Bermudagrass trends: The search for the holy grail heats up

By LARRY KIEFFER

GAINESVILLE, Fla. — "Ladies and gentlemen, start your Stimpmeters!"

It is ironic that the simple adaptation of the inclined plane, one of the five basic tools known by all high school physics students, has launched a quest in some of the more esoteric regions of biochemistry. The quest is for the holy grail of warm-season putting green grasses — a grass that will withstand mowing heights of 1/8 inch, moderate foot traffic and sustained temperature and relative humidity readings above 90. The grass also should be dark green, drought- and shade-tolerant and reasonably resistant to all known pests. A lot cheaper would be nice, also.

There is no such grass on the market at the moment and most turfgrass breeders say there never will be. But many of them in the South are trying to breed the next best thing.

"The holy grail is speed," said Dr. Al Dudeck, professor of ornamental horticulture and a turfgrass breeder at the University of Florida here. Golfers are demanding greens that allow a ball to travel 10-1/2 feet or more when rolled from a Stimpmeter and Dudeck is one of perhaps more than a dozen breeders trying to find a Bermudagrass that will produce that speed — and survive over the long term.

None of the nearly 40 hybrid Bermudagrasses entered on the market by sponsoring agencies since Dr. Glen Burton released the first sterile triploid hybrid — U-3 — from the Agricultural Research Station in Tifton, Ga. in 1947 has so far been shown clearly to outperform Tifdwarf, the *de facto* standard for the past 30 years.

Other hybrid Bermudagrasses outperform Tifdwarf in certain locations under certain conditions, but the naturally occurring hybrid discovered by Burton in the early 1960s in a stand of his Tifgreen has been the hands-down winner in the broadest range of conditions.

Although Tifdwarf has come under some criticism recently for developing "off-types," particularly in Florida, Dudeck and other UF researchers attribute the off-types to contamination, most likely from a mutation that either was distributed to or developed simultaneously in the fields of several different growers.

"If your grass came from a single sprig of the foundation stock, you can have Tifdwarf greens that look and perform as well now as they did 30 years ago," Dudeck told a Tampa seminar in August. He showed slides of a golf course in Hawaii to prove his point.

The real problem with Tifdwarf is simply that it is 30 years old and cannot meet the demands of today's golfers — Stimpmeter readings of 10.5 and beyond in an era of ever-tightening management restrictions.

"It's like pitting a Corvette Stingray against a modern vehicle," said Mark Jarrell, superintendent at Palm Beach National Golf Club. "The Stingray was a classic — and always will be — but it is not going to meet today's definition of 'high performance.' "

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And so the quest for the holy grail.

Although none of the 26 Bermudagrasses entered in the 1992-95 National Turfgrass Evaluation Program trials for fairway grasses was able to surpass Tifway (a Burton hybrid released in 1960) in overall score, several newer grasses looked promising at more locations and under a broader variety of condi-

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Champions Bermuda gets a real-life test at south Texas golf course

WESLACO, Texas — Golfers will get to test the new mini-dwarf Bermudagrass Champions when Tierra Santa golf club, three miles north of the border, opens here between December and February.

The grass was sprigged, but was slowed by unusually wet weather.

Developer and attorney Zeke Reyna agreed to using the mini-dwarf.

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Meanwhile, Reyna has guaranteed the town the course will remain public for at least seven years. It was built on family land and designed to country-club quality, course architect Jeffrey Brauer said. The property includes 210 acres for the 18-hole course and 150 acres for housing.

The dead-flat tract of land was transformed moving 650,000 cubic yards of dirt and building several lakes, with an elaborate drainage system.

Tierra Santa has water rights from the irrigation district, and will switch to effluent when a wastewater treatment plant goes on line in a few years.

Bermuda search

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tions than earlier challengers. And some of those new grasses, categorized as "mini dwarfs" or "ultra dwarfs," are now being evaluated on putting greens.

"Jeff Krans at Mississippi State released some very good grasses last year. They are really doing very well in our plots," Dudeck said, referring to Mississippi Choice, Express and Pride. He also noted Tifton's new TW-72, and grasses released by Jacklin and Lesco.

"Our own FloraDwarf also is showing up well," he added. FloraDwarf did poorly at a few NTEP locations "but that was due to management practices inconsistent with the grass," Dudeck said. "They were mowing at 3/4 inch and FloraDwarf stops growing at a half, so it really wasn't being mowed.

"A lot of grasses that weren't entered in the NTEP are looking very good," Dudeck said. "I don't know if we'll ever find the holy grail, but we'll surely find some new Bermudagrasses that will find their place on the market. Several of our Hawaiian selections (of which FloraDwarf was the first to be released) are looking very promising."

The possibility of cheaper grasses is not entirely facetious. The most interesting development in Bermudagrass science is the emergence of seeded varieties that are performing comparable to vegetative varieties.

"A seeded fairway could cost as little as 10 percent of the cost of sprigging," Dudeck said. He noted that seed has a long shelf life compared to sod and the establishment time for Bermudagrass would be about the same as for sprigging.

The principal disadvantage to using seeded varieties is the danger of weed competition from an improperly prepared seedbed, and erosion "from one of our infamous violent Florida thunderstorms."

The possibility that a fairway planted to a Bermudagrass that produces viable seed could contaminate a green planted to a different cultivar is slight, Dudeck claimed.

"From the time flowers first appear, there is a period of about two or three weeks before the seed is viable," he said. "If you mow at least once every two weeks, you won't contaminate your greens."

In addition to the development of new seeded Bermudagrasses that will rival or exceed existing Bermudagrasses, Dudeck sees three other major trends:

- exclusive releases to a few growers;
- patented vegetative releases; and
- plant variety protection for seeded releases.