

The Burden of Making Green Speeds Safe and Sane Begins With Design

By **TERRY OSTMEYER**
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The recent development of bentgrass and hybrid bermudagrass cultivars that produce firmer and faster putting greens dictates new levels in both playability and maintenance, along with a new look in architecture.

A factor almost throughout the annals of golf course design, green speeds have become a key point of influence for many architects because of the new grasses that thrive at ultra-low mowing heights and thus stretch the bounds of fair play on anything but a relatively flat putting surface.

"Clearly, it's a concern in the last five years or so," says Don Knott, a longtime golf course architect who shares a design office with Gary Linn in Palo Alto, Calif. Knott is a staunch advocate of challenging greens structures that instill excitement to the game.

"We've got grasses now that are so good in the environment of 1/8 inch that there's really no way to slow them down other than by design," Knott adds.

Knott also says that escalating green speeds are not only affecting the design and construction of new golf venues, but, perhaps more so, strongly influencing the renovation and/or restoration of existing facilities — notably those built in the days when distinctly contoured putting surfaces were in vogue.

A Learning Process

In the wake of their much-publicized emergence at high-profile championship courses across the country, the popularity of the "super" cultivars has soared. Course owners and

"Today's built-for speed cultivars affect how golf courses are being designed."

managers are seeking more consistent, top-quality putting conditions but sometimes fail to consider course design and consequences on playability and maintenance.

"We try to educate the client about the new grasses, as well as try to get a feel for what they're looking for, especially in remodels or renovations," says Clyde Johnson of

Hilton Head island, a course designer since 1974. "Usually they're reluctant to change any of the greens' look or flavor, yet most of the time we've got to reduce the slope enough to make the greens manageable for play and maintenance."

"As speeds escalate, greens are getting flatter and larger."

Most golf course architects agree that the all-important slope in greens design has been altered — some say drastically — by the new grasses. Although the norm in slope for

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Green Speeds—

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many years was in the 5-6 percent range, it's now closer to 1-3 percent.

That's a significant change in the realm of golf course design, according to Bob Cupp of Atlanta, Ga., who's been in the business for three decades and learned all about the roll of a golf ball on a green during a 16-year stint with Jack Nicklaus.

Make no mistake, there's a definite correlation between the slope of a green and Stimpmeter readings," says Cupp, who calls the rule of thumb in slope tolerance (mere inches per 100 feet) "the degree of treachery."

"It's not child's play," he says. "It's a science. I got my master's degree in putting slopes at places like Muirfield and Augusta."

Double Jeopardy

The speedy new cultivars are influencing both new course designs and renovations. But the restoration projects demand more intense planning, the designers point out, because it's harder to make the required changes to the greens and still retain a course's historical and physical characteristics.

"That's what makes a lot of these places special," says John Harbottle III, a Tacoma, Wash., designer whose resume includes a six-year run with Pete Dye, as well as some noteworthy renovation/restoration projects in recent years. "It's something we're all very aware of, and the new turfgrasses have made it very challenging."

Reducing slope in many building and rebuilding projects is a genuine concern to Knott, who notes that drainage becomes a major issue as greens are flattened out — a problem that intensifies as a green ages.

"Strategies differ for new course design vs. renovation/restoration projects when the new bents and bermudas are the grasses of choice."

"I think the game loses a great deal of its competitiveness and excitement when you have to return a lot of flatness to the putting aspect," Knott says. "It's also difficult to flatten a green from a design standpoint if the rest of the natural course design doesn't match. The green should be part of the overall terrain."

Johnston adds that a green with a slope of 1-2 percent may be barely visible from the fairway, giving impetus to a trend of some elevation on a hole, either landing areas or greens that also are sloped back to front, to offer the golfer a decent shot perspective.

Innovation, Good or Bad?

Dye, whose storied career as a designer and builder of very challenging — many have said "Dyeabolical" — courses has spanned four decades, says today's new turfgrasses are just another development that has perpetuated the golf indus-

try's hell-bent obsession with longer and faster.

"The new grasses will have a tremendous impact because they will help cause playability to be entirely different — shorter and quicker — and when you build a golf course you have to take that into account," says Dye, who admits to resorting to more subtle design changes in some of his recent work to compensate for increased green speeds.

"Like a lot of other innovations in golf, the new greens turf makes the game easier for the good players, but I'm not sure it's better for the paying customers," he adds. "And, I think the work a lot of these new grasses require raises the already-high cost of maintenance."

Another architect, Damian Pascuzzo, who runs a design firm out of Walnut Creek, Calif., with partner Robert Muir Graves, has taken a moderate view of the new cultivars' effects on design until all the facts are in — both from his personal work and that of the industry overall.

"We're relatively new at using these grasses at our projects, so they haven't changed our focus so far," he says. "I've got a wait-and-see attitude. My take is that in a few years or more we'll really start to see where they're making a difference — maybe most of all in maintenance because of constantly having to keep them cut at 1/8 inch or lower. It's all unfortunate, because I think there's already too much emphasis on putting."

The Art of Compromise

Cupp notes that tee-to-green speed can dramatically
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change a golf course. From an architect's viewpoint, that usually means a larger golf course.

"We've reached the point where we have to figure that into the equation right away," says Cupp, who specializes in creating venues to host major tournaments. "You have to know what that golf course is going to be used for."

However, he says it was a recent renovation project that tested his adaptive mettle the most. In 1996 he rebuilt the greens at Old Town Club, a 60-year-old Perry Maxwell layout in Winston-Salem, N.C., where Crenshaw bentgrass was chosen over Penn G-2 for the putting surfaces. Although Crenshaw is a bit slower than G-2, it's still quick enough to dictate tough decisions regarding the old, undulating, push-up bent/*Poa* greens Maxwell created in 1939.

"It certainly wasn't a subjective issue, it was an objective issue," Cupp recalls. "You couldn't have puttied the original slope of those greens with that new grass. We had to soften them just enough to regain the feel of the golf course that the client wanted. I think it was the most difficult and exacting job I've ever done."

O'Neil Crouch III, assistant superintendent at Old Town for the last three years, says the operation was a success. The Crenshaw has proved to be relatively maintenance friendly, it looks good and is speed enough to delight the membership.

"The playability and aesthetics gained from the project have been great," says the one-year GCSAA member. "We have the quickness we wanted, but if they hadn't toned down the undulations, it would have been too severe. They're tough to Stimp as it is."

Crouch says the new Old Town greens normally run 8-10 on the Stimpmeter, adding that when he turns them up to 11 for events, they are extremely difficult to play. One problem, he notes, is that the club's smallish greens (3,500-4,000 square feet) make finding suitable hole locations tough in the face of the battle of speed vs. slope.

Thrill of the Hunt

Harbottle can relate to Cupp because of similar projects, but the 15-year design veteran relishes such jobs. He says they emphasize what he believes is the game's key element.

"I'm a big fan of the new bentgrasses," Harbottle says. "I think there should be a challenge to putting. I've found that with most of these new grasses, they'll be fast no matter how a green is designed and built."

In the past few years, Harbottle has designed a new venue, Golf Mountain in Bremerton, Wash., and renovated the greens complexes at two high-profile classics — Los Angeles Country Club and Big Canyon Country Club in Newport Beach, Calif. All three jobs involved the new Penn Pals super grasses. Gold Mountain opted for G-6, while LACC and

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Big Canyon both chose the lightning-quick A-4.

“The two rebuilds were especially challenging,” Harbottle says. “At LA Country Club (built in 1911) they wanted their old George Thomas greens basically matched, and at Big Canyon we actually increased the slope. In theory, you have to try and tone down some areas for pin placements, but that can be tough on small greens with slopes of 4 percent or so.”

The project at LACC involved both the North and South courses. Years of topdressing the old push-up *Poa* greens had actually softened Thomas’ original design. Besides being seeded to the new bent, the greens were rebuilt to USGA recommendations.

“The A-4 has been great, but we’re still battling some

“I’ve found that with most of these new grasses, they’ll be fast no matter how a green is designed and built.”

—John Harbottle III

water and soil issues that I feel are not related to the new putting surfaces,” says Bruce R. Williams, CGCS at LACC. “High maintenance is necessary, but that’s also normal for any top course.”

Williams, a 23-year GCSAA member and president of the association in 1996, adds that the project has generally enjoyed rave reviews.

“It’s enhanced the overall play of the golf course; it’s firm and fast because of lower water consumption, and its old look and style have been retained,” he explains. “It’s what the members wanted.”

The greens complex renovation at Big Canyon was a \$4 million-plus operation at the 27-year-old Robert Muir Graves layout. Harbottle added slope and character to the old *Poa* greens to allow the A-4 to strut its stuff. So far the membership couldn’t be happier, according to superintendent Jeff Beardsley.

“Everyone is very pleased. As for maintenance, it’s definitely challenging,” says the 12-year GCSAA member. “Hole locations are especially challenging. It’s a short course and the premium is on the greens.”

Always the defining element of a golf course architect’s work, maintenance is more important than ever, designers say, with the emphasis on more length, more speed and more consistency in overall playability.

“In actuality, maintenance itself is the difference between championship play and normal play on anything we do,” Cupp notes.

Facts Dictate Choices

Another perspective on the greenspeed issue comes from the current president of the American Society of Golf Course Architects, John LaFoy of Greenville, S.C., a 27-year veteran in course design.

LaFoy, who cut his teeth in the business during a 10-year stint with George Cobb in the 1970s, has written on the effects of green speeds and slopes on the game, but it’s his recent research on the new super grasses that provided him with an outlook based more on specifics than generalities.

LaFoy has been involved in the design and building of some USGA greens at Birmingham (Ala.) Country Club. The study has charted the new grasses’ characteristics from week to week. LaFoy says they’re learning that the cultivars change — sometimes considerably — from season-to-

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season as well as over shorter periods of climatic change.

“The location of a golf course has always been vital to design and turf considerations, but the choices that must be made with these new grasses also have to include season and climate and how they perform during the changes,” he explains.

LaFoy says he believes the impact of the built-for-speed cultivars will be less on design than it will be on playability, aesthetics and, especially, maintenance.

“It’s like picking out wallpaper,” he says. “These new grasses give us more options — like bents that can be successful in the South. They give us a better tool for creating courses, especially putting surfaces.”

A Sizable Issue

Work with the new cultivars has led to two different approaches for designers: easy does it for renovation/restoration projects, and bigger is better for new construction. Mostly, the latter points to larger greens.

In the South, Johnston notes that the new bentgrasses allow for the building of greens 7,000 square feet or more. The sleek new bermudas, he adds, can be tamed on surfaces 15-20 percent smaller. Again, there are many options.

Knott agrees that larger greens are a viable solution because they can give a client appealing undulation along with flat and sane putting and pin-placement areas. But, he adds, large greens are costly to maintain and encourage slow play.

Most designers admit that the disease- and weather-tolerance bred into the new greens cultivars, as well as their low dependence on water and turf-care products, are attractive buffers to the issues of speed. Most also hope these grasses improve to new levels of overall performance — more durability and more efficiency in care, and, it’s hoped, less dependence on ultra-low cutting heights for more precise, case-by-case management.

“Speed is nothing new; we’ve been dealing with it all along in stages,” LaFoy says. “It’s important to remember that the improvements the new grasses bring are actually quite incremental. They’re not something we can’t work with.”