

# A STRONG RECOVERY

Golf course superintendents weathered a disease-filled year in 1987. But the new year holds promise for better health.

by Jeff Sobul, assistant editor

**F**ungicide manufacturers must have been happy in 1987. The superintendents? Well. . .

It seems turf diseases hit just about everybody this year, some harder than usual.

"It was ideal weather for diseases this year," says Joseph Baidy, superintendent at Acacia Country Club in Lyndhurst, Ohio. "We had so many extremes this year with all the moisture we had and then dryness. The grass really couldn't tolerate it." Baidy notes that take-all patch did the most damage at Acacia.

Pythium blight reared its ugly head at PGA National just in time for the PGA Championship and the national media. Nearly 20 straight days of temperatures above 90 during the day and 70 at night, combined with 90-plus humidity, ravaged the bentgrass/Bermudagrass greens. The pythium was helped along by the presence of an aquatic herbicide in the irrigation water, unbeknownst to superintendent Luke Majorki.

At Quail Hollow in Painesville, Ohio, the presence of diseases was constant this summer. Along with leaf spot, dollar spot and pythium, among other things, superintendent Jim Loke found brown patch on some greens, tees and fairways. "That was a first," he comments. The cause for the diseases was a combination of high temperature and humidity and weakened turf. "In general, everybody had problems with pythium this year," he concludes.

Dan Pierson, superintendent at Cherry Hills Country Club in Englewood, Col., reports that his course was one hit by pythium this year. It should be noted that the Denver area's climate is usually not conducive to turf diseases. The humidity is low and the summer temperatures generally drop down far enough at night to keep diseases at bay. In fact, the course only has a \$6,000 chemical budget.

However, one Friday night it happened. "I was out Saturday morning and was not cognizant of what the humidity had been the night before. One of the tees had pythium running



**Though high-priced, lightweight mowing is making bentgrass fairways a reality on many courses, reducing compaction and cutting water use.**

through it pretty badly," Pierson says. "A lot of guys around here have never seen pythium."

Pierson says they had enough fungicide in house to spot spray, then bought enough material from a local distributor to treat the greens and tees and put a preventive down. He says the par-three eighth hole was hit particularly bad, but it was mostly *Poa annua* that was killed. "It was kind of a Godsend," he says.

## Speaking of poa

Is there control in sight? Possibly.

"The tools are at hand to perpetuate poa or remove it to the extent wanted," says Tom Watschke, Ph.D., Penn State University.

The decision then is whether to keep the poa or eventually convert

greens, fairways or tees, usually to bentgrass. New growth regulators are entering the market which will perform one of those two tasks.

The host of new regulators include Cutlass from Elanco, O.M. Scott's TGR, and Embark, marketed by PBI Gordon. Nor-Am's Prograss herbicide and Elanco's Rubigan fungicide have also been tested as poa reducers. Researchers at Michigan State University may have discovered a biological control for poa (see Research Update in this issue for more information).

To strengthen annual bluegrass, Watschke says Embark will inhibit seedheads but improve the stand of existing turf when at seed. In addition, poa benefits because Kentucky bluegrass shows signs of weakening when treated, Watschke says, and





**Pythium won the "Disease of the Year Award" for most appearances by a pathogen on different golf courses in 1987.**

thus is more susceptible to disease.

Ohio State's Karl Danneberger, Ph.D., has also seen this reaction from both the annual and Kentucky bluegrasses, but has no hard data. However, when Embark is applied regularly to an area, he seems to notice more annual bluegrass.

Cutlass and TGR also inhibit poa seedheads but selectively reduce poa to aid conversion to desired species, usually bentgrass since these products are used mainly on golf course fairways. (The only side effect is some discoloration of the bent.) From there, Watschke says, cultural practices can help to speed the conversion: strict water management and lower cutting heights. Danneberger suggests using these in conjunction with overseeding of desired species.

Stan Zontek, Mid-Atlantic Region director of the USGA Green Section agrees. "A single chemical or management practice rarely controls *Poa annua* by itself," he says. "The best results are obtained when all the programs are meshed together."

There are some cautions in using Cutlass, TGR, Prograss and others to reduce poa, especially if the percentage of poa in the treated turf isn't exactly known.

"The problem is sometimes you really don't know how much poa you

have," Danneberger says. He notes that annual bluegrass and Kentucky bluegrass can look pretty similar when cut at, say, two inches. The key then is to assess the turf closely when going in to kill the poa. Zontek adds that the chemicals should first be

tested on a limited basis to avoid massive annihilation of poa.

Danneberger says Prograss, a herbicide registered to kill annual bluegrass, has been most successful killing annual bluegrass in Kentucky blue and perennial ryegrass.

Despite these successes—and they are successes—Danneberger says, "it's always going to be there; it's always going to be a problem." When Kentucky bluegrass weakens or dies, it's replaced by annual bluegrass. When annual bluegrass dies, it's replaced by annual bluegrass.

"I'm not ready to write it off," Danneberger concludes. "It's going to be here long after I'm gone."

Muirfield Village Golf Club superintendent Michael McBride concurs. "I don't think you'll ever get rid of poa. People have been trying to get rid of it for 50 years. You can keep it under control, to a certain point, but I don't think you can totally eliminate it and keep it out effectively and economically."

### **Lightweight**

One of the cultural practices that shows hope for propagating bent on fairways, thus helping to reduce poa, is lightweight mowing.

This is one of the newest management practices to be developed, starting about eight years ago at Coldstream Country Club in Cincinnati, Ohio. As with other "inventions," this was discovered somewhat by accident, and then by experiment: using a greensmower on an approach that was compacted by a heavy fairway mower.

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**The lightweight five-gang mower from Lesco could increase lightweight equipment quality and bring prices down to the budget of the public course.**



As the turf improved, experimentation spread to a par-three fairway, and then the rest of the course. It has now spread to numerous cool-season courses where bentgrass is the dominant or desired species.

It is not a fad, says Kevin Dushane, superintendent at Bloomfield Hills (Michigan) Country Club, where he has used lightweight mowing for six years. It is a general shift in cultural practices that improves bentgrass noticeably. Those who use it rave about its effects. Lighter-weight machines, such as the Toro 84 triplex, reduce compaction and improve root zone development and drainage.

"I think the biggest thing is compaction," Dushane says. His lightweight mowing has resulted in improved playability and aesthetics. "When the program first started," he says, "the membership was really pleased with it."

"It's amazing," says Acacia's Baidy. "You don't know what you

have in the fairway until you start mowing with a triplex." On one fairway, he says, bent now covers 90 percent of the turf because of lightweight mowing.

"You can cross-cut and do anything you want with the triplex and go different angles and it helps the grass," he says, "and it gets rid of deep gullies."

As with many good things, there is a flip side. Lightweight mowing is expensive. New machinery can run \$30,000 to \$50,000 for sufficient equipment (three triplexes or two five-gangs). Many public courses have little hope of affording the equipment at this time.

Also, because the units are smaller, they take more time and labor. Dushane estimates it takes three triplexes 15 to 18 man-hours to cut 18 holes, plus picking up clippings if so desired. One man on a seven-gang, he says, can do the same job in perhaps six man-hours.

However, Dushane feels that the expense balances out in less water use, sometimes as much as one-third, and healthier grass requiring less fertilizer. Plus, he says, "If you're going to have a better golf course the members will pay for it." And anytime you can make such an improvement on 25 to 30 acres, it can't be all bad.

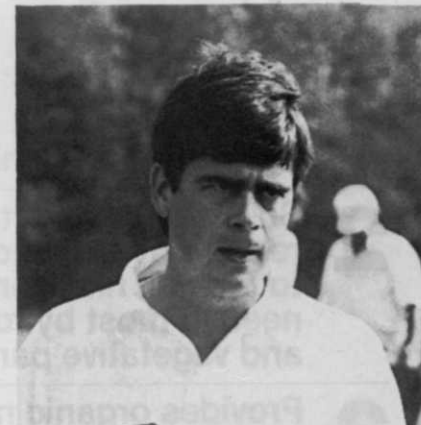
And there is hope for lower-budget courses. Dushane feels the recent introduction of the less-expensive Lesco five-gang lightweight mower will lead to an opening of the market and a reduction in overall equipment prices and an improvement in equipment quality.

#### **In conclusion**

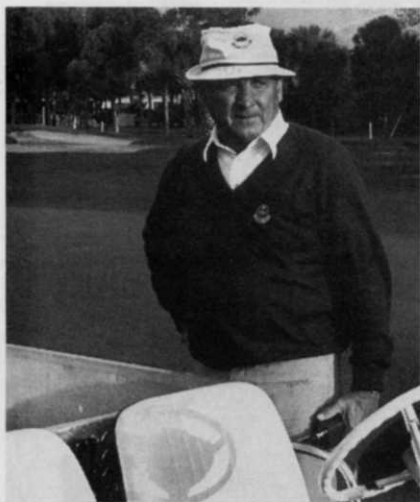
It may sound from this report like 1987 was a down year for golf courses. On the contrary, it has been a year far and above anyone's expectations (see lead



**McBride: poa can be controlled but never eliminated economically.**



**Danneberger: know how much poa is in the turf before treating.**



**Luke Majorcki and PGA National were hit by massive pythium right before the 1987 PGA Championship.**



**Despite Denver's arid climate, Dan Pierson and Cherry Hills Country Club had to deal with pythium.**

article this section). There seems no reason to believe 1988 won't be at least as good.

The black layer issue has died down some, mainly because speculation on the cause and nature of the disease is giving way to some hard data, most notably by Joe Vargas, Ph.D., at Michigan State University and Clint Hodges, Ph.D., Iowa State University (see October and November, 1987, *LANDSCAPE MANAGEMENT*). There is some hope that a solution to the problem will be found this year or next.

Turf diseases will be around as usual, and there seems no catch-all solution, except maybe to get an earlier start on preventive applications. (Danneberger has been recommending April or May.) But things probably won't be much worse than in 1987.

As long as the economy remains strong, the golf course industry should follow right along. The only problem with that is a shortage of seasonal labor because of lower unemployment, which the industry can probably live with for now.

So, happy disease-hunting, and have a good 1988. **LM**