

Care of Bermuda Putting Greens

By Dr. Thomas P. Hinman, Atlanta, Ga.

It is generally recognized that there are two distinct methods of handling Bermuda putting greens; one, known as the "starvation method," in which no water is used except the natural rainfall and little or no fertilizer applied. In the other method, which I believe is the correct one, fertilizer is used and also artificial watering to supplement the rainfall. Having used and observed both methods, I feel that I am in a position to pass on my observation and experience which, in a small way, may be a help to those who have the same problems to solve.

In our immediate section, the playing season on Bermuda lasts only about five months, beginning from the first to the fifteenth of June and lasting until about the fifteenth of November to the first of December when the frost kills the Bermuda. As playing is continuous throughout the year, we plant our winter greens around the fifteenth of September to the first of October. We have found that English perennial rye planted on a Bermuda base is very satisfactory—that is, greens are made double size and one-half used for summer play and one-half used for winter. In some instances there are two distinct greens for the same hole—one for summer, the other for winter play.

Bermuda that comes up after winter play has ceased, comes up rather scatteringly. Care must be taken of these greens during the summer so that in the fall all that is necessary is to cut the greens closely, scarify the surface with sharp rakes, clear off the débris that is left, by raking, sow them to English perennial rye at the rate of about 10 pounds to every thousand square feet, fertilize with bone meal and tankage—half and half—at the rate of about 75 pounds per green. This will vary according to the size of the green—I am speaking now of a green containing an area of around 3,000 square feet. A light topdressing to cover the seed is used, composed of woods earth, 50 percent; and sharp sand, 50 percent. It is sometimes wise to mix the fertilizer with the topdressing. Water immediately after planting. Growth is very rapid, grass showing in about a week's time.

When the grass has gotten high enough so that it begins to slightly droop, it needs cutting. The cutting is done with an ordinary lawn mower, being sure that the blades are very sharp. The cutting is continued with this high-up mower until the green is ready to play. Then, the usual mowing is done, the green topdressed, or filled, and rolled.

During the growing season it is not wise to do much topdressing, as it is liable to smother the young grass. If the green has a sufficient Bermuda base, no topdressing is needed except just previous to play. Bone meal is used because it is very slow in giving up its ammonia and works particularly well on this type of grass.

In the springtime, the Bermuda greens that have been laid aside during the winter should be prepared for summer play. In our section, they are usually filled with *Poa annua*. It has been found that the best way to handle this situation is to take sharp hoes and skim off the surface, thus removing all foreign grass and weeds.

Bermuda greens never come up uniformly; there are always a

number of dead spots. These should be scarified and sprigged with fresh Bermuda stolons, as well as the sowing of fresh Bermuda seed each year. The amount of seed needed each year will depend entirely on the green. As soon as the green gets a good start, applications of sulfate of ammonia at the rate of 6 pounds per 1,000 square feet should be made; these applications made preferably in a water solution. However, this fertilizing may be done by broadcasting and the water applied afterwards.

The Bermuda should never be allowed to get high and rank. Early cutting is advisable. The mower should be set low and the green clipped regularly. Early and constant cutting seems to cause the Bermuda to spread. An additional application of ammonium sulfate should be made at frequent intervals, depending on the growth of the particular green under consideration. A light application of fertilizer—about every two weeks—during the growing season is advisable.

It is not necessary to do any topdressing until a few days before the green is to be put in play. To get the best results with Bermuda greens it has been found, in a majority of instances, that a topdressing should be made by using 50 percent of woods earth and 50 percent finely screened sharp sand, using this filling about every three weeks to a month.

To get a good Bermuda green the stolons should be kept buried, only the leaves of the grass showing through. Sometimes a Bermuda green can go as long as six weeks without topdressing, but this is unusual. Where giant Bermuda is used for putting greens more frequent dressings are necessary. In the so-called Atlanta strain, where the stolon is much smaller and the leaf much finer and the growth much more compact, such frequent topdressing is not necessary.

Poa Bulbosa

By H. L. Westover and O. B. Fitts

The Green Section, in cooperation with the U. S. Department of Agriculture, has been experimenting with *Poa bulbosa* at the Arlington Turf Garden for several years. Little has been written about this grass as the results of the experiments thus far have not been such as to warrant very definite conclusions regarding its possibilities for putting green purposes. However recent press publicity has resulted in so many inquiries concerning the value of the grass for winter putting greens that a short article giving such information as we have regarding the grass should be timely.

Poa bulbosa is a bluegrass, the underground stems of which are true bulbs about the size of a grain of wheat. The leaves are fine and of a bright green color. At Arlington Farm it begins to grow about October 1 and remains green until May 1, when it dies down. For this reason it is often spoken of as a winter annual, though it is in reality a perennial since the bulbs remain dormant during the summer, sending up new shoots in the fall. The grass seldom grows to a height of more than three inches until in April when it sends up scattering seed stalks about twelve inches in height. Most of the