

Bermuda breakthrough!

Morris Brown found Champion 'growing where it shouldn't be.' Test results show it to be a valid candidate for use on southern putting greens.

by BILL KNOOP, PH.D / Technical Editor

Once in a while something comes along in our business that's so far ahead of what we have had that it's hard to believe. It may be a new management technique, a new piece of equipment or even a chemical that does a much better job of controlling a pest without hurting the environment.

The latest big breakthrough is bermudagrass. Those of you who have been around this business a few years may know the names of some turfgrasses that set new standards for the respective variety. Some examples from the past are Merion Kentucky bluegrass, Manhattan perennial ryegrass and Penncross creeping bentgrass. These three represent significant improvements over the others of the same variety that we were using.

For years there has been a certain amount of

pressure on golf courses in the south to provide bentgrass putting greens. Since all the bentgrasses are cool-season turfgrasses, growing them successfully in the south has been a challenge that is second to none. Bentgrass greens have been perceived by many golfers to have a better quality putting surface than bermuda, but some suggest that the movement in the south to bentgrass putting greens may be more of a fad. In other words, if "Club A" has bentgrass greens, then "Club B" must also have bentgrass greens. For whatever reason, many southern golf courses have bentgrass greens, and there aren't too many people that won't admit that a good bentgrass green probably may putt better than green planted with either Tifdwarf or Tifgreen.

Closely resembles bentgrass

Champion is the new dwarf bermudagrass that can form a putting surface denser than most of the bentgrasses. Those who have putted on a Champion green concede that they wouldn't have known it was a bermuda green if they hadn't been told.

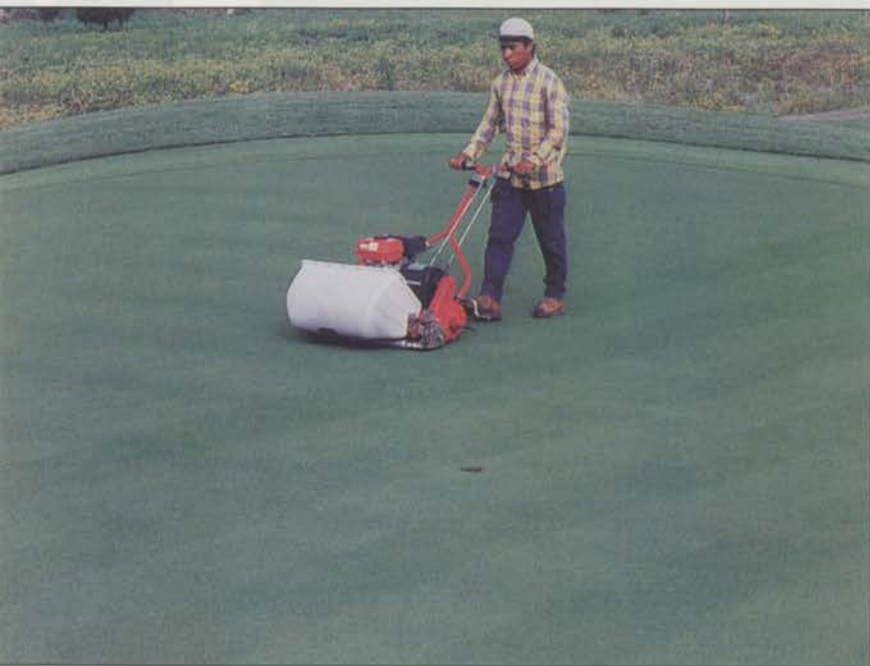
The most interesting fact about Champion is that it was not a product of some very large university or company breeding program. Like some of our other turfgrass varieties, Champion was simply "found,"

by Morris Brown in 1987.

Brown, of Coastal Turf Inc., Bay City, Texas, noticed a very small, different looking, bermudagrass growing in a Tifdwarf green that was established way back in the 1960s. Morris has spent a significant part of what spare time he has had looking for grasses growing where they shouldn't be, or for grasses that just look or act differently than they should. Champion was one

The Champion bermuda has fooled golfers who thought they were putting on bentgrass. Stimpmeter reading goes beyond 10.





Champion bermudagrass is reported to have good tolerance to close mowing, at heights below $\frac{1}{2}$ inch.

of these and it seems to be a naturally-occurring mutant of Tifdwarf.

Morris knew that just because this new bermudagrass looked very promising as a putting green grass, there were many tests that needed to be run to make sure it was as good as he thought. He turned this new bermuda over to Dr. Jim Beard of the International Sports Turf Institute. Beard had previously led the turfgrass research program at Michigan State and Texas A&M universities.

Gene print taken

The first step in analyzing Champion's potential was to take its genetic "fingerprint." This revealed that while Champion is distinctly different than Tifdwarf, Tifgreen or Tifway, it does share some genetic identity with Tifdwarf. Since its closest relative is Tifdwarf—and Tifdwarf is the choice for many bermuda putting greens, Beard conducted a series of comparison tests between Champion and Tifdwarf.

Most rounds of golf are played during the summer months. In the south, when play is at its peak, bentgrass greens can be under their greatest stress. This has caused some serious problems. Summer care of bentgrass, according to many superintendents, has been significantly higher in both materials and labor costs.

We now can plant a bermuda that will produce

Better density, no seed heads

All the tests that Dr. Beard conducted were replicated and analyzed statistically. The results were very interesting:

1. Champion had nearly twice the shoot density of Tifdwarf, when mowed at $\frac{1}{2}$ inch.
2. Champion produced more than twice as many stolons as Tifdwarf at $\frac{1}{2}$ inch. This may help to explain Champion's higher density.
3. While Champion has a high lateral growth rate, it has less than half the vertical leaf growth rate as Tifdwarf. This should mean that the putting quality of a green should remain high longer and after mowing.
4. Champion's leaf blade is about 14 percent finer than Tifdwarf.
5. No seed heads have ever been observed on Champion.
6. In a wear test using a machine that traveled over the green 1900 times, Champion had about a third of the wear damage as Tifdwarf, cut at $\frac{1}{2}$ inch.
7. Champion recovered 3.4 times faster from wear as Tifdwarf.
8. Champion proved to be able to withstand lower temperatures and have better recovery from the cold than Tifdwarf.

B.K.

the putting quality we've always associated with bentgrass. And the hotter it gets, the better the green.

We will be on the verge of a whole new trend in the south: back to bermuda! □

For more information on Champion, contact Morris or Mike Brown, at (800) 463-8873; (409) 245-3231.