



A Little Help From His

Desert Mountain's Shawn Emerson courts consultants to propel agronomic excellence

BY DAVID FRABOTTA, SENIOR EDITOR

It's hard to thrive alone. Successful people rely on family, friends and co-workers to create great outcomes.

That's why Shawn Emerson, director of agronomy at Desert Mountain Golf Club, surrounds himself with the most prolific turf team he can find. Drs. James Beard, Fred Yelverton and Rick Brandenburg converge on Desert Mountain several times each year to iron out turf troubles at the Carefree, Ariz., facility. It's a Dream Team of turfgrass consultants. Beard is a celebrated author and researcher who barely needs introduction in turf circles, and Yelverton (weed science) and Brandenburg (entomology) are noted professors at North Carolina State University. Together with the 180-strong golf course crew at the upscale property, they keep Desert Mountain's six Jack Nicklaus-designed golf courses conditioned as well as any cluster of courses in the country.

The interesting reality is that Emerson thrives on new perspectives and ideas even though it would be easy for him to rest on his laurels. After all, maintaining six championship-caliber golf courses in Arizona's Sonora Desert isn't easy. He overseeds five of them each year with a perennial ryegrass. Then, he must kill off the ryegrass to help the bermudagrass compete when it comes out of dormancy.

With five overseedings a season, Emerson has supervised about 55 of them during his 11 years at Desert Mountain, plus a half dozen more at his past gigs at the Coronado Country Club (El Paso, Texas) and La Quinta (Calif.) PGA West. He has applied about 13 billion gallons of water on his golf courses throughout his career, and he currently manages 5.2 acres of bentgrass greens.

This doesn't appear like a guy who needs a helping hand. Emerson probably has grown as much turfgrass as any superintendent in the country, and he's gone through about 70 transitions back to bermudagrass. Plus he's a superintendent's son. So why would an agronomist at the top of his game feel the need to assemble some of the most resourceful turfgrass personalities on the planet?

"Success is fleeting in this business," Emerson says. "That's why I wanted my own turf council to keep an eye on me. We don't always make good decisions, but a mistake doesn't become an error unless you refuse to change it."

It's clear that good isn't good enough for Emerson. He likes to provide great conditions, and great is what the members are accustomed to as well. These members aren't as fervent as Oakmont Country Club golfers, but they always expect the best at the upscale community. Multi-million-dollar Spanish-

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THE DREAM TEAM:

1) Shawn Emerson (center) passes a soil sample to his superintendents so they can feel and smell the difference between a healthy sample and an unhealthy one. 2) Dr. Jim Beard examines a healthy root system. 5) From left, Emerson works with Drs. Rick Brandenburg, Fred Yelverton and Beard to manage a pesky *Poa* infestation. 6) The hunt for *Poa* never ends. 7) Yelverton takes a closer look to determine if it's an annual or perennial plant.

(Photos by: Stuart Buck)



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Friends



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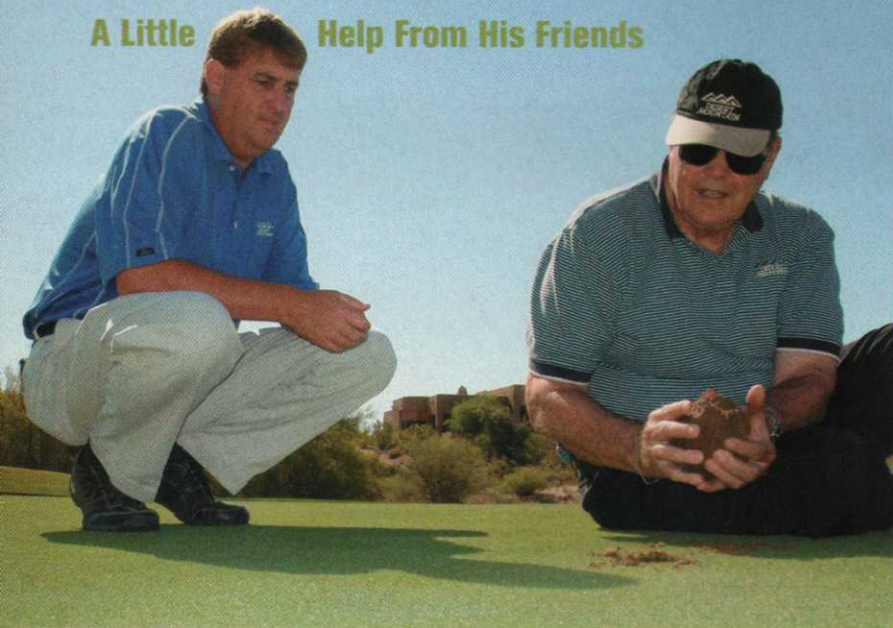


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A Little Help From His Friends



Dr. Beard (right) says superintendents must look below ground to get a longer-term perspective of turf health and stress.

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style winter homes dot the desert mountainsides along with boulders the size of Volkswagens and 200-year-old saguaro cacti. There are several restaurants on the property that cater to any imaginable culinary whim, and agronomists from Wimbledon visit the Desert Mountain Golf Club's grass courts to learn turf-growing tips.

The pace of the place is not for the faint of heart, either. When *Golfdom* caught up with Emerson on a typical 100-degree day in June, Desert Mountain was hosting the Southwest Golf Association's Mens Invitational on its Outlaw course, was closely monitoring the winter ryegrass kill off and subsequent bermudagrass grow-in on the Geronimo course, and resurfacing fairways on its Apache course — all while keeping three courses open with pristine conditions for members.

In addition to looking after 108 golf holes that day, the courses' superintendents and assistant superintendents were meeting with Beard, Yelverton and Brandenburg for agronomic consultations. At times, about 20 golf course managers were cruising around the facility checking rootzones, hunting for *Poa annua* and pinpointing other pests around the 2,000 acres that fall under the purview of golf maintenance.

But the hustle is nothing new for Emerson and his crew, who traverse the property with precise attention to every detail combined with an almost nonchalant style that leaves the impression that these guys handle stress as

well as any crew in the business. And they're as driven as any, too.

Architects of efficacy

It's an obvious passion for agronomy that keeps driving Emerson and his crew to excel, and they also realize operational efficiencies as a direct result of agronomic efficacy. One of the biggest time, labor and money savers has been a result of Beard's original consultation in 1999. Beard, then president and chief scientist of the International Sports Turf Institute after retiring from Texas A&M University in 1992, was courted by Desert Mountain to improve year-round playing conditions. Beard is known worldwide for his books "Turfgrass: Science and Culture" (the best-selling reference book in the field) and "Turf Management for Golf Courses" (a staple for golf course superintendents since 1982). Needless to say, it was a coup to bring him aboard.

Beard helped Emerson determine that the ryegrass was competing with the bermudagrass while the warm-season grass was trying to re-establish itself. The result was bare spots when it came out of dormancy. The only solution was to generate a total kill — not just a die off — of the ryegrass just as the bermuda came out of dormancy.

As a result, Beard and Emerson formulated a plan that pinpointed the critical timing when chemical spraying would be most effective — slightly contingent on weather patterns — so ryegrass could be killed at the exact time that the bermudagrass ascended in the desert springtime. Then Beard brought in Yelverton and Brandenburg (I guess even consultants need consultants) to finalize the chemical program, which has been tweaked slightly in each of their visits during the past eight years. The results were profound almost immediately, and the program has eliminated at least 90 percent of the spring-time resodding for the past few years.

"We were using about 2 1/2 acres of sod at a cost of about \$40,000 to \$50,000 before we finalized our spray program," Emerson says. "Now we use about 10,000 square feet, which is about \$4,000."

Cha-ching. Emerson proudly points out

the small patches of sod throughout the golf course: "There's my sod: 2 1/2 acres to *that*," he says.

The savings is a real budget booster, and the labor once lost on laying new turfgrass now can be spent elsewhere around the facility, meaning Emerson can get more done with the same amount of people.

That's the real message here: Consultants cost money, but the investment reaps huge rewards in labor efficiencies, product optimization and the consequential financial savings.

"We might spend about 1 percent on consultant fees, but we save twice that in operational efficiencies as a direct result," Emerson says.

Emerson spends about \$30,000 to \$50,000 a year on consultations, which includes his Dream Team, various soil experts, USGA consultants and irrigation advisors.

"My whole philosophy is checks and balances," Emerson says. "Dr. Beard counsels me, encourages me and makes sure I'm staying on

track. So I make sure that 80 percent of the program is consistent and has not changed for eight years now. The other 20 percent is influenced by environmental and other changes."

Environmental changes might include the 500-foot elevation difference around Desert Mountain's 8,000 total acres, lack of rain, seasonal variances or perhaps the facility's decomposed granite soil structure might have too much salt from the poor-quality reclaimed city water. Some of the property's idiosyncrasies can create a bit of guesswork despite the well-regimented protocols for fertility, chemical use and cultural practices.

The technical speculation necessary for each course superintendent leaves a little wiggle room at the execution level, and sometimes new superintendents lack instant and complete adoption of the program.

"I remember the first time we sprayed the ryegrass, I thought I was going to get fired," says Jose Castillo, superintendent of the Co-

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**Consultant fees
often return
twice their
investment in
labor and product
efficiencies.**



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A Little Help From His Friends

The Chiricahua Course (one of six) is 7,424 yards from the tips with a slope rating of 154.

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chise course. "I asked (Emerson) three or four time if he was sure we should kill it."

That uncertainty at the implementation level can be a potentially huge problem in microclimates that require tightly scripted maintenance programs for sustained results. Emerson stops his gaggle of senior crew members to point out a *Poa* problem around a bunker entrance that was controlled two years prior. It's back because the course superintendent "wanted to try something different without talking (to me) about his concerns with the program. He waited too long to spray because that's what he did at another golf course," Emerson says glancing at his workers, who are staring at the turf in angst. Then he cracks a smile, but only because he knows that his entourage of up-and-coming agronomists already has learned this lesson.

But it's not the end of the learning curve. The entire process is an intentional learning experience for the Desert Mountain crew and turfgrass gurus alike. Even Yelverton and Brandenburg benefit because they return to N.C. State with a healthy amount of field data they can teach in their classes.

"This is more than just solving Desert Mountain's problems," Brandenburg says. "Some of our educational programs might not have developed if we hadn't been here onsite to observe trends and then take those observations back to the

Southeast to teach. Then, we can follow up to see how well our recommended program worked and tweak it as necessary."

The team spreads the education around the region as well. The day before the crew scrutinized Desert Mountain, it held a seminar for almost 50 area superintendents so they could talk about what pests and problems they were collectively seeing around the area and devise strategies to treat them.

"These issues you have on transition really apply to everyone in the Southwest and many in the Southeast as well," Yelverton says. "So these local meetings are as good as any educational meetings you'll find because they are specific to the area. And when you have someone like Shawn who is as well-versed as he is in all the practical aspects, then you have a lot more value. It's ideal when you can get academics and superintendents together to put on seminars."

Emerson also reciprocates with a guest lecture each semester at N.C. State. His talk, "Things You Don't Learn in Turf School," is widely anticipated throughout the program.

"A high percentage of students want to go into golf until Shawn comes to talk to them," Brandenburg jokes.

The origins of excellence

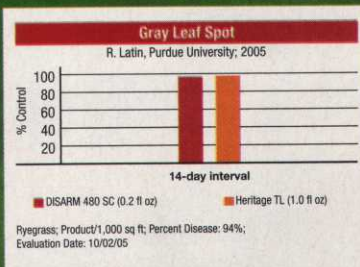
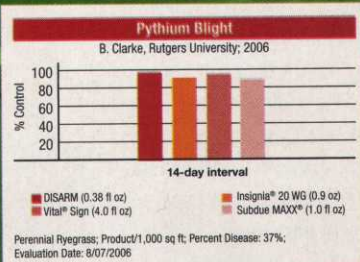
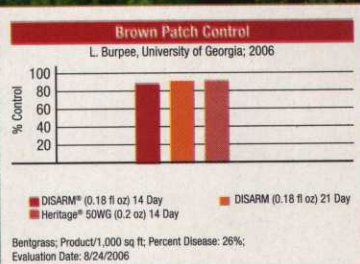
Desert Mountain didn't always run like a deer. It had as many procedural ineffi-

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Diagnostic tests can identify problems that might need to be solved in a particular order.

From left, Spectron Labs' Stuart Buck, Apache superintendent Rick Hildreth, James Beard and Shawn Emerson discuss Apache's fairway resurfacing project. It was such a success (now grown in) that management expects to do another course next year.



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ciencies and chemical failures as any facility in the Southwest. But the crew kept exhaustive records. They tracked their respective spray formulations, sprayer calibrations, fertility regimen, clipping yields, outbreak occurrences, irrigation volume and cultural practices, to name a few. If it could be measured, Emerson and his course superintendents had it written down somewhere.

Those metrics — despite the quality of their outcomes — established the crucial baseline necessary to tweak the various maintenance programs.

Beard says preliminary benchmarks also are vital to gauge improvements once a maintenance protocol is being tweaked.

“You have to be honest about the history, and superintendents must have good records,” Beard says. “A superintendent is a keen observer of his golf course and has the ability to note changes that help piece together how and why something happened.

“Some of these problems are very complex. You need to be willing to run some tests and spend some money on diagnostic analysis so you can identify situations where problems might need to be solved in a particular order.”

The diagnosis of turfgrass trouble often begins with above-ground symptoms. But as Beard shoves his nose in a core sample from a fairway at Desert Mountain, he says superin-

tendents often neglect to regularly investigate their soils when determining the health and viability of their golf turf.

“We need to do a better job looking underground for problems instead of above ground,” Beard says. “No one ever gives you an owner’s manual on exactly how to grow grass, so superintendents have to do their part. That’s why we can have as many failures as successes.”

But fresh perspectives can help mitigate the failures. The consulting and learning process is a lot of work and a serious commitment, but the time and money invested pays off. Sure, many courses might not have a \$13.4-million budget, but most of Desert Mountain’s budget goes to labor (52 percent) and utilities (18 percent) just like many other golf courses. So it goes to reason that many superintendents can finagle 1 percent of their respective budgets for outside consultations, perhaps beginning with USGA Section agronomists and university extension specialists.

“It doesn’t matter if you are a Desert Mountain or a muni, you still have an obligation to be a good steward of your dollars,” says Stuart Buck, president of Spectron Laboratories, a soil analysis and consulting firm in Phoenix. He has been working with Desert Mountain since 1992. “Shawn has just as tight of a budget relative to expectations as any golf course. You still must be responsible with the dollars.”

And those dollars go a lot further with a little help from academia, industry manufacturers and suppliers. This year, the club is using almost 10 percent less water because grass stands are stronger, and fairway-resurfacing projects have produced better rootzones and waterflow. The club makes better use of its chemicals as well because the harsh but predictable Sonora Desert yields very small windows for optimum chemical efficacy. The cultural and technical improvements create better turf, happier golfers and more man-hours to accomplish other things around the golf course.

“My ultimate goal is to drive down operational costs,” Emerson says. “Whatever I spend on consultant fees and advice comes back to me both agronomically and economically. You need a long-range plan to be successful at providing great conditions today and also solve problems that might occur tomorrow.” ■