

Forty years of building greens have convinced Alex McKay that bent can survive in the South. Good drainage is a must, depth of topsoil is critical. That's why he strongly recommends

THE 8-INCH LAYER

By A. G. (Alex) McKay

When I was a young man I spent three years in Egypt and observed many of their customs. One was that of keeping drinking water in stone jars and letting the water seep through the jars to keep it cool.

When I came to Tennessee to try to grow bentgrass, this is the method I used. I thought if I could build greens and let the water seep through the top soil to tile drains in the base of the greens, the soil would be kept cool. It worked and so I was the first to grow bent successfully in the Southern states.

I experimented further and found that too much top soil is not good in the South for growing bent. Good drainage is a must. This applies to both surface and base drainage through the use of sand in soil and tile drainage under the greens. The water must not stay too long in the topsoil but must be kept moving down to the tile drains. This keeps the soil cool so that bent can grow.

Ordeal by Heat

During 1952 my greens in Chattanooga survived when temperatures ranged from 102 to 107 degrees for 19 days, with only one day of 98 degrees during that time. The greens had to be watered by hand from 11:30 a.m. to sundown and one man took care of three greens. The greens came through in the highest temperatures, I believe, in which bent has ever been grown.

When I started building bent greens in the South, my method was to use 12 inches of topsoil. I since have experimented with different depths of topsoil. My findings are that the best results have been obtained with depths of from 7½ to 8 inches. I have tried depths of from 4 to 25 inches. When using over 8 inches, the grass is not quite as good as it is in the 7½ to 8 inch range.

At 25 inches the greens are a dismal failure. Now I stick to the 8-inch depth and during the hot humid months the grass always comes through in excellent condition. Greens with 12 inches of topsoil have not done too well.

However, you should not use less than 7½ inches. This is enough to enable you to cut a clean hole with the hole cutter without going into the subsoil. New plastic cups are approximately 4½ inches deep.

Sand must be carefully considered. The amount of sand depends on the soil being used. Ordinary soil needs around 120 tons of sharp sand for a 6,000 square foot green. Peat should not be mixed in the topsoil. Sand is added to the soil for drainage, and if peat is added it retards the movement of water in the topsoil. My method is to spread ¾ inch of peat on the top of the green and rake it in with the fertilizer. This holds the water around the roots long enough for the roots to get the benefit of the water. The ¾ inch of peat helps cushion the green and keeps it from getting too hard on top.

With this method of building, a layer of stone under the green is unnecessary, and, in my opinion, a useless expense. The water will get to the tile quicker with 8 inches of top soil than it will with 12 inches of topsoil and stones.

I have tried building greens with peat added to the soil. They are not to be compared to the greens without peat. With peat in the soil I contend that you get more diseases, especially brownpatch and pythium.

The 12 inches of top soil that I started with has become standard. Now I advocate 8 inches of top soil for better greens at less cost. They will also withstand the heat and humidity better. Top-dressing should contain 15 per cent peat moss.

I have not written this to discredit anyone or any method of building greens, but instead to state what my experience has taught me in 40 years of construction.