

Superintendents develop bermudagrass strategies

In the 'real world,' turfgrass managers are learning to deal with ultradwarf bermudagrasses.

William Knoop, Ph.D.

The new generation of bermudagrasses, referred to as ultradwarf cultivars, is seeing greater utilization across the South as superintendents strive to provide the best-possible putting surfaces for golfers.

The cultivars — Champion, FloraDwarf, MiniVerde, MS Supreme and TifEagle — are all characterized by short leaves, but their lateral growth rates vary somewhat among cultivars. These varieties have undergone wide-ranging tests by researchers, but the real test occurs on golf courses.

Champion was first planted on an 18-hole course in 1995, and has maintained top quality even when mowed to less than $\frac{1}{10}$ inch. Now it is on 124 courses from the desert Southwest to the

mid-South, from the upper transition zone to hot, humid southern Florida.

These golf courses offer the best real-world information on how Champion performs on greens. The superintendents have worked with the ultradwarf and discovered the most-appropriate practices to produce the best-possible turf, according to interviews and surveys.

Mowing programs

According to superintendents' responses, height of cut on Champion varies by region and time of year. In the desert and semiarid regions, it's routinely mowed to $\frac{1}{10}$ inch or less. South-central U.S. courses report mowing to $\frac{1}{8}$ or $\frac{1}{10}$ inch during summer, but as



Photos courtesy of William Knoop

Superintendents report satisfaction among golfers who putt on ultradwarf bermudagrass greens.

KEY POINTS

- Superintendents report low mowing heights for Champion, but under reduced sunlight, they're growing it somewhat higher.
- Greater density means greater potential for thatch buildup in dwarf bermudagrasses, so verticutting and topdressing occur frequently.
- A naturally dark green, dense cultivar doesn't demand as much nitrogen for high-quality turf, compared with lighter green, thinner varieties.

high as $\frac{5}{32}$ or $\frac{3}{16}$ inch during fall and winter. South Florida superintendents do just the opposite: $\frac{1}{10}$ inch or lower in the winter, but as high as $\frac{5}{32}$ inch in the summer.

Because Champion has very high shoot densities, it can be cut at these extraordinarily low levels without thinning out. However, sunlight is needed to maintain growth and quality at extremely low cutting heights, so during cloudy spells in the Southeast, superintendents may allow the grass to grow above $\frac{1}{8}$ inch to keep more energy-producing leaf area on the turf to intercept the reduced amounts of sunlight.

The cultivar also demands more sunlight if higher rates of fertilizer are applied and growth rate increases. Soil temperature plays a role as well: With moderate temperatures, growth rate and demand for photosynthetic products are less than with high temperatures. This may explain the seemingly contrarian mowing habits in Florida.

Verticutting and topdressing

Superintendents say they verticut and topdress Champion greens as often as one to two times per week and as rarely as monthly. With its vigorous stolon production, biomass material builds up

quickly in Champion turf, and thatch removal must be consistent and frequent.

Some superintendents actually verticut lightly *after* topdressing, which seems to work the sand into the dense turf canopy. Only experience can determine the best practice on each course.

Nitrogen

Most superintendents surveyed recommend a low nitrogen rate. The cultivar possesses an inherent high density, high vigor and dark green color, so its need for nitrogen is apparently less than that of other cultivars that rely on fertilization to enhance these characteristics.

Over-fertilization is not advised because thatch is a common result. A low-nitrogen strategy of $\frac{1}{8}$ pound per week applied foliarly seems to give the best results.

Overseeding

It's not easy to get a fall seeding past the dense Champion turf where it can take root for green winter growth. Superintendents who overseed have had the best results with small-seeded varieties, such as *Poa trivialis* cultivars.

Player response

High-density bermudagrass is proving popular with golfers. Superintendents report receiving compliments from players on green speeds and trueness of ball roll.

Clearly, the extra effort required by these grasses can pay dividends in golfer satisfaction. ■

References

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Champion bermudagrass greens can produce extremely dense turf.

William Knoop, Ph.D., is a golf course management consultant. He surveyed superintendents for Coastal Turf Inc., developer of Champion bermudagrass, and used their responses for this article on management techniques.