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world's top professional golfer will eventually end. And while no one knows when Woods will return to competitive golf, I suspect it'll be around the Masters. And he'll re-emerge on the scene with a renewed competitive spirit not seen since early in his career.

The beginning of Woods' reverence began with his astonishing ability to hit miraculous golf shots and win golf tournaments. And that's exactly where it's going to begin again. Tiger will win multiple Major tournaments this year, which will ultimately outshine that unfortunate Thanksgiving night last year.

Some people don't think our economy has hit rock bottom yet, but I do. This is the year of economic resurgence, especially for the golf course industry. I suspect that clear-cut signs won't be visible until the latter part of the year, but they'll be there.

When the economic turmoil began, the people and the companies with the largest cash reserves went into hibernation mode, which, in turn, further slowed the economy. But with the worst seemingly behind us, there's an array of opportunities available in the golf industry of which to take advantage, whether it's in golf course ownership or in launching new products into the marketplace.

It really comes down to one's vision. One man's ceiling is another man's floor.

This is also the year of customer base growth. Three years ago, every consulting firm in the golf industry was touting the retirement of the baby boomers as the saving grace for our industry. For the most part, that prediction fell flat. Economic turbulence effectively scared many potential new customers to stay

home and play bridge with the spouse, rather than hit the links.

But with a clearer economic picture coming into view this year, these same baby boomers have played enough cards and are ready to pick up their clubs more regularly. This potential shot in the arm for our industry from the largest group of people ever entering retirement will start to become a reality this season.

**It really comes down to vision. One man's ceiling is another man's floor.**

Coupled with clubs and courses offering remarkable incentive deals and packages to join and play, the baby boomers will begin to have a tremendous impact on our currently sluggish industry. After years of losing members and rounds consistently, we'll end 2010 with a net gain in both categories.

I'm sure some of you think I've lost my mind. And, to be honest, this type of optimistic prognostication has never been my specialty. But there's something about where we're positioned right now as an industry that compels me to believe good things will happen this year.

With so many people and companies affected negatively by the blunt end of this economic downturn, I think we all need to be a little optimistic right now. ■

*Christopher S. Gray Sr., a contributing editor to Golfdom, is superintendent and general manager of the Marvel Golf Club in Benton, Ky.*



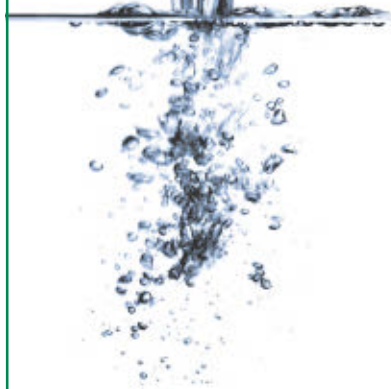
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PART ONE OF A THREE-PART SPECIAL SERIES

# Plant Health Report

They are two of the golf course maintenance industry's biggest buzz words: plant and health. And, yes, they go together like spaghetti and meatballs. That's why *Golfdom*, in partnership with BASF Professional Turf & Ornamentals, has embarked on this plant health series.

**PART ONE** covers the modern concept of plant health and turf-disease management — from cultural practices to fungicide use — and what golf course superintendents should do to achieve the highest success rate to control diseases such as dollar spot and anthracnose, among others.

**PART TWO**, running in April, focuses on fungicide management in accordance with plant health. We'll speak with superintendents and other experts on how they get the best out of their fungicide programs as they relate to plant health.

**THE FINAL STORY** will look into the future and examine how superintendents will manage turf in 2025. We'll speak with superintendents and other experts to get their thoughts on how plant health will best be achieved 15 years from now.



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# From Research to Reality



BY  
THAVY  
STAAL

In the last several years, golf course superintendents have struggled more and more with wise use of water, unpredictable weather patterns and disease control. These issues have shed more light on the emergence of technology that can deliver plant health to turfgrass and mitigate these issues.

So when *Golfdom* approached BASF with the idea of a series on plant health that was to be based in research, with input from leading superintendents as well as turf pathologists from around the United States, we signed on immediately.

At BASF, we've been studying plant health benefits for more than 10 years. The beginnings of this were in the early 2000s, when BASF launched several fungicides into the crop market that were based on its proprietary active ingredient pyraclostrobin.

Like many products developed, you don't often see their true potential until they're adopted by the marketplace. As they were used, growers noticed additional benefits to using these fungicides for disease control, and BASF researched and developed these plant health benefits.



Growers using these fungicides reported higher yields in many crops, such as wheat, corn and soybeans. Corn stalks were stronger, leading to more efficient harvests. Crops were also better able to tolerate stresses such as heat, drought and cold than those that weren't treated with a fungicide.

Further research by BASF indicated that plant health effects delivered by the pyraclostrobin-based fungicides included increased plant efficiency via more efficient photosynthesis and better use of nitrogen. This research also uncovered evidence of increased plant tolerance to stress through a decrease in ethylene production and an increase in antioxidant activity.

So on the crop side, the plant health evidence was, well, evident. The next step fell to BASF Professional Turf & Ornamentals in determining whether its pyraclostrobin-based products could deliver improved plant health in turf and provide additional management assistance to superintendents and other turf professionals.

A naive researcher might say, "Well that's easy. Aren't superintendents like farmers that grow grass instead of row crops?" Of course, we know that's untrue. After all, the idea isn't to increase the turf yield. We don't want superintendents and their crews to have more grass to cut. But that other benefit our research uncovered, that of stress toler-

ance? If we could show this is also true for turf, we might have something there.

So that has been the focus of our research in turf in addition to better disease control. Can BASF products deliver tangible and real, not cosmetic and imagined, plant health benefits to superintendents? Lack of water, unusual weather, aerification recovery times, recovery from tournament conditions — it all matters to them.

BASF has been looking at various stresses on turf and working with superintendents, turf pathologists and physiologists in the field and with our experts in the lab. And I'm pleased to report this research points to evidence of improved plant health in turf when treated with pyraclostrobin-based fungicides.

The turf is less stressed during heat and drought conditions, the aerification recovery times are reduced and root mass has increased. BASF expects to share specifics on the above points and more information later this year.

And as we edge closer to that moment, the icing on the cake of this journey now includes taking part in this series to learn what others have seen and how superintendents can benefit from proven plant health benefits on their golf courses.

I'm confident we will all learn and benefit from the discourse. ■

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*Thavy Staal is marketing manager for BASF Professional Turf & Ornamentals.*



# A THINKING MAN'S APPROACH TO Disease Management

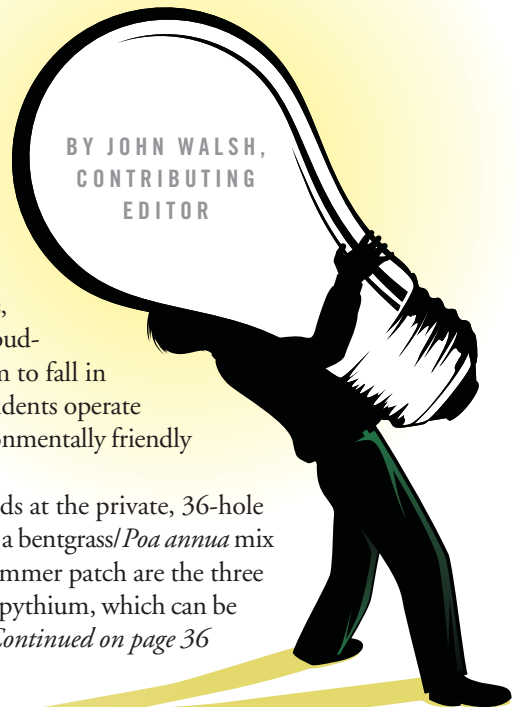
Superintendents share their philosophies on using everything in their arsenal — from fungicides to cultural practices — to control dollar spot and other pathogens for the sake of healthy turf

**W**hen it comes to managing turf disease, golf course superintendents take different approaches because each course is unique. They factor in many aspects of turf maintenance: turf type, soil, microclimates, weather, fungicides, fertility, water, cultural practices, golfer expectations, budgets and disease severity. Yet, all of those factors seem to fall in line with two broader principles that most superintendents operate by: to save as much money as possible and be as environmentally friendly as possible.

Jeff Corcoran, manager of golf courses and grounds at the private, 36-hole Oak Hill Country Club in Rochester, N.Y., maintains a bentgrass/*Poa annua* mix on playing surfaces. Dollar spot, brown patch and summer patch are the three main diseases he manages. Some years, he'll deal with pythium, which can be

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BY JOHN WALSH,  
CONTRIBUTING  
EDITOR



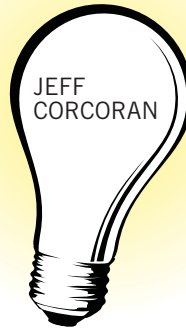
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severe. In the past, Corcoran spent between \$40,000 and \$50,000 on three wall-to-wall applications in the years that pythium reared its ugly head.

“I don’t factor that cost into the budget every year, but I let the green committee know it’s a possibility based on the weather,” says Corcoran, noting that Oak Hill is far enough North that the course doesn’t see pythium every year.

Of course, weather is the fundamental cause for fungicides and dictates what’s going to happen.

“I try to put together the best plan possible,” Corcoran says. “There are some fungicide applications I know I’ll need to make every year, but it depends. A lot is dictated on budget and the threshold level of the members. What are they willing to accept?”



**“There are some fungicide applications I know I’ll need to make every year, but it depends. A lot is dictated on budget and the threshold level of the members. What are they willing to accept?”**

The threshold at Oak Hill is low, and because of that Corcoran (who was preceded at the course by Paul B. Latshaw, the certified superintendent of Muirfield Village Golf Club in Dublin,

Ohio) applies a lot of fungicides preventively. But if a superintendent knows the history of the course he manages, that will help prevent him or her from randomly applying fungicides.

“I try to balance everything when attacking disease: Mother Nature and members’ expectations and couple those with the cards I’m being dealt when weather arises,” says Corcoran, who fundamentally adopted Latshaw’s fungicide program. (Latshaw is the certified superintendent of Muirfield Village Golf Club in Dublin, Ohio.) “Mother Nature is dictating it, keeping in mind I need to put out a certain level of conditioning every day.”

When the weather is humid and hot, superintendents who manage cool-season turf tend to spray preventively. In the fall, they tend to spray more curatively.

Scott Brickley, superintendent at the public, 18-hole Bunker Hill Golf Course in Medina, Ohio, manages a bentgrass/*Poa annua* mix on

*Continued on page 38*

PHOTO (TOP) BY: MARY CORCORAN; PHOTO (BOTTOM) COURTESY: SILVERADO COUNTRY CLUB & RESORT



**At the Silverado Country Club and Resort, superintendent Bill Hamilton verticuts and topdresses regularly to keep the turf healthy, which helps fend off disease.**



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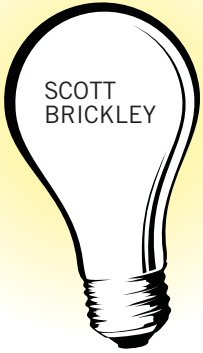
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“Timing is key, and you need to look at weather conditions for that. The keys for mapping disease are looking for its location and time of year, and turf conditions.”

*Continued from page 36*  
the greens, tees and fairways. Brickley’s first step to managing disease was mapping the diseases and collecting data because none existed when he arrived at Bunker Hill 15 years ago. This information helped start his integrated pest management program.

“The first step was understanding the course, which took five years,” he says. “I started from scratch. It’s important to look at data, or start collecting it yourself. Timing is key, and you need to look at weather conditions for that. The keys for mapping disease are looking for its location and time of year, and turf conditions.”

Bunker Hill hasn’t had a bad outbreak in several years, Brickley says. The last one was pythium on some

fairways. Since then, Brickley has reduced the amount of fertilizer on those fairways because of thatch. The fairways contained high organic matter that was creating nitrogen naturally. He also core aerified the fairways.

Bill Hamilton, superintendent at the 36-hole Silverado Country Club and Resort in Napa, Calif., verticuts and topdresses regularly to help keep the turf healthy, which, in turn, makes it better able to fend off disease when pressure arises. There haven’t been any outbreaks lately. But if he sees something coming, Hamilton will deal with it. He says he’s not worried about severity or a disease spreading quickly.

In Florida, Joe Boe, superintendent at the 18-hole semiprivate Windermere

*Continued on page 40*

## THE BIG THREE

There’s no competition when it comes to the disease most superintendents are trying to get under control. When asked in a recent *Golfdom* survey what disease they use fungicides to control, an overwhelming 53 percent said dollar spot, distantly followed by brown patch (13 percent) anthracnose (8 percent) and snow mold (6 percent).



*Based on a survey of 350 Golfdom readers*

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*Continued from page 38*

Country Club, deals with disease primarily on greens because there's not much disease on the fairways and tees. He manages bermudagrass on all playing surfaces — the old Jensen variety on greens.

"I had brown patch in fairways awhile back, but I just let it run its course and the turf overcame it," he says. "I let members know what we were doing — that it wasn't a threat, that we were saving money and being environmentally friendly, and that if it had appeared on the greens, we would treat it."

### Putting it out

Superintendents' fungicide applications methods vary.

For example, Hamilton tinkers with compost teas with worm castings and an organic fungicide, so to speak. However, he realizes this method is not a panacea.

"I'll use a chemical fungicide in a heartbeat," he says.

Ted Cox has been superintendent at the public, 36-hole Running Fox Golf Course in Chillicothe, Ohio, for about 20 years. Because of his longevity there, Cox senses when diseases are coming and sprays before they do come.

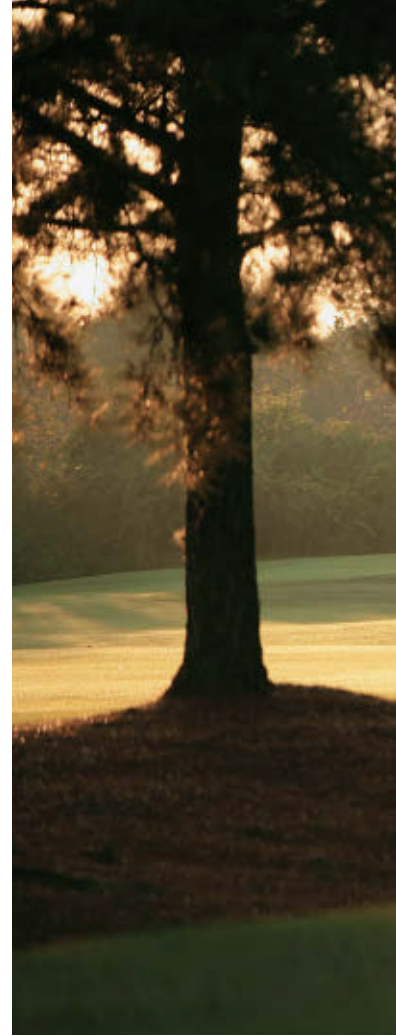
Brickley's summer stress program, which he uses throughout the year, includes applications of fosetyl-aluminum or O-ethyl phosphonate, and chlorothalonil rotated with iprodione. "This is

the program that allows me to sleep at night," he says.

Brickley tank mixes foliar fertilizer with fungicides to reduce the amount of time he's on the spraying rig.

Boe's main two concerns disease-wise are fairy ring and fusarium blight. While high humidity and hot weather encourage these two diseases, Boe doesn't treat preventively.

There are two greens at Windermere that tend to get disease before any others. Boe used to spray all greens when disease appeared on the two. A few years ago, Boe had a new crew member spraying, and he ran out of product with one green left. So Boe waited to see what happened.



## MONEY MATTERS

### Reduced budgets force superintendents to alter pesticide programs

Of the many aspects factored into managing turf disease, one of the biggest is a golf course superintendent's maintenance budget. And lately, an increasing number of superintendents are dealing with smaller ones.

According to a recent *Golfdom* survey of more than 500 golf course superintendents, 65 percent of superintendents had to reduce their maintenance budgets in 2009. Forty-one percent of those who reduced their budgets did so by 5 percent to 10 percent.

Scott Brickley, superintendent at the public, 18-hole Bunker Hill Golf Course in Medina, Ohio, had his normal budget of about \$400,000 cut by 11.5 percent in 2009. He says the reduction caused him to reduce pesticide rates and try some generic products.

"But my concern [in doing so] is that because we had the best growing year in a while, it doesn't reflect a typical year



because we didn't have the outbreaks we typically have," he says.

Ted Cox, superintendent at the public, 36-hole Running Fox Golf Course in Chillicothe, Ohio, has a low main-

tenance budget. As a result, the course's bentgrass fairways haven't been treated at all the past four years. Cox does spray the course's ryegrass/bluegrass tees three or four times a year with chlorothalonil.

"I've had to cut back," Cox says. "I'm spraying less area than I used to. I used to spray the green surrounds, but I don't anymore. I also don't hit the tees as much as I used to."

Bill Hamilton, superintendent at the 36-hole Silverado Country Club and Resort in Napa, Calif., maintains the two courses with a \$2.4-million budget, which has been flat for several years. Even though Hamilton tries to save a dollar here and there, the economy hasn't affected the way he approaches managing turf disease.

"We're known for our greens, and I don't want to jeopardize that," he says. "I will cut somewhere else if I have to. There's no tolerance for not being smart about greens maintenance. Greens don't go unwatched." — *John Walsh*