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## GCSAA Product Preview

Continued from page 60

### New turf protectors

Becker Underwood's BioGain and Canteen work in tandem to treat newly seeded or established turf, according to the company. BioGain is designed for use in spray application programs to reduce stress and stimulate root growth through enhanced water and nutrient uptake and to correct iron deficiencies in turf. Canteen, a performance-enhanced spreader and soil penetrant, loosens compacted soils, improves seed germination, delivers pesticides and fertilizers to the root zone, and assists wetting of spray-tank mixes, according to the company. Fog Force, a low-cost and nonlethal bird repellent, and Ne-



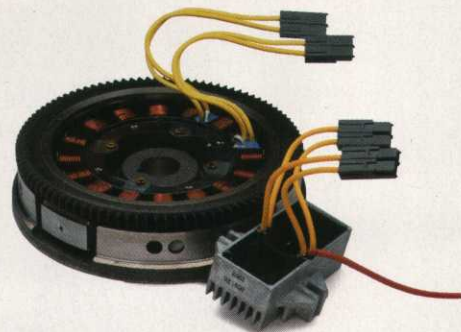
matac S, a bio-pesticide that uses a natural enemy instead of chemicals to control damaging mole crickets on golf courses, will also be shown at the show. For more information, visit Becker Underwood at booth 4421, call 800-232-5907 or visit its Web site at [www.beckerunderwood.com](http://www.beckerunderwood.com).

### Pond aerators

Aquamaster Fountains & Aerators will introduce its AquaAir aerator, which will provide any aquatic environment superior aeration, circulation and destratification without disturbing the natural, aquatic landscape, according to the company. It features one to six state-of-the-art dual self-cleaning membrane diffusers. For more information, visit Aquamaster at booth 4323, call 800-693-3144 or visit its Web site at [www.aquamasterfountains.com](http://www.aquamasterfountains.com).

### Powerful engines

Briggs & Stratton introduces a new 20/50 Amp Alternator option for its twin-cylinder Vanguard engines. Located under the en-



gine's flywheel, the new 20/50 Amp Alternator is the most powerful internal alternator available, producing 20 amps of electrical power at just 1,200 RPM, according to the company. It will also have the 2.4 horsepower Vanguard OHV, a single-cylinder engine designed to provide a lighter and smoother performance on smaller horsepower commercial applications; and the Vanguard™ 31 HP, the largest two-cylinder engine the company has ever produced, at the show. For more information, visit Briggs & Stratton at booth 2139, call 414-259-5333 or visit its Web site at [www.briggsandstratton.com](http://www.briggsandstratton.com).

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## Pond fountains

**Air-O-Lator's** Font'n-Aire Platinum and Gulf Stream fountains use stainless-steel water-cooled submersible motors. Fountain packages include one of eight different nozzle spray patterns, 100 feet of cord, propeller guard, ETL-list control panel with time clock and a three-year limited warranty. The company will also highlight aerators that use Franklin Electric's submersible motors, which operate a scientifically designed propeller. For more information, visit Air-O-Lator at booth 2823, call 800-821-3177 or visit its Web site at [www.airolator.com](http://www.airolator.com).

## Leaf Blowers

Giant-Vac, a subsidiary of **Simplicity Manufacturing**, will show off its Whisper Jet leaf blowers, which feature smooth-operating overhead valve engines, one-piece welded construction for added strength and eight-blade cast aluminum impellers for in-



creased airflow and quieter performance. The company also plans to have its large-area trail vacuums, which clear grass clippings, leaves and twigs from trails, paths and other areas of the golf course quickly and efficiently. For more information, visit Giant-Vac at booth 1246, call 860-423-7741 or visit its Web site at [www.giant-vac.com](http://www.giant-vac.com).

## Turf blankets

**Profile Products** introduces its Futerra revegetation blankets, which hold the seed bed in place and provide mulch that speeds grass germination, according to the company. Other features include lightweight design, soil-bonding action that prevents washouts and seed migration, complete degradation and accelerated germination than is 15 percent to 90 percent higher than alternative products, the company says. For more information, visit Profile Products at booth 4328, call 800-366-1180 or visit its Web site at [www.profileproducts.com](http://www.profileproducts.com).

## Golf cars

**Fairway Golf Cars** introduces its Freedom Power Caddy, which has smooth, turf-

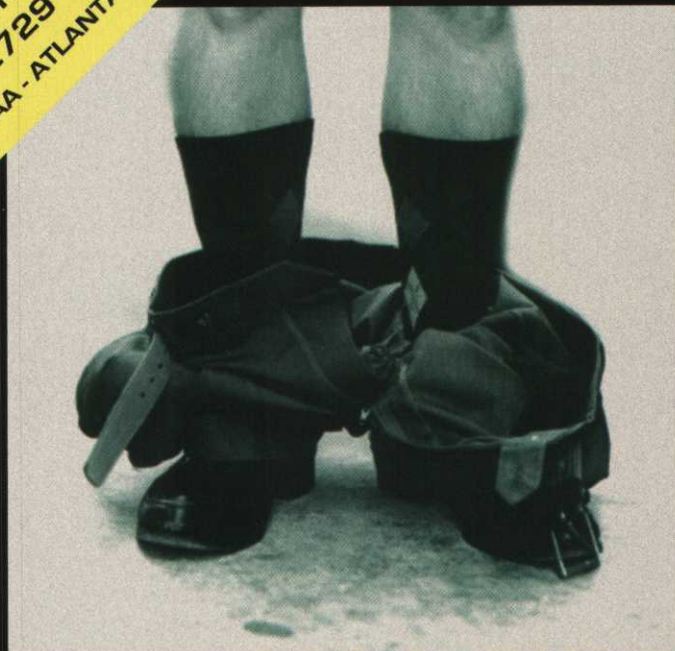


friendly tires and even-weight distribution to help prevent it from causing damage to turf. It is also equipped with a scorecard and drink holder, a clothes/shoes basket, an attachment point for a cooler and a ball/club

washer. For more information, visit Fairway Golf Cars at booth 3379, call 888-320-4850 or visit its Web site at [www.fairwaygolfcars.com](http://www.fairwaygolfcars.com).

Oh, last but not least, don't forget to stop by booth 2317. That's where **Golfdom's** editors will be hanging out and taking your comments, criticisms and suggestions. Stop by and see us. We'll be looking for you. ■

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# 'Princess' Royal

New seeded hybrid bermudagrass features fine leaf texture, color and density – just what superintendent needed to grow grass in the desert

BY LARRY AYLWARD, EDITOR

The fairways at Cimarron Golf Resort's Long Course are much easier to maintain after being overseeded with Princess 77.

### Problem

The cost of maintaining ryegrass – in money and manhours – proved to be too much at Cimarron Golf Resort's Long Course, located near Palm Springs, Calif., where the heat can knock you to your knees in the summer.

### Solution

Overseed the ryegrass in the spring with a new dense, fine-textured hybrid bermudagrass variety that's available in seeded form. The cultivar has "outstanding" drought tolerance.

**T**hey decided to open Cimarron Golf Resort's Long Course in January 2000. Good idea. Why not garner some business for the new course early in the year instead of waiting to open in the spring?

There was a problem, however. Being located near Palm Springs, Calif., — where the sun shines 350 days a year and the intense heat can knock you to your knees in the summer — you'd think they'd want to carpet the course almost entirely with bermudagrass. But here's the deal: Most everybody involved with the grow-in in the fall of 1999 knew that bermudagrass fairways wouldn't fly during the early months of the year. There just wouldn't be enough heat and humidity at that time to spark the bermudagrass and get it growing flush and green.

So the decision-makers elected to grow-in the tees and greens with Tifdwarf bermudagrass, but they made the controversial decision to grow-in the fairways and roughs with ryegrass. They knew that — with the dog days of summer napping for the winter — the ryegrass would germinate quickly and the course would be ready for play in January.

The decision-makers were correct, golfers came to Cimarron and all was cool at the course. Or was it?

### The problem

Most agronomic experts will tell you that it's risky business to grow a cool-season grass in a region where the sun sears and the heat index soars for several months during the year. Ryegrass can grow in Palm Springs during the cool months. But in the summer?

Cimarron's decision-makers elected not to overseed the fairways in the spring with bermudagrass. They wanted to see if the ryegrass fairways could hold their own in the desert heat. The weight of their decision was left on the shoulders of the course's maintenance staff, including Mario Aguiar, assistant superintendent of the course at the time and now its head superintendent.

Aguiar, who has been with the course since its grow-in, says he knew that he and the crew were in for a challenge.

"But I felt that if we could pull it off, we'd be heroes," he says. "If we didn't pull it off ... well, nobody expected us to."

Aguiar says many of his peers told him



there was no way the crew would be able to keep the ryegrass alive during the summer. But Aguiar and the others proved them wrong and kept the ryegrass fairways going for three summers. However, it was a very labor-intensive and sweat-profusing three summers.

"I was here day and night," Aguiar says. "August was especially brutal."

Aguiar says he became one of the course's soldiers in the fight against the continuous threat of turf disease, especially pythium.

"There was a lot of disease with the heat and humidity," he says. "We were always spraying fungicides, especially when the heat index rose, and we were prone to disease."

When the crew fertilized the course, the disease pressure was even greater. Aguiar says the crew sprayed fungicide covering 65 acres about once every two weeks. If he saw a patch of pythium, Aguiar knew he had to act quickly to contain it, or it was going to spread quicker than he could say azoxystrobin three times fast. "I was constantly monitoring temperatures and when to spray," Aguiar says.

Irrigation was another delicate project. Because Aguiar and the crew were spraying so much fungicide, they couldn't water the course on a whim. When they did turn on the irrigation system, it was only for a few minutes every two hours just to cool off the ryegrass. They knew that too much water would only provoke more disease.

Finally, during the 2002 season, Aguiar says the maintenance crew and the course's decision-makers jointly recognized that maintaining the ryegrass was too expensive and too time-consuming. The fungicide, water and electrical costs — not to mention manhours — associated with keeping the ryegrass alive were too high. A change had to be made. "We finally realized it wasn't making any sense," Aguiar says.

### The solution

Last spring, the decision was made to overseed the ryegrass fairways with bermudagrass.

"We had wanted to overseed with the bermudagrass for two years, but the money wasn't available," Aguiar says. "But then we realized our thinking didn't make sense. We were spending more on water, electricity and labor to keep the rye alive in a year than we would on overseeding."



Aguiar, who was promoted to superintendent of Cimarron's Long Course in June, says he and others researched what type of bermudagrass to use for overseeding. They settled on a new seeded hybrid cultivar called Princess 77, developed by plant breeder Arden Baltensperger of Seeds West, a division of Pennington Seed. West Coast Turf is marketing Princess 77 as seed, sod and stolons.

Seeds West says that Princess 77 is the first dense, fine-textured hybrid bermudagrass variety available in seeded form. It's produced much like hybrid seed corn, according to Charlie Rodgers, research director for Seeds West. But instead of two inbred parent lines, two self-incompatible but cross-fertile parent clones are planted in alternating rows, Rodgers says. The specific combining ability of these two elite parent clones is what makes Princess 77 the first seeded bermudagrass that is competitive with the vegetative hybrid bermudagrasses for turfgrass quality, leaf texture, color and density, Rodgers says.

"The reason we're excited about it and want to be involved with it is because it takes on all or many of the characteristics of the vegetative propagated grasses," says Jeff Cole, spokesman for West Coast Turf, who adds that Princess 77's characteristics are what superintendents desire in bermudagrass. "They want something that's going to give them the playability, the repair and the wear tolerance."

Seeds West says Princess 77 features "outstanding" drought tolerance and requires 21 percent less water than Tifway.

*Continued on page 66*

**Superintendent Mario Aguiar says the course will save several thousand dollars a month in the summer, thanks to Princess 77.**

**Read another  
Real-Life Solutions  
on page 76**



## Real Life Solutions: 'Princess' Royal

**Playability at  
the course was  
excellent soon  
after the  
conversion.**

*Continued from page 65*

Aguiar says Cimarron tested Princess 77 on three fairways before he committed using it on the entire course. Aguiar wanted to see how Princess 77 held up under traffic, and how much water and fertilizer it needed to grow. He was impressed.

"We saw germination with two weeks," Aguiar says. "We couldn't believe the density we had within a month."

Princess 77 passed the test, and Aguiar and his crew overseeded the rest of the course's fairways. It took about three days to overseed with a slice seeder, and the course didn't have to be closed.

### Outlook

Aguiar says playability was excellent soon after the conversion. "We were mowing at a quarter of an inch, and the fairways looked tight," he adds.

Aguiar says Princess 77 seed is expensive but cost-effective.

"The seed is much less expensive than

sod," he says. "The big thing is that hybrids aren't usually available in seeded form. I'm happy with it."

In November, Aguiar and his crew overseeded the established bermudagrass with ryegrass for the winter season. Aguiar expects the course's fairways to transition well back to bermuda when the weather gets warmer.

The best thing about Princess 77 is that maintenance is much easier on Aguiar and his crew. The course's budget is also in good standing. Aguiar expects the course to save \$18,000 a month on pesticides, water, electricity and any other maintenance costs that come with tending ryegrass in the summer months.

"Trying to grow ryegrass all year round, especially in the summer, is a headache," Aguiar says. "I can't believe I did it for three years, but it was a good experience."

But changing to Princess 77 so the course's fairways could withstand Palm Springs' infamous desert heat is a much better experience, Aguiar adds. ■

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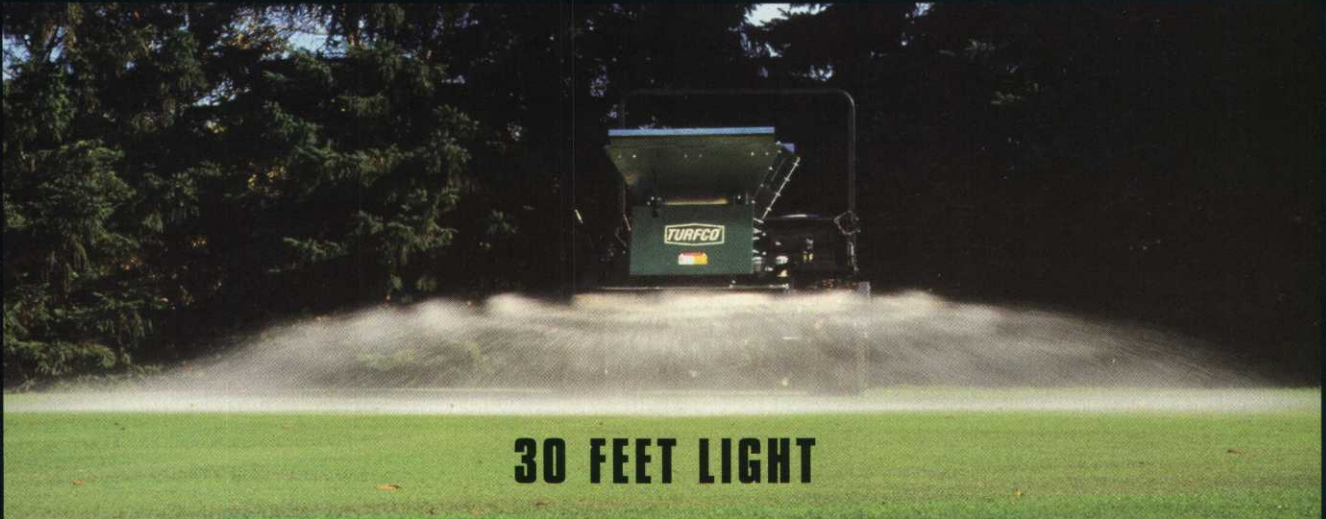
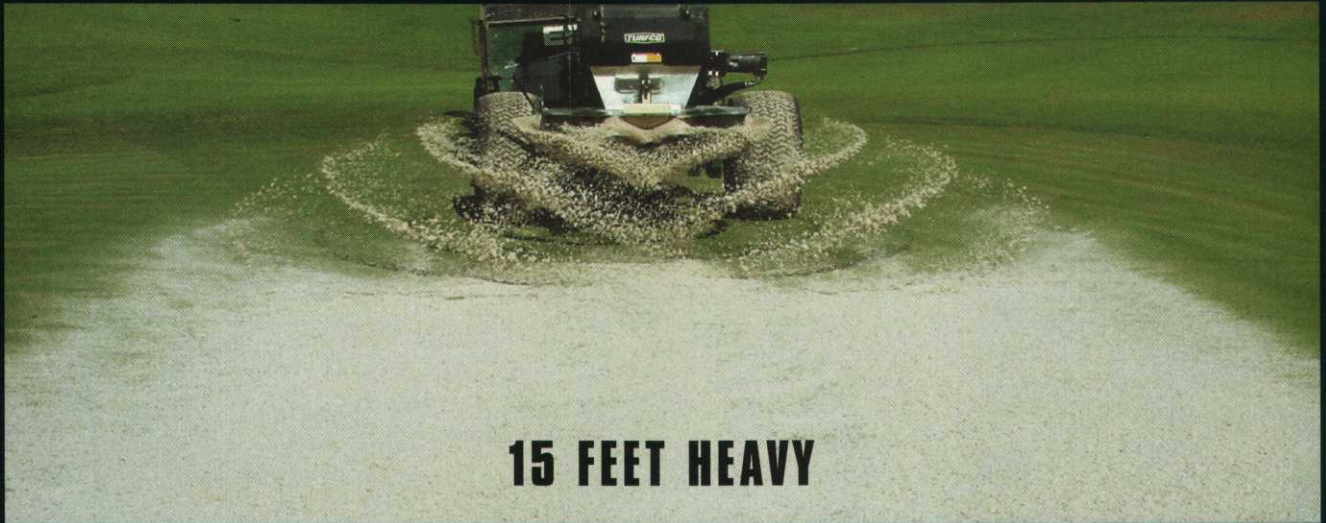
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# Back to the Basics

Stick to the central tenets of good agronomy so your spring fertility program can kick-start your season

By Frank H. Andorka Jr.  
Managing Editor

**H**ow you handle your early season fertility program can mean the difference between providing excellent season-long conditions and being beset by disease and insect infestations. But despite its importance, experts say superintendents can get caught up in the latest fertility fads and forget the central tenets of plant nutrition. To prepare for the season, it's time to revisit the basics of spring fertility.

### Basic principles forgotten

Keith Happ, an agronomist in the USGA's Mid-Atlantic Regional office, says superintendents should stick to what they know about basic agronomy, such as the importance of soil testing and using proper nutrition ratios.

"All too often, sound agronomic principles, such as the importance of soil tests, are forgotten," Happ says. "A turf manager should always be in a position to apply fertilizer when

it is needed. Instead, superintendents often apply large amounts of fertilizer at once, and they lose control over turf growth."

Superintendents should combine common sense with scientific testing when they're planning spring fertility programs, says Stan Zontek, director of the USGA's Mid-Atlantic Regional office.

"Good fertility is a mixture of art and science," he says. "While scientific testing is a great help in determining what the grass needs for food, it's also important to look at the grass. Turf talks to you and lets you know what it needs — if you're willing to listen."

### Soil tests highlight deficiencies

Pat Gross, director of the USGA's Green Section's Southwest Regional office, says superintendents should take regular soil tests from representative areas in the spring, including two samples each from greens, tees and fairways. Then they should have them analyzed by established labs to see where specific deficiencies exist. "Superintendents should use the same labs year after year so the results are reliable and comparable," he adds.

But it's not just enough to do soil tests — superintendents must follow the recommen-

*Continued on page 70*

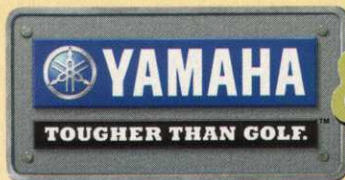
MIKE KLEMM



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## Dave S. Gourlay Jr., CGCS

Colbert Hills GC, Manhattan, Kan.

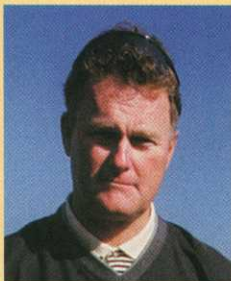
Kansas State University career development instructor

The son of a 1987 GCSAA Distinguished Service Award winner, Gourlay knows something about dedication to his profession and career advancement.

Working at Colbert Hills GC, designed by Jeffrey D. Brauer not only to be a championship golf course but the National First Tee Academy and a living laboratory for Kansas State University, Gourlay is teaching college students how to attain success. As an adjunct faculty member since 2000, the Texas A&M graduate teaches classes in budgeting, career development and general management.

"Volunteering is instrumental in career development," Gourlay said. "Not only do you give something back to the turf community, but you get one thousand times more out of it than you put in."

"Dave was instrumental in helping identify the curriculum at Kansas State that trains young people not only for a profession as superintendents but in golf facility management," said GCSAA Past President Tommy Witt, CGCS, at the Kiawah Island Club. "As general manager at Colbert Hills, he is pioneering that position and proving that superintendents can do that job and do it well!"



## Ken Krausz, CGCS

Paramus G&CC, Paramus, N.J.

Long-time editor of *The Greenside* for GCSA of New Jersey

The volunteer gene runs strong in Ken Krausz. In fact, his career in turf-grass maintenance actually stems from a contact he made while a young volunteer fireman in Old Tappin, N.J. The contact, as head of the town's Department of Public Works, told Ken he needed laborers for the municipal Old Tappin Golf Course. That was in 1978.

Since then, Krausz became certified superintendent at Paramus G&CC in 1988. In May, Ken completed six years as editor of the chapter's magazine, *The Greenside*, and turned its reins over to a successor.

His six years at the helm of *The Greenside* were enjoyable he said.

"It kept me on top of everything," Krausz said. "I met interesting people in the industry."

Chapter President Ed Mellor of Colts Neck G&CC in Little Silver, N.J., said Ken's contributions have been enormous.

"New Jersey is lucky to have somebody like Kenny," Mellor said. "When you can find someone who does as much work as Ken, it makes it that much easier for everyone else."



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## Spring Fertility



MIKE KLEMM

*Continued from page 68*

dations to be successful. Gross also believes superintendents should keep a journal outlining their plans and results.

"It's important to stick with what they know," Gross says. "Superintendents should make sure they don't fall for fancy gimmick products."

James Camberato, professor of turfgrass management at Clemson University, says he recommends taking 10 to 20 soil cores from the area to be tested and prepare them for the lab.

"For established turf, the cores should be 3 inches to 4 inches deep," Camberato says. "If you're doing a grow-in, the cores should be 6 inches to 8 inches deep. That gives you the right amount of soil to see where your deficiencies lie."

Superintendents should research the labs that do their testing because not all labs do test for the same nutrients, Camberato says. "You have to make sure their tests will find what you're looking for. Otherwise, the results may not help you."

### Caring for warm-season grasses

Todd Lowe, an agronomist in the USGA's Florida Regional office, says warm-season grasses are fairly easy to treat as they re-emerge in the spring. But he says Southern superintendents shouldn't ignore the importance of spring fertility during the transition from overseeded varieties to the main grass.

"We recommend pushing the over-

seeding out with practices like lower mowing, light verticutting and increased fertility," Lowe says. "These practices should be manipulated around the weather because it should be warm enough to sustain bermudagrass growth."

He adds that fertility on warm-season greens can be increased to .33 pounds to .5 pounds of nitrogen per 1,000 square feet per week, using products like ammonium sulfate in rotation with complete fertilizers.

Ross O'Fee, certified superintendent of The Country Club of Salt Lake City, says superintendents who care for warm-season grasses should resist the temptation to fertilize heavily in the spring. "If you start putting out fertilizer while the soil temperatures are still cool, you won't see any benefit from them," he adds.

### Find the right ratio

Zontek says too many superintendents rely on determining fertility programs based on percent base saturations (PBS), which measures the adsorption complex of a soil that is saturated with exchangeable cations other than hydrogen or aluminum. It is expressed as a percentage of cation exchange capacity and measures the amount of nitrogen (N), phosphorus (P) and potassium (K) in soils. It's an older system that was originally developed for agricultural crops and may be outdated for today's turfgrass managers as a sole determinant of nutritional ratios.

"In my opinion, you keep fertility simple," Zontek says. "After you've done your soil tests, you develop your own N-P-K at a ratio determined by soil tests. There is nothing wrong with the old 3-1-2 or 4-1-4 ratios for those nutrients."

But superintendents have to take into consideration the types of turf they have on their courses, says Chris Thuer, certified superintendent of Bear Slide GC in Cicero, Ind. One-size fertility programs clearly don't fit all.

"At my last course, which had bluegrass, ryegrass, and *Poa annua* fairways, we used a program that was light in nitrogen and heavy on potassium," Thuer

says. "Since divots were not much of a concern, we only needed nitrogen in small amounts for color. The heavy potassium application prepared the turf for the extreme stresses of summer."

When Thuer arrived at Bear Slide GC and found largely pure bentgrass fairways, he realized he had to change his program. He applied equal amounts of nitrogen and potassium because divots are a bigger problem at his new course. The fairways survived a brutal Indiana summer well partly because of the influx of potassium, Thuer believes.

### Don't forget to spoon-feed

More and more superintendents are moving toward spoon-feeding programs on their turf in the spring, Happ says.

"The programs run the gamut regarding frequency of application and nutrient sources," Happ says. "But superintendents need to keep their eyes on the overall health of the turf. Sometimes, there is too much emphasis on micronutrients and not enough focus on growing grass."

Dan Dinelli, certified superintendent at North Shore CC in Glenview, Ill., is a proponent of spoon-feeding his turf in the spring through his course's fertigation system. He enhances the irrigation system with inputs of monopotassium phosphate and seaweed extract for trace elements.

"The general idea is to offer the plant and soil system an easily used biostimulant and nutrients package, when soil temperatures are still a little cool, to stimulate root growth and plant health," Dinelli says. "Research has shown that frequent low mowing shortens root growth. We are trying to offset that with this approach."

### Fall treatments beget spring health

Before superintendents can provide adequate spring fertility, they have to evaluate what they did in the fall, says Wayne Kussow, a professor of soil science at the University of Wisconsin-Madison. He rattles off four or five questions he would ask before advising anyone on a spring program, starting with an account of what

*Continued on page 72*