

Bentgrass vs. Bermudagrass Greens

written by / **LEON T. LUCAS, CGA AGRONOMIST**

Creeping bentgrass, the variety Penncross, has been grown on golf greens in the central parts of the Carolinas since the early '60s. I was told that the first course to do so was Whispering Pines CC in North Carolina. Bentgrass was used on most greens in the central and eastern parts of both states.

New ultradwarf bermudagrass varieties have replaced bentgrass on many courses in the last decade. But this winter's cold weather might have caused them some damage. Because of this, bentgrass could once again become the preferred choice for greens.

There are many "new and improved" bentgrass varieties — such as A-1, A-4, Crenshaw, G-1, and L-93. Plant breeders selected desirable clones developed on old Penncross greens over the years. (You can see the clones as circular patches of darker green, light green, purple, or finer-textured patches on these old greens.) These can be mowed at low heights (1/8 inch) to provide the faster putting speeds golfers want today.

I prefer bentgrass on most courses in the central Carolinas and along the coast. You can expect some decline problems in late summer, but it can be reseeded and recover quickly in the fall, with proper management.

Bentgrass experiences problems from heat stress, diseases, poorly drained soils, and wear during the summer. Superintendents have to spend many hours aerating greens, watering with hand-held hoses, applying fungicides and small amounts of fertilizer, applying wetting agents, and providing good airflow — all to create better growing conditions.

The most desirable growing conditions for this grass features soil temperatures of 50-65 degrees and air temperatures of 60-75 degrees. Root growth is limited when soil temperatures are above 77 degrees, which is usually the case in our summers (temperatures often rise above 90 degrees).

Several actions can create more favorable conditions for bentgrass growth: (1) soil aeration in the spring and fall, to provide better soil drainage and more air in the soil for root growth and summer survival; (2) good sunlight throughout the day, which might require the removal of some trees that have grown larger and cause shade on greens; (3) improved airflow over the surface to help the grass cool by increasing evapotranspiration (similar to removing sweat from your skin) by removing nearby undergrowth or installing adequate-sized fans; and (4) applying fertilizers and pesticides as needed.

Bermudagrass has a different physiology and grows best when the temperature is 80-90 degrees. Better growth in the summer explains why this grass has replaced bentgrass on some courses. However, this grass can be damaged by cold weather when the soil temperatures remain in the 20s for several days.

I observed severe damage on bermudagrass greens in the Carolinas following very cold weather in the winters of 1976-77 and 1984-85. Some courses had bare soil on greens into July of the following year, and clubs had to replant bermudagrass.

The use of bentgrass increased after these cold winters and continued until recent years. Further, the construction of greens with higher sand content results in colder soil temperatures and makes the grass even more susceptible to cold damage.

It is difficult to predict what will happen to bermudagrass greens following colder — or dry and cool — weather. The new bermudagrass varieties do not develop deep root systems and can be more susceptible to cold damage. Also, sources of planting material — sprigs and sod — now are rather limited, and it might take more time for the turf to recover this summer.

I suspect there will be serious winterkill problems on bermudagrass this spring because of the colder than normal temperatures in January. This might be the year that some courses return to bentgrass — or at least overseed bermudagrass greens with bentgrass, in case cold damage occurs.

Much of growing turfgrasses in the Carolinas is still an art. We make the best decisions based on the available information. We will know if we made the right decision several months later, as we look at the quality of turf on our golf greens throughout the year.

➤ CGA staff agronomist **Leon Lucas** is available to help CGA member clubs with their turfgrass dilemmas. Contact him at (919) 779-3241 or llucas@carolinascgolf.org.