



Better Turf for Better Golf

TURF MANAGEMENT

from the USGA Green Section

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BENTGRASS PUTTING GREENS AT CHATTANOOGA

By ALEX G. McKAY

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Golf-course superintendents as a rule are a placid group. The average superintendent is a quiet, industrious man with skin of tan who gives his all every day to provide golfers with the best possible playing conditions on a budget which is never quite enough. Yet within our group are some who, with mischievous twinkles in their eyes, sometimes succumb to the urge to turn friend against friend. This they do by initiating a discussion on the feasibility of bentgrass putting greens in the South.

We readily admit we have a gleam in our eye, but it is not directed toward inciting more discussion of the provocative question; we are merely proud of our bentgrass putting greens at the Chattanooga Golf and Country Club.

We rebuilt our eighteen putting greens in the fall of 1951. We used the Arlington (C-1) strain of creeping bentgrass on three greens and the Old Orchard (C-52) strain on the remaining fifteen greens. During the summer of 1952 we experienced a total of nineteen days with-

in a temperature range of 102°F. to 107°F. Ten of these days were consecutive. We also experienced some flash storms which, coupled with high temperatures, oftentimes mean death to grass.

Yet we had only minor troubles on three greens (a few dead spots), while all other greens came through the summer unmarred. Our members consider it a miracle, and, truthfully, it was more than I expected of any bentgrass during so unfavorable a summer. Since the greens fared so well in 1952 (which was the toughest grass year I have encountered in my thirty years experience), I am ever so much more optimistic about the future of bentgrass putting greens in the South.

Experience has taught me that good sub-surface drainage is one of the most important factors in keeping bentgrass putting greens. Sub-surface drainage is vital in times of excessive rainfall. If, during a season, this sub-surface drainage system is put to work only one time, I feel that the expense is justified. I sleep

much more comfortably just knowing that the drainage system is there to function if needed.

I use the herringbone system of tile drainage with tiles spaced not more than 15 feet apart and a fall of not less than one per cent. The tile is placed to a depth which measures 20 inches from the bottom of the ditch to the surface of the green. Between tile lines, I taper the sub-surface soil from the center to the drainage lines on either side to insure against pockets where water could lay and to direct the water into the tile system. Over the tile I place coarse gravel to cover the lines. Then, in spreading the topsoil, I place my boards on the peaks formed by my sub-surface grading.

In the areas directly over the tile lines there is a depth of topsoil of from 14 inches to 16 inches, while at the sub-surface peaks the depth of topsoil is approximately 10 inches. All topsoil is mixed off the green site and is hauled in by wheelbarrow. This phase of putting green construction is done carefully and exactly, as my experience has taught me that good sub-surface drainage is one of the most important factors in keeping bentgrass putting greens in the South.

As is true in most parts of the country, we have to build our greens to with-

stand the excessive heat of July and August, and all our efforts are directed toward seeing us through those trying months. Under our conditions, greens which are drained improperly will suffer during July and August.

Surface drainage is another important construction factor, and where it is possible to do so, I try to provide surface drainage in two or preferably three directions. It is important to remove the water from the surface of the green as well as from the sub-surface areas.

Bentgrass putting greens in the South must be checked carefully for signs of wilt during the hot summer months. During the torrid summer of 1952 we had to watch our greens very closely. On some days we worked until 6:30 P.M. to *hand syringe* the greens in order to keep the grass from wilting. We feel that the practice of light hand syringings, which supplement our usual early morning waterings, often-times means the difference between life and death of bentgrass.

The fertilizing program for my putting greens is as follows: In spring and fall I mix my fertilizer with topdressing and apply it uniformly over the greens. Topdressing consists of 50 per cent coarse, sharp sand, 35 per cent sterile loam soil, and 15 per cent peatmoss.



Alex G. McKay, the author, inspects the sub-surface drainage system while workmen haul topsoil. Mr. McKay uses the herringbone drainage pattern and believes whole-heartedly in sub-surface drainage for best results with bentgrass greens in the South.

The greens are fertilized three times in the spring and twice in the fall. I apply the equivalent of one pound of nitrogen (mostly organic nitrogen) each month during the spring and fall. These applications are supplemented with light rates of ammonium sulphate when I feel it necessary.

A good preventive fungicide program is important especially in the maintenance of bentgrass putting greens in our region. I prefer to take preventive measures as I feel that anything that I can do to prevent spore formation will be of decided value in combating diseases.

The members at the Chattanooga Golf and Country Club are well pleased with the bentgrass putting surfaces. Since the bentgrass greens have been open for play, we have had an increase in membership

and guest players at Chattanooga. Now that our members have tasted bentgrass putting surfaces, they vow that they will never go back to bermuda-ryegrass putting-green turf at Chattanooga.

EDITORS' NOTE: *Mr. McKay has been a golf professional, golf course architect, consultant and golf-course superintendent for thirty years. In that time he has built 120 bentgrass putting greens in the South. Ten of these years were devoted to work in Louisville, Ky., where he designed and built the Shawnee Country Club, rebuilt the Cherokee Country Club, the Crescent Hill Country Club, the Audubon Country Club and the L. & N. courses. He then moved to Charleston, W. Va., where he designed and built the Meadow Brook Golf Course and rebuilt the greens at the Edgewood Country Club. Later he moved to Knoxville, Tenn., and worked on the greens at the Holston Hills Country Club, rebuilt the greens at the Cherokee Country Club, and rebuilt the greens at the Chattanooga Golf and Country Club, where he is now employed.*

CHINCH BUG CONTROL

By JOHN C. SCHREAD

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There is perhaps no other insect of national distribution which is more injurious to turf than the hairy chinch bug (*Blissus leucopterus say.*)

The insect is apparently native to tropical America. It has migrated northward up the Atlantic Coast, the Mississippi Valley and the Pacific Coast and is now found everywhere south of the St. Lawrence River and the Great Lakes. It also extends into the Dakotas, southern Canada and the eastern slope of the Rocky Mountains to Texas. Reports of its presence in areas of the Pacific Coast states are current.

Altitude up to 3,000 feet appears to be no barrier to its survival. When surface temperatures range between 75° F. and 80° F. the insects may, when present, be observed and collected. This insect, obviously of tropical origin, appears to survive the winter as adults only in some areas. There are reports, however, of successful overwintering of immature indi-

viduals during mild seasons in the Northeast.

Winter is passed in protected places, such as under quantities of fallen leaves, in piles of discarded plant material, fence rows, tufts of heavy grass and in dense thatch which has been accumulating in well-kept turf areas for a few or a number of years.

In the spring, in most years, the bugs leave their winter quarters when the temperature is about 70° F., which for the most part may not occur until May. This year, however, in Connecticut an exception to the rule developed.

Investigations of a report of serious and undetermined injury to turf on an athletic field in the vicinity of New Ha-

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