Fertilizing Bermuda Greens for Winter Play

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Of our 36 Bermuda grass putting greens 28 were built up out of sand, topped with a mixture of marl, muck, and sand in equal proportions. While their natural subdrainage is very good, their topsoil is not of a character that can be expected to produce good turf without careful attention as regards its fertilization. Our muck and marl soils are notably lacking in the various plant food elements required by most plants, but we are having success in supplying these elements through an active organic material, activated sludge, used in conjunction with inorganic fertilizers. Two of the greens were planted with stolons and the remainder with seed. We do not use such grasses as rye grass, redtop, and bluegrass, for our winter greens, neither on our regular courses, our large practice green, nor our 9 pitch-course greens.

The activated sludge is applied to our putting greens at intervals of 6 to 8 weeks, at a rate of 25 to 50 pounds to 1,000 square feet. An ordinary seeder is used for making the application. Sulphate of ammonia is also applied to the greens, at intervals of 2 to 4 weeks, at the rate of 3 to 5 pounds to 1,000 square feet. This is broadcast by hand, in the dry state, when applied alone, and properly watered in; when mixed with activated sludge, the material is applied with the seeder.

In April, near the end of our season, we apply a mixture of 2 pounds of sulphate of potash, 5 pounds of sulphate of manganese, 5 pounds of treble superphosphate, and 40 to 50 pounds of activated sludge, to 1,000 square feet. We believe the use of a complete mixed fertilizer of this kind at the end of the playing season helps the grass build up sufficient reserve strength to resist the drought and insect attacks of summer. We buy no mixed fertilizers but mix our own. In the early fall, at the beginning of the rains, hydrated lime is applied at the rate of 15 to 20 pounds to 1,000 square feet.

The applications are determined by the vigor and color of the turf, time of the year, temperature, moisture, and the requirements of play. Our heaviest play is at the time of the year when the grass is naturally dormant, a condition which of course calls for suitable fertilization in order to prepare the turf for the demands to be put upon it. With the exception of 8 of our greens, which were taken over from the old Cloister Inn Club, we treat the greens all alike, since all have about the same kind of soil and drainage, and none are heavily shaded. The 8 Cloister Inn greens give us some trouble and call for special attention, due to the layer-like nature of their topsoil resulting from their having been formerly top-dressed with layers of unmixed materials, especially black hammock sand.

For top-dressing our greens we use a mixture of equal parts of muck, marl, sharp sand, and German peat moss. No fertilizer is put into this mixture. We apply fertilizer only when needed, and before the top-dressing is applied. Sufficient top-dressing material is prepared at a time to dress all of one 18-hole course, this amount giving us a good start on the top-dressing crew. The material is fed dry through a shredding machine into a sheltered place. It is then passed through a mixer of the impeller type, being thrown up through a revolving screen against a partition in the upper or feed end. Impact

against this partition breaks the material to such an extent that as it feeds down the slope of the screen more of the good material comes through in the first handling than would otherwise be possible. The screening crew loads the finished material into trucks which carry it to the top-dressing crew on the green. It is then applied to the green with top-dressing machines equipped with a steel door mat 2½ feet wide by 3 feet long hung from the axle instead of the ordinary brush attachment. We follow this operation by dragging steel door mats in circles down one-half of the green and back the other half, overlapping in a manner much the same as that practiced in penmanship when a series of O's are run together. The dressing is then watered in to save the cutting edge of the mower.

Working top-dressing into turf by dragging door mats in circles over a putting green on the Boca Raton course

During the playing season we top-dress as required to keep a true putting surface, which is at intervals of 2 to 3 weeks. During the summer, when the courses are not in use, we top-dress only about once in 3 months; this is for the purpose of covering the cuttings, which we never remove, since in this manner they are rotted into humus, but in quantities not so large as to create heat in the process of decomposition. The cuttings thus left on the turf, in combination with the peat moss in the top-dressing material, increase the organic content of the topsoil and hence keep the soil in a more porous condition and assist in the conservation of moisture. A dressing of this kind is a great help to the heat-loving Bermuda grass. The turf will respond to the warmth of the sun more readily when plenty of peat moss has been applied, since the darker substance absorbs heat from the sun more readily than does the white sand.

The airplane menace to wild fowl grows more acute each year. The airman is swifter on the wing than ducks and geese and frequently takes advantage of his fast-flying ability to bag ducks, geese, and other game birds. The regulations under the Federal migratory bird treaty act make it unlawful to hunt migratory game birds from an airplane, and the law provides a fine of not more than $500 or imprisonment for not more than six months, or both, for violations. Aviators violate this provision every year, however, some in ignorance of the law and some in disregard of it.

Approach of the sixth hole (343 yards) on the South Course of the Boca Raton Club, Boca Raton, Fla.

First of all, we must observe that in all these matters of human action the too little and the too much are alike ruinous, as we can see (to illustrate the spiritual by the natural) in matters of strength and health. Too much and too little exercise alike impair the strength, and too much meat and drink and too little both alike destroy the health, but the fitting amount produces and preserves them.

Aristotle