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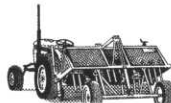
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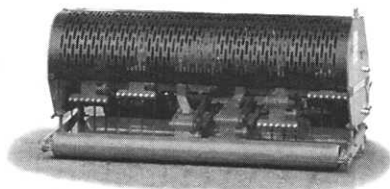


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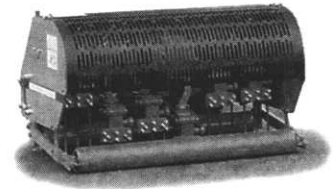
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Stingers—

(Continued from Page 11)

ada killers rarely sting unless handled, stepped on with bare feet or otherwise provoked, their presence may be sufficiently disturbing to warrant control.

Cicada killers prefer to nest in areas of full sun, scant vegetation and light-textured, sandy, well-drained soils. The female wasp digs numerous burrows about 1/2 inch across, 6-9 inches deep, vertical or slightly angled, with several secondary tunnels, each ending in a brood chamber. Excess soil is pushed out of the burrow, forming a U-shaped mound around the entrance. Offspring develop in the underground burrows, emerging as winged wasps the following summer.

Cicada killers often form aggregations with numerous individuals nesting in the same area. Males usually emerge first and patrol the nesting area. They buzz-bomb any intruder, sometimes hovering about or flying into a person's head or back. Fortunately, males cannot sting, and the females are quite docile and do not defend their burrows. However, the mounds themselves are unsightly and can smother patches of grass.

Sand wasps (*Bembix* species) are similar to cicada killers, but smaller. These fast-flying wasps are about 13/16 to 1 inch long and dark-colored, often with pale green markings. Sand wasps nest in sandy areas, usually in colonies. They return repeatedly to their burrows to stock their nests with various kinds of insect prey. Although these wasps aren't aggressive, they're a distraction when they

nest in golf course bunkers.

Like most wasps and bees, cicada killers and sand wasps are highly susceptible to carbanate and pyrethroid insecticides. Small infestations can be controlled by dusting the burrow openings with carbaryl, bendiocarb or deltamethrin to kill the females as they engage in nesting activities.

“Unlike a honeybee’s stinger, the wasp’s stinger is barbless; it’s not lost in the wasp’s first victim, and each wasp can inflict multiple stings.”

Broadcast spray applications are effective when many nests are present.

Emergency Aid

Wasps, especially hornets and yellow jackets, will sting if the nest is disturbed. Attacking wasps release a chemical “alarm pheromone” that causes nest mates to swarm to the defense. Unlike a honeybee’s stinger, the wasp’s stinger is barbless; it’s not lost in the wasp’s first victim, and each wasp can inflict multiple stings.

In most people, wasp stings result in localized redness and swelling. Treatment involves washing the wound to prevent infection, using an ice pack, and taking pain relievers and antihistamines orally. In the case of large, local reactions, elevation of the affected limb and rest may also be needed.

For people who are hypersensitive to wasp and bee venom, stings can be life-threatening. Sting victims should seek immediate medical attention if they experience dizziness, difficult breathing or swallowing or a general allergic reaction away from the wound site. Even if they survive this dangerous initial reaction, such persons may be at even greater risk should they receive additional stings, regardless of whether these occur weeks, months or even years later.

Sting-allergic persons should consider obtaining a prescription for syringes with epinephrine or undergoing immunotherapy, a series of injections that increase tolerance to insect venom.

References

1. Bennett, G.W., J.M. Owens and R.M. Corrigan. 1997. Truman’s scientific guide to pest control operations. 5th edition.
2. Goddard, J. 1993. Physician’s guide to arthropods of medial importance, 2nd edition. CRC Press, Boca Raton, Fla.
3. Malalis, A. 1997. Handbook of pest control, 8th edition. Franzak & Foster, Cleveland, Ohio.

* * * *

(Editor’s Note: Daniel A. Potter, Ph.D., is a professor of turf and landscape entomology at the University of Kentucky. His book, “Destructive Turfgrass Insects: Biology, Diagnosis, and Control,” is available from the GCSAA bookstore or from Ann Arbor Press. His brother, Michael F. Potter, Ph.D., is a professor in entomology Extension at the University of Kentucky. He specializes in urban and structural pest control. This article was reprinted with permission from *Golf Course Management* magazine.)



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

By **TERRY OSTMEYER**
Golf Course Management Magazine

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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as



Green Speeds—

(Continued from Page 25)

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
(Continued on Page 29)



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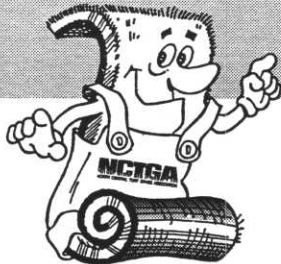


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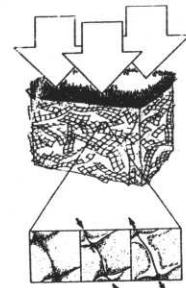
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Green Speeds—

(Continued from Page 27)

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

(Continued on Page 31)



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