are struggling to make ends meet, they can't afford to lose weekends to bad weather. In 2003, steady rain from early spring to June suppressed the number of rounds played in many areas. Golf courses from Maine to Florida saw revenues fall.

"A couple of regions had rough weather patterns this year that made it difficult for them to make money," says Mike Hughes, executive director of the National Golf Course Owners Association (NGCOA). "The Mid-Atlantic and New England regions were negatively affected by abnormally wet weather during the spring and early summer."

The Shenvalee Golf Resort, nestled in the picturesque Blue Ridge Mountains of Virginia, felt Mother Nature's wrath in the early part of the season. The bad weather, which started in October 2002, continued into the spring.

"We were 13 inches over the normal amount of rainfall through June," says Charlie Fultz, the course's superinten-
Breningmeyer: Tough Year In the Iron Industry

Gregg Breningmeyer, director of marketing and sales for John Deere Golf & Turf One Source, says 2003 was a tough year in the equipment market because golf courses struggled to bring in revenue. That made them less likely to purchase new equipment.

"The supply-and-demand equilibrium is getting more and more out of whack," Breningmeyer says. "There are more golf courses than there are golfers, and that hurts overall revenue. There's less to put toward new equipment">

Dealing with overbuilding
One of the most intractable problems the golf industry faces, however, is the question of overbuilding. KPMG's Bruff says it's the biggest problem facing the industry. The easiest solution to overbuilding is to remove some of the supply from the market by turning golf course properties to other land uses, but it's not that simple.

"So many golf courses that are being built now are connected to housing developments," Bruff says. "Once the developer has made the sale on that basis, it's hard to turn the land into some other use. There are legal reasons having to do with housing contracts that prevent it."

Bruff says he's seen few golf courses changing hands in recent years because many owners aren't willing to come down on price and risk losing money on courses they invested in such a short time ago.

"Low interest rates have allowed some owners to accept lower prices than they used to think they could get," Bruff says. "We've seen some older courses going for less than what they originally cost to build."

Breningmeyer says what he's heard from many superintendents is that equipment purchases have been put off until revenues return to more normal levels. He says that could happen in 2004.

"We've seen some courses turning around," Breningmeyer says. "The third- and fourth-quarter numbers are looking pretty robust, he says. "The economy looks like it's on solid ground. If you assume normal weather patterns, we're looking to grow in 2004."

He said John Deere expects the equipment market to grow by 2 percent to 3 percent in 2004. - F.H.A. Jr.

Continued on page 12A

McWhirter: Irrigation Renovations Drive Bottom Line

Rod McWhirter, national specification manager for Rain Bird's golf division, says the irrigation industry is increasingly depending on the renovation market for its income.

"New golf course construction is continuing its downward trend since the late 1990s. With many areas of the country oversaturated, fewer courses are being built each year, McWhirter says. As a result, irrigation companies have had to rethink their business models.

"It used to be that as new golf course construction went, so went the irrigation market," McWhirter says. "We've found new opportunities in the renovation market."

In 2003, the renovation market remained brisk because so many of the courses built in the 1980s and 1990s have irrigation systems that need to be upgraded or replaced, McWhirter says.

"Golf courses need irrigation, and these older systems don't have the water-saving and energy-saving properties of the newer technology," McWhirter says. "Since members can see immediate savings in those areas, they're more likely to spend money on an upgrade than they would on other projects. They may delay a project, but they will rarely cancel it outright."

McWhirter says Rain Bird expects a similar business model to hold in 2004. "We're not expecting to see a huge boom in new course construction, so we're planning for more of the same," he says. "That's where we're focusing our energy."

-F.H.A. Jr.
Using technology to increase length and control is a story as old as golf itself.
Dollar spot's never seen anything like new Emerald® fungicide. Emerald is the first all-new class of fungicide chemistry for dollar spot control to be introduced in years. That's good news for superintendents battling resistance issues. Emerald sets a new standard for dollar spot control, offering you the first fungicide to reliably control dollar spot for three to four weeks with a single application. If you're tired of losing sleep over dollar spot, now you can rest easy knowing Emerald is on the job. It's the only fungicide you can really trust to consistently provide you with dependable dollar spot control for weeks at a time. It's time to make room in your fungicide rotation for the next generation of dollar spot control—Emerald® fungicide. To learn more, visit www.turffacts.com.

Setting a New Standard.

BASF
Elyea: Ryegrass Fuels Seed Comeback

Rick Elyea, director of golf for Turf-Seed, says the rise in ryegrass prices balanced out falling prices on other varieties in 2003, leaving seed producers feeling good about their performances in 2003.

"There had been an oversupply of ryegrass for years that drove down prices," Elyea says. "That led farmers in Oregon to take many of those fields out of production, either by growing other crops or changing grass varieties. That paid off this year with better prices for the producers."

Rising prices led some superintendents to switch their overseeding practices, Elyea says. Some switched from strictly ryegrass to a perennial ryegrass/fine fescue mixture, while others reduced the number of acres they overseeded.

"We saw some squeezing of budgets this year," Elyea says. "As superintendents create their budgets for 2004, they should make sure they have enough money for Overseeding."

Elyea says he's expecting the total volume for seed purchases to rise in 2004. He also believes more seed research will focus on glyphosate-tolerant and salt-tolerant grasses.

-F.H.A. Jr.

Continued from page 9A

Still Struggling

Institutional golf has good year

To avoid the vagaries that have plagued so many in the golf industry this year, the answer might be to become a superintendent at an institutional golf course, says Paul Brandenburg, superintendent of Furman University Golf Club in Greenville, S.C.

Don't get him wrong: 2003 was no picnic for Brandenburg either. The constant rain drove rounds down at the course from the expected 35,000 to 40,000 into the range of 20,000 to 30,000. It also made operations like chemical applications and overseeding difficult. But the safety and security of working for a public institution relieved some of the stresses that his daily-fee colleagues faced.

"When you work for a place like Furman, you're not totally dependent on every golfer that walks through the door,"

If You're Doing Revenue Projections, How Do They Look Compared to the Actual Numbers This Year?

"I try to ignore it," Normandt says of the uncertain situation surrounding the course. "When I'm out working on the course, it's easy. When I'm doing the general manager's job, it's a lot harder."

"I've come to grips with the idea that we don't have much choice other than to keep on doing what we've been doing," he continues. "The future is a little more stressful than the past or the present, but I don't have a single regret about making the purchase. How often in life do you get the chance to do something you really enjoy? That's what I'm doing right now."

If You're Doing Revenue Projections, How Do They Look Compared to the Actual Numbers This Year?

If You're Doing Revenue Projections, How Do They Look Compared to the Actual Numbers This Year?
Brandenburg says, "There's a great support network here, and there's not the same pressure to have a perfect golf course all the time that you have in some private facilities. That's a comfort, particularly in a crazy year like this."

Though he has been forced to cut his budget in the middle of the year in each of the last two years, the financial overseers of the university don't question every purchase, Brandenburg says. "I inherited a lot of old equipment, and they've let me replace some of it," Brandenburg says. "They look at the big picture and see that I need it. I don't have to worry about an argument over some of these things."

The same sense of institutional security enveloped Mike Jones, certified superintendent of the New Mexico Military Institute Golf Course in Roswell, N.M. He says it's actually been a good year overall, despite receiving 3 inches of rain when he normally sees 12 inches. He still faces battles from other golf courses in the overbuilt area—it has 45 holes for a town of 50,000 (not all of whom are golfers, Jones points out). But it's a fairly stable market where golfers switch from Jones' course to the local municipal and back again with ease.

"We've been watching the budget tightly to make sure we're not spending more than our fair share, but since we take care of the campus maintenance too, we don't get a lot of grief for lower rounds," Jones says. "We put forth the best product we can and let the golfers decide."

Looking forward to 2004

Despite a rough 2003, superintendents are remarkably bullish on the prospects for 2004. According to Golfdom's survey, 73 percent of the respondents believe the economy will pick up in 2004. The 7 percent jump in gross domestic product in the third quarter of 2003 gives a glimpse that it might be true. (So do trends in some of the industry's major markets; see sidebars).

The NGCOA's Hughes says play picked up in 2003 at destination golf courses and high-end daily-fee courses as corporate outings business increased. The fallout from Sept. 11 seems to be dissipating.

"I can't say they've come all the way back, but there are signs of a recovery," Hughes says. "Corporate spending on golf is starting to come back some, and I expect that trend to continue in 2004."

Hughes says he will focus in 2004 on bringing more players into the game with innovative solutions like the ones Meriam Leake is using in Michigan. "I'll be trying to persuade courses to sell golf differently — maybe in one-hour or 1.5-hour increments or creating a starter experience — that will fit better into the busy lives of today's golfers," Hughes says.

At Winfield Country Club, Hollembeak and his members are continuing their own search for solutions to the problems facing the club. Though they haven't figured it out completely yet, Hollembeak says he's ready for next year no matter what the future holds.

"We'll see how we come out of the budgeting process [that started on Nov. 1]," Hollembeak says. "I'm anticipating the economy to rebound in 2004, and that will help us. Until then, we'll just have to tough it out."

Matthews: Architects

See Flat Market

Bruce Matthews, principal of Matthews Design Group, a Michigan-based architecture firm, says the architectural segment of the industry was flat in 2003, but the future may be murkier.

In part, the flatness of the market is the result of few courses being built, Matthews says. Financing for golf courses largely dried up after banks had trouble collecting on golf course loans they made in the late 1990s.

"The days are over when banks will loan money to just anyone because golf is connected with a project," Matthews says. "The golf industry won't recover until after the economy has fully recovered."

Matthews believes it will be at least two to three years before the market turns around.

Though new-course construction is down from three years ago, the architecture market was supposed to be buoyed by courses in need of renovation. Matthews, whose business is 60 percent renovations, says even that market has taken a downturn as course revenues have dropped. "It's not just me — that's what I've been hearing from a lot of my colleagues," he says.

He said his three-person shop ditched the office space they were renting in favor of home offices to cut down on expenses during this downturn. But he believes the market will eventually turn around.

— F.H.A. Jr.
It's desolate now. The steel mill in Massillon, Ohio, where Jim Jennings toiled for nearly 25 years, is hollow of machinery and vacant of humanity. Jennings leans on the rusty chain-link fence that surrounds the vast structure formerly named Massillon Stainless Inc. He gazes up at the colossal 13-story, bland-looking building that houses the steel-making furnace he once operated. There's joyless silence in the air, but Jennings can still hear the ferocious and blissful sound of the once-mighty furnace in his mind.

It's distressing for the 46-year-old Jennings to be here on this autumn day. It's the first time Jennings has returned to the mill — the place that provided the paycheck that helped him feed and clothe his family since 1978 — since he and about 60 others were laid off about 14 months ago.

Jennings had been laid off before from the mill, but he was always recalled. But when the mill announced it was closing for good in October 2002 and moving its machinery to China, Jennings knew he was never going back.

But Jennings, mindful of the volatile industry he was employed, considered another livelihood back in the early 1990s. He enrolled at The Ohio State University's Agricultural Technical Institute (ATI) in Wooster, Ohio, to study turfgrass management in 1992. This month, 11 years later, Jennings will receive a two-year degree and embark on a new career.

He's excited but understandably apprehensive about his future. Jennings wants to be a superintendent, but he knows his new field is a competitive one.

"Sometimes I wake up in the middle of the night and wonder if there are any jobs out Continued on page 16A
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Continued from page 14A

there," Jennings says. "That's the scary part."

Jennings isn't the only one waking up worried at four in the morning. Every year a horde of fledgling turf professionals, armed with two- and four-year degrees, enters the industry with the will to flourish. But they're also leery of the job market they will find.

They have many questions about the health of their profession. Is it a crowded market place? Are there enough jobs for capable graduates? Will finding a job require relocating? And how long will it take to become a head superintendent?

The pragmatic Jennings says he's not looking for a dream job. He just wants to work with capable people, learn the business and gain experience. And he'd like to do all those things close to home for a few years while his 14-year-old son Jordan, his only child, finishes high school.

Time will tell if Jennings and other graduates will find what they're looking for. But one thing is for certain — they will find an industry that has suffered from the dismal economy the past few years. However, that shouldn't intimidate them, says Tom Watschke, longtime professor of turfgrass science at Penn State University.

"The sky isn't falling on the golf course industry," Watschke says. "Are times a little tougher? There's no denying that. Is this a permanent state? I don't think so."

Starting out

Though people study golf course maintenance for myriad reasons, a common one is their desire to work outdoors.

Jennings worked several odd jobs after he was laid off from the steel mill in 1989. A few years later, he learned he was eligible for a government job-training program set up for displaced steel employees.

As part of the program, Jennings took a personality test, which revealed his love of golf (something he already knew) and his interest in working outdoors. A job counselor suggested he attend Ohio State's ATI, which was funded through the job-training program.

In the spring of 1992, Jennings began going to school part-time at ATI and worked as a starter at a nearby country club. He also tended bar. But when he was called back to work at the mill in 1995, he ditched school because he needed a steady paycheck to support his family, and the mill provided it.

Jennings was laid off again in 1999. He went back to school in 2000 and was recalled to the mill again a short time later. But he was let go for good last fall.

Even though it took Jennings more than a decade to get his degree, he says he loved learning about entomology, turf species and other subjects. "I'm passionate about this industry," he says.

Jennings, who sports a 10 handicap, hopes his passion helps land him a job as an assistant superintendent. He might like his chances.

Kim Heck, GCSAA's director of career development, says her conversations with established superintendents reveal that golf courses in some regions of the country need assistant superintendents now. A reason for this is that many golf courses have been hiring more assistants — first and second positions — the past few years.

"The average superintendent has 20 people reporting to him, compared to 17 people in 2000," Heck says.

GCSAA relies on anecdotal information to monitor the job market. It doesn't conduct scientific studies to determine how many people join and leave the industry annually.

Heck says she and other GCSAA representatives meet with students every year and talk to them about employment. Heck says students in the past three years have told her they're confident about getting jobs after graduation. "The students paint a fairly bright picture."

That said, Heck notes that not all students will be able to secure the jobs they most desire. They may have to settle on taking positions as equipment technicians or spray technicians if they can't get jobs as first or second assistants.

Bruce Clarke, director of the Center for Turf Science at Rutgers University/Cook College, realizes that golf course construction is down, but he still says the school has not had any problems placing its graduates. About 12 students graduate from the school's four-year turf program annually.

Clarke says the school has experienced a dip in applications for its two-year certificate program. While he admits the troubled economy might have something to do with the decrease, he is certain that the GCSAA's push to enhance the profession from a credibility standpoint — a four-year degree is better than a two-year degree — has something to do with it.

Penn State has two programs — a two-year program that's specific to golf turf and a four-year turfgrass science program. The former program gradu-
ates about 25 people annually. The latter program graduates about 40 people each year. Not all of them go into golf course maintenance. In fact, Watschke says the percentage of graduates going into golf course maintenance has been decreasing because of career growth in other areas of the turf industry such as sports turf.

Watschke says Penn State hasn’t had a problem placing its students in jobs for several years. No, they’re not landing big-cheese positions. But, as Watschke points out, most graduating students do not land jobs as top superintendents directly out of school, no matter what the job market is like. "Less than 1 percent of our students get those jobs."

The industry has grown substantially in the last 30 years, and jobs now often require a college education, Watschke notes.

"As we approached the 1980s, the notion of having a college-trained assistant became popular and a necessity," Watschke says. "Fast-forward another 10 years, and it’s not uncommon for a superintendent on an 18-hole property to have a first and second assistant. Fast-forward to 2000, and it’s not uncommon for a course to have a college-trained person as a spray technician/pest scout. There are even college-trained irrigation technicians on courses.”

Watschke's point is there are plenty of jobs for graduates, even if new-course constructions have dropped from about 400 in 2000 to roughly 235 this year. He says second assistants in the Mid-Atlantic region are paid between $28,000 and $32,000. A first assistant makes a few thousand more.

Bruce Williams, certified superintendent of the Los Angeles Country Club and an industry veteran, advises people looking for work to monitor the golf industry from an economic standpoint. They might not want to consider work in areas where courses have shut down and laid off employees. "It’s all about supply and demand," he says.

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One Man Who Got Out of the Profession

Hocutt was tired of the pressure and politics that come with being a superintendent

Sam Hocutt had enough. Worn out from the long hours and work-filled weekends, not to mention the pressure and the politics that often come with the territory, the 43-year-old Hocutt quit his job earlier this year as certified superintendent of Pawleys Plantation in Pawleys Island, S.C.

Hocutt opted for a job as a sales manager for a Myrtle Beach, S.C., communications company.

A few months later, he says he doesn’t feel even a tinge of regret about leaving Pawleys Plantation, where he was superintendent for almost 10 years. And Hocutt says he’s sure he’ll never miss the profession, even though he spent 20 years as a superintendent.

"I will not go back into the business," he says. "I don’t care if I’m offered $200,000. It’s just not worth it.”

Kim Heck, director of career development for the GCSAA, says the association doesn’t know the main reasons why superintendents ditch the profession for other careers. But she notes that many superintendents who do leave the profession have many career alternatives.

"Our members have discussed and identified about 30 careers that a superintendent is prepared for.” Heck says.

It can be assumed, however, that many superintendents leave the profession for the same reasons as Hocutt did. In addition to being on call to his course like a doctor on call to his patients, Hocutt says he was tired of trying to please everyone at the course, which proved futile.

"I spent more time doing public relations than growing grass," he says.

Hocutt says turf schools would be wise to teach courses on the politics that often intertwine with growing grass. He says up-and-coming superintendents need to learn people-management and employee-management skills, as well as how to deal with difficult situations with golfers and members.

"Politics is not trained. It’s learned,” Hocutt says. "I would hate to see a new guy come in to his first job where there are 400 members. He screws up one time, and all the members jump on him. Then he loses his job because he didn’t know how to react to the politics. It takes a lot to get over that”

Hocutt says he knows other superintendents who’ve lost their jobs in the crossfire of turf politics. "When it comes to politics, I’ve seen too many people let go”

Hocutt predicts more superintendents will get out of the business as the politics and pressures of tending turf continue to mount. He says he’s made sales calls to about 100 courses, and about 20 percent of the superintendents from those courses say they would get out of the profession if they had other jobs to go to.

Hocutt admits he misses the good pay that many established superintendents earn. But he quickly notes that he works nine to five and has weekends free.

"I took a huge pay cut,” Hocutt says. "But I definitely enjoy life more now, and I sleep better.”

– Larry Aylward, Editor
On the Job Front

Continued from page 17A

As in other industries (and maybe a tad more), one has to go where the jobs are. So a big part about employment in the golf course maintenance industry has to do with a person's flexibility to pick up and move, Williams says. For Jennings, it's a good bet there's better turf nutrition philosophy is to

"If he has a ball and chain on him geographically, his opportunities are going to be limited," Williams says.

Even if people like Jennings find jobs close to home, the courses they've joined might not be the best places for them to learn, Williams points out. For instance, someone new to the business isn't going to learn much from a superintendent who's turf nutrition philosophy is to apply fertilizer to the course whether it needs it or not.

"You want to hone your skills with someone who has a good reputation in the industry," Williams says.

That means going to work for someone who knows agronomy like Merrill Lynch knows finance, "Some guys are more in tune agronomically than others," Williams adds.

A person who's new to the industry may also want to jump at the chance to work for a seasoned superintendent who's 60 years old.

"Guess who might get a crack at his job if he retires at 65?" Williams asks rhetorically. "That person shouldn't expect to get the [retiring superintendent's] job. But if he works his tail off, how is he going to get a chance to prove himself?

The bottleneck

Mitch Tankersley worked in sales and marketing for a Silicon Valley software company for about 10 years before burnout set in and he quit his job. Tankersley then enrolled at a nearby community college and sought a two-year degree in horticulture. While going to school, the 35-year-old landed a job on the crew at San Jose (Calif.) Country Club in March 2002.

"It was a lot of work, but it was the best move I ever made," he says.

It only took Tankersley a little more than a year to be promoted to second assistant at San Jose. He's hoping to become a first assistant even sooner and plans to be a superintendent within five years.

But becoming a superintendent in five years may be difficult if the job market for the top posts doesn't improve. Heck says there's an infusion of experienced assistants but not enough top jobs for all of them.

"It's taking assistants longer to become head superintendents," Heck says. "That's where there's a bottleneck."

That's no surprise to Williams, who says the decline in the number of new course openings explains why there aren't as many superintendent jobs now as there were three years ago.

Watschke says the logjam is more the result of demographics.

"It has to do with what the average age of superintendents is," he says. "The industry went through a period in the 1970s and 1980s when a lot of superintendents retired. Now the average age of superintendents is much less. Because there's a younger general population of superintendents, the turnover rate at the top is slower."

While that may be true, some industry insiders theorize that an oversupply of assistant superintendents could cause many golf course financial decision makers to replace veteran superintendents and their hefty salaries with hungry rookies at half the cost, especially in a period of economic distress.

Heck doesn't deny that such a scenario could unfold, but he doubts it would become a trend. Heck says employers realize it's vital to employ seasoned superintendents to oversee their golf courses.

"So they're willing to pay them what the market will bear," she adds. "That's good news for the profession."

Yes, superintendents with loads of experience and hefty salaries have been left go for frugality's sake. But that happens in a lot of industries, Williams notes. "Too many people think that things like that are unique to the golf industry."

The general rule of thumb is that 55 percent of a golf course's maintenance budget is devoted to payroll, Williams says. So if the budget gets slashed, it usually starts where most of the money is being spent. And if a quality superintendent is let go for financial reasons, the course will suffer in the long run, Williams says. "It's shortsighted thinking."

Speaking of pay, Heck says the average superintendent's salary has increased from $44,500 in 1993 to $63,065 in 2003. She expects the upward trend to continue.

The pay range can vary, though. It depends on type of course, region, a person's experience and other factors. But Watschke notes that superintendents' pay range is comparable to that of the general labor in the United States, where 12 percent to 14 percent of people make $60,000 or more, and up to 6 percent make $100,000 or more.

The right stuff

Despite the golf boom the past 10 years, Heck doesn't believe that people are going into the profession for all the wrong reasons — because it's glamorous and they get to play golf three days a week. She says the GCSAA has spent a lot of time and effort to market the profession to potential students for what

Continued on page 20A
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Continued from page 18A

it is — a splendid and rewarding profession, but not necessarily as glamorous as they might think.

"I believe that the people getting into this profession are coming in with their eyes open fully," Heck says.

Some insiders are also concerned that the industry has too many schools offering turf management programs. Heck says she gets several calls from college representatives who want to implement turf programs in their curriculums. She tells them like it is — that in order to compete with other schools, the turf school wannabes must hire top instructors and be heavily committed to their programs.

If an interested school happens to be 20 miles down the road from a turf university powerhouse like Penn State, Heck says she'll discourage the school from implementing a program.

"We're very frank with them," Heck says. "The association is cognizant of the potential proliferation of programs."

While Williams is also concerned about the growth of schools, he says they've done a better job of presenting the profession for what it really is. The schools have done that by letting experienced superintendents speak to classes about what their jobs entail.

"I used to hear students say — and they're probably still saying it — that they didn't want to get stuck behind desks," Williams says. "But the reality is, unless you have an office manager, you're going to spend a lot of time behind a desk as a superintendent — perhaps as much as half your time."

In the end, finding a job in the field or taking the next step in the profession to become a superintendent is about a lot of things, including timing and contacts. But most everyone agrees that enthusiasm plays a huge part in defining a career.

Clarke says job prospects will continue to be good for students who are eager to make an impact.

"There are jobs out there for well-qualified students," he adds. "Students who aren't really into it will have a more difficult time finding jobs."

Heck says employers want people who desire to learn, among other things. "They want quick learners and people who can assume more responsibility and add value immediately."

And employers want people, no matter their age, who want to make a difference, Williams says. The industry won't turn its back on a 46-year-old newcomer like Jennings if he's hungry to make an impact.

"There's always plenty of room at the top," Williams says. "If you've got the right attitude, the right work ethic and you really care, there's a place for you in the industry."

Jennings hopes he gets his chance. He pauses when asked how he plans to market himself to get a job. He has the tanned look of a golfer, but retains the rugged appearance of a former steel worker.

"I just need a chance to prove myself," he says softly. "And I need someone that doesn't mind me looking over his shoulder to find out why he's doing this and that."

"I'm hoping I'm in the right place at the right time."
In October, Golfdom blasted into cyberspace to poll superintendents on many issues—most related to the economy. The charts below are based on responses from 301 superintendents. Fifty-one percent of the superintendents are from private courses and 49 percent are from public tracks. We focused mostly on economic issues within the industry because they comprise the single largest topic at hand for golf courses and their superintendents.

### What Budget Are You Most Likely to Cut?

- Labor: 51%
- Equipment: 39%
- Fertilizer: 6%
- Pesticides: 4%

### Has the Struggling Economy Affected Your Course's Revenue?

- Yes: 74%
- No: 26%

### Were You Forced to Cut Your Budget Midyear Because of the Economy?

- No: 68%
- Yes: 32%

### Are You Confident the Economy Will Rebound in 2004?

- No: 27%
- Yes: 73%
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Irrigation Innovation

Head and nozzle advances aid superintendents

BY PETER BLAIS

Course operators have welcomed new technology that helps save water.

Water shortages and water price hikes have led manufacturers to develop improved irrigation head and nozzle technologies designed to achieve more uniform coverage, conserve water and save money. Stung by higher costs and fewer rounds, course operators have been receptive to the latest innovations.

A drought crisis usually triggers the use of new technology, according to Dave Davis, a Lake Arrowhead, Calif.-based irrigation consultant. "You just don't have enough water, as frequently happens in the Southwest," Davis says. "Or it could be like what happened a year ago in Pennsylvania or Virginia when they just didn't have the rainfall they usually do."

Nozzle manufacturers have spent more money on in-house and independent testing in recent years, Davis says. The result has been more consistency in the final product and a greater variety of nozzle shapes. In addition to round nozzles, a combination of square, triangular, slot-

Problem
Golf courses need irrigation systems to achieve more uniform coverage and conserve more water because of water shortages and water price hikes.

Solution
Manufacturers have spent more money on in-house and independent testing to develop improved head and nozzle technologies to combat the water crisis.

Water shortages and water price hikes have led manufacturers to develop improved irrigation head and nozzle technologies designed to achieve more uniform coverage, conserve water and save money. Stung by higher costs and fewer rounds, course operators have been receptive to the latest innovations.

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Says Rich Dunn, golf rotor product manager for Hunter Golf: "In the early days, every manufacturer struggled to achieve scheduling coefficients below 1.5. Today, it is common to achieve efficiencies of 1.3, 1.2 and even 1.1 with some combinations of products and spacing. Like Hunter, every manufacturer has introduced certain technologies that make this possible. Our patented PressurePort System is one example."

The PressurePort System is designed to improve coverage close to the head, a challenge with high-flow, high-pressure rotors. According to company literature, the primary stream traditionally tends to draw water away from the companion nozzle, limiting the efficiency of nozzles intended for short- and medium-range coverage. PressurePort reduces velocity and pressure while increasing droplet size from those nozzles, resulting in improved, close-in coverage.

The ability to change nozzle trajectories is one of the primary advantages of Toro's 720 series, according to Jim Wright, the company's marketing and product manager for golf sprinklers. The MultiMatrix nozzle and Trajectory adjustment system allows precise coverage for tee boxes, approaches and other difficult-to-irrigate areas.

"You can adjust the distance of throw so you have true head-to-head coverage with no over-throw," Wright explains. "You can also adjust it down sufficiently to provide improved coverage in the wind. That benefits nozzle performance in general."

Marc Negus, Rain Bird's product manager

Continued on page 36
Many of the newer sprinklers are more efficient at throwing water just as far at medium- and low-operating pressures as their predecessors were at high pressure.

Continued from page 35

for golf rotors, says the new EAGLE 1100 series rotors throw anywhere from 85 feet to 115 feet but with the same high level of distribution uniformity as the company's other rotors, allowing a course to reduce costs by using fewer rotors and adjusting their spacing.

Davis notes that many of the newer sprinklers are more efficient at throwing water just as far at medium- and low-operating pressures as their predecessors were at high pressure.

"That's important because the more pressure you have to provide per sprinkler, the higher the pressure you have to produce at the pump," he says. "And that takes energy. You like to get that higher distance of throw, but you don't want to have to use 100 pounds of pressure to do it. You would like to be able to do it at 65 pounds to 70 pounds. That 20 pounds to 30 pounds of pressure savings shows up at the pump in electrical savings."

Reduced maintenance costs are another benefit gained through new irrigation head technologies. Rain Bird's top-serviceable rotor design, for example, makes change-out of nozzles, pressure regulators, internals, valves and even rock screens a snap, Negus says.

"No digging is required," he adds. "This feature saves courses a considerable amount of money in labor costs."

Adds Hunter Golf's Dunn: "For years, the gear-drive and inlet valve were the only components in golf rotors that could be serviced without digging up the turf. Access to the pilot valve, regulator and solenoid always meant a big mess around the sprinkler head and many days of turf healing. This has all changed with the introduction of Hunter's top-serviceable TTS Series rotors. Now every serviceable component can be accessed without disruption of the playing conditions, thereby helping the superintendent to further maintain course playability."

Reduced energy and maintenance costs are also major benefits of Toro's Spike-Guard solenoid, which is being incorporated into its valve line this year, according to Wright. The lightning protector, he adds, "draws about half as much as electricity as our former solenoid, and it will withstand lightning storms three times as powerful as traditional solenoids. That's lightning protection exceeding 20,000 volts. Typically, other solenoids on the market will fail at 7,000 volts to 9,000 volts. The savings is in areas with high lightning frequency."
Typically, replacing a solenoid requires digging up the turf to make the replacement. The Spike-Guard will fail less, and by eliminating replacement labor it allows superintendents to do other things more beneficial to the golf course than replacing parts, Wright adds.

As Davis notes: "Control systems are getting very sophisticated. We can almost split hairs in terms of programming, operating times, cycle and soak."

Brian Smith, president and CEO of Signature Control Systems, says even though his company's controllers are capable of turning a head on and off several times in a single second, "this is worthless if you're relying on a poorly designed or installed irrigation system that takes an additional period of time to shut off a head. Given this scenario, no matter how advanced the controller system, you could have an extra few minutes of run time. That means a large amount of excess water being applied for every minute the system runs. The next generation of heads would need to be more accurate in this regard and an intelligent extension of the controller."

Smith says his firm is working on developing new sprinkler technology that will look much the same as traditional models.

"But the operational aspects will be very different," he adds. "They will have different pressure, elevational, throw and radius criteria. You should see some of those in the next 24 months."

Hunter Golf's Dunn made the following comment about his own company, although it could easily apply to other irrigation-component manufacturers.

"When you get down to the core of it, our mission is to help the superintendent maintain playability," he says. "Today's golfer makes a big investment in money and time to play the game and with that comes high expectations with regard to course conditions.

"By helping superintendents maintain playability, we help them satisfy the needs and expectations of the golfer." •

Blais is a free-lance writer from North Yarmouth, Maine.

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"When you get down to the core of it, our mission is to help the superintendent maintain playability."

RICH DUNN
HUNTER GOLF

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Southerners Battle Myriad Pests

Here’s an overview of what they face – and how they treat them

BY WILL HUDSON

While superintendents throughout the country have to deal with insect problems on a regular basis, those of us in warm-season areas, particularly in the Southern and South-eastern states, may have more (and more severe) pest problems than our counterparts in other areas.

Mild weather and a longer growing season extend the playing season for golfers who enjoy the grass and for bugs that eat it alike. Some of these pests are unique to warmer areas; others just feed longer or have more generations per year. All can do serious damage to the grass and to the budgets of those that manage fine turf.

Mole crickets are easily the most serious pests of turf-grass, particularly on golf courses, in the coastal plain region of the South and Southeast. Introduced from South America about 100 years ago, they now infest turf from North Carolina to Florida and west to Texas. There are isolated populations in Arizona as well. They damage turf directly by feeding on the grass and indirectly by their extensive tunneling in the top inch or so of the soil. This damages the grass by clipping the roots and also loosens the surface layer of soil, leading to increased susceptibility to drought and reduced tolerance to traffic.

Heavy infestations can completely destroy the grass over large areas, even entire fairways, in a single season.

Traditional programs for mole cricket control involved repeated applications of insecticides throughout the season (April-October in most Southern states and year-round in Florida) at a cost that could exceed $1,000 per hole, with results that were often unsatisfactory. This situation has improved over the last few years with the introduction of insecticides containing fipronil. Although the cost is still high — more than $200 an acre — a single application usually provides satisfactory control.

One advantage of the newer fipronil products is that they also control another serious problem for golf courses, the fire ant. This is also a South American import, but its range is considerably wider than the mole cricket. Introduced early in the 20th century at the port of Mobile, Ala., fire ants now infest all or most of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana and Arkansas, as well as parts of Tennessee and Texas. There are isolated infestations in Arizona and California, which have been treated aggressively in eradication programs.

Fire ants do not damage the grass, but their mounds affect play and can damage mowers and other machinery. They have a fondness for irrigation controller boxes and other electrical housing. They are aggressive when disturbed and deliver a painful bite and sting that can be life-threatening for sensitive individuals. Ridding a course of these pests is a high priority for most superintendents.

In addition to fipronil products, fire ants can be managed effectively with a two-step program of bait application every six months and individual mound treatments to eliminate existing colonies. A variety of baits are available, some of which carry a guarantee of “no mounds” if used according to the label directions. At a cost of $30 or less, this is a considerably cheaper option if mole crickets are not a problem.

Billbugs are perhaps the most widespread and least noticed of Southern turf pests. Most common in warm-season grasses is the hunting billbug, which is also found in cool-season grasses well up into southern New England. They are widespread in the south from the mid-Atlantic states around to the eastern part of Texas. Feeding by adults and larvae causes a gradual, progressive weakening and thinning of turf that can be mistaken for symptoms of disease, compaction, poor fertility and other problems. Adults can be flushed from the grass with soapy water, but larvae are more difficult to find. All stages can be found most of the year in the Deep South, although activity slows or stops during the coldest part of winter.

Control can be problematic, requiring repeated applications of contact insecticides to kill adults and/or applications of imidacloprid to control larvae.

Hudson is a professor of entomology at the University of Georgia.
Developing Effective Fungicide Programs for

Spring Bermudagrass Dead Spot Control

By L.P. Tredway and E.L. Butler

Spring bermudagrass dead spot is the most severe disease in the transition zone. The disease may occur wherever bermudagrass goes dormant in the winter, but it is particularly severe in the northern-most range of bermudagrass growth. Intensely managed turf, such as golf courses, is particularly prone to the disease.

As the name implies, spring dead spot symptoms appear in the spring as bermudagrass comes out of winter dormancy. Circular patches of turf ranging in diameter from 6 inches to several feet remain dormant as the surrounding turf turns green. The patches of dormant turf eventually disintegrate, leaving depressions in the playing surface. Recovery from spring dead spot is slow and occurs from spread of bermudagrass into the patch from the outside. In severe cases, recovery can take the entire growing season.

In many regions, spring dead spot is the only disease of bermudagrass that warrants preventative fungicide applications. Unfortunately, there is a lack of fungicide treatments for spring dead spot that are both cost-effective and reliable. In fact, some university extension services specifically do not recommend fungicide applications for spring dead spot because of unreliable results, and most others provide no specific recommendations. Furthermore, application instructions on fungicide labels are vague and do not provide specific guidelines for the timing or method of applications.

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Spring dead spot can be effectively managed with a combination of variety selection and cultural practices. Bermudagrass varieties selected for cold-tolerance, such as Midiron, Vamont and Tifsport, tend to have increased spring dead spot resistance. Culturally, spring dead spot is encouraged by high nitrogen levels in the fall, potassium deficiencies, high soil pH, soil compaction, excessive thatch and poor soil drainage. Correcting these cultural problems is a critical first step for spring dead spot management.

In many cases, cultural practices alone do not provide adequate control, and fungicide applications are needed to prevent unacceptable turf damage.

Currently, five fungicides are labeled for spring dead spot: 3336 (thiophanate-methyl), Banner (propiconazole), Eagle (myclobutanil), Heritage (azoxystrobin), and Rubigan (fenarimol). Of these, Rubigan and Eagle are most widely used for spring dead spot control.

What factors are responsible for the erratic nature of spring dead spot control? Answer:

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