

Vegetative Propagation of Putting Green Grasses

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Any grass can be propagated in at least two ways, one by seed, the other by a portion of the parent plant. In bunch grasses a tuft can be subdivided into many portions each of which will grow readily. In creeping grasses a new plant can be produced easily from a single joint of a root-stock or runner. This can indeed be done with nearly any grass, but it is particularly easy with creeping grasses. Indeed, it has long been employed by farmers in planting fields to such grasses as Bermuda and Para. This method of planting is called *vegetative propagation*.

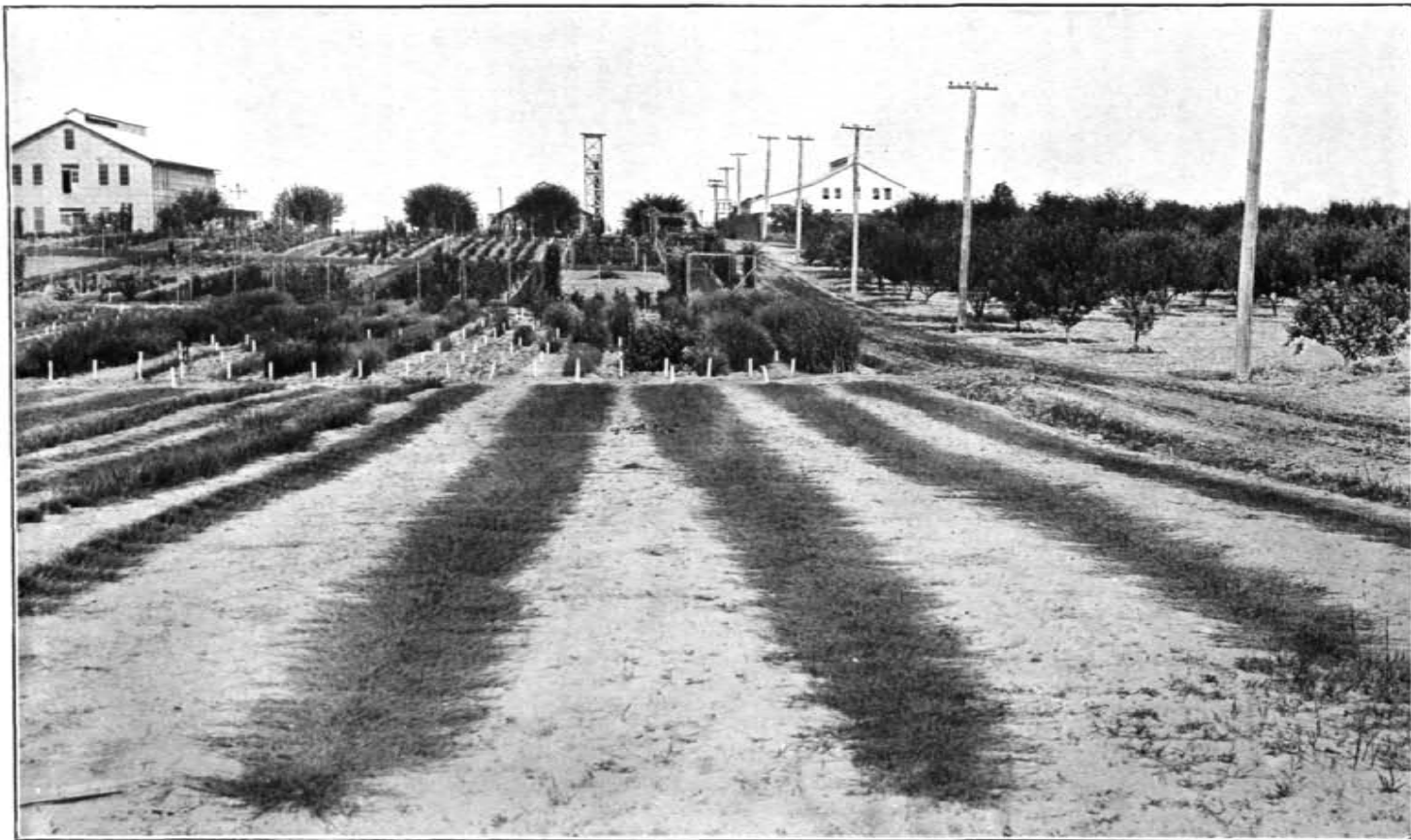
Some years ago, in studying the behavior of creeping bent—all in all, the best of putting green grasses—we discovered that a single plant, under favorable condition, would make a mass of turf six feet in diameter in a single year. The turf really consisted of innumerable runners, or stolons, radiating from the start at the center and rooting at each joint. It was at once evident that this grass could easily be propagated vegetatively. The runners were lifted, chopped into joints about two or three inches long, scattered over well-prepared soil, rolled in, and then covered lightly with soil. The quickness of growth of the joints thus planted is truly astonishing. At first only small plots of turf 8 by 8 feet were thus produced, the turf from each parent plant being perfectly uniform in color and texture. The finest of these were selected for further investigations.

To propagate the selected strains in quantity, runners placed end to end were planted in rows 6 feet apart, about the middle of September. As each runner is about 3 feet long, it takes only about 35 to plant a row 100 feet long. A year later each of these rows had developed into a broad band of grass 6 feet in width (see illustration). This amount of runners is sufficient to plant a large putting green by the vegetative method—that is, simply by cutting the runners into lengths of 2 or 3 inches, scattering over the prepared ground, pressing them in with a light roller and then covered with a thin layer of good soil.

The whole thing is extremely simple. Perhaps the only surprising thing is the ability of creeping bent to form runners. On an old putting green seeded with German mixed bent, the individual plants of creeping bent are seen as circular patches a foot or more in diameter and varying in color from green to decidedly bluish green. In reality the circular patch was made by radiating runners; but these grew comparatively slowly in the dense sod. Plant a small piece of this turf an inch square in open growth, and it is really surprising how rapidly it produces long creeping runners.

While any grass can be propagated vegetatively, it is only with the creeping grasses that it can be done cheaply on a large scale. Grass thus propagated is perfectly uniform, and of like color and texture to the parent plant. Therefore by this method the quality of turf made by any single plant can be increased without limit.

Already a considerable number of putting greens have been planted by the vegetative method. It can safely be said that some of these greens, notably No. 9 at the Columbia Country Club, and No. 9-A at the Potomac



Rows of carpet bent at Arlington Farm, Va. Photograph taken in June, 1918. The rows were planted the previous October and when planted each consisted of a single row of runners; the following June these rows were 3 feet wide, and by the first of October 6 feet wide

Golf course, both in Washington, are covered with the finest turf ever grown anywhere at any time.

But there is the inevitable fly in the ointment. The bents are greatly subject to the "brown-patch" disease which so greatly injures putting greens in July and August and which, indeed, is the most serious menace to fine turf that we have to confront. The vegetative greens suffer no worse than seeded greens, but fully as much. Many selections of creeping bent have been made in the hope of finding strains immune to the disease. Thus far strains more resistant to the disease have been found, but none truly immune. If such a one can be found, the vegetative method for creeping bent could be recommended without stint. Even as it is, the beauty and perfection of vegetative greens are far superior to seeded greens, and the cost of making them not much greater. Indeed, after a turf garden is once established, the vegetative method is quite as cheap as seeding. If a turf nursery such as above described is left undisturbed two years, the turf will be perfectly solid and can be lifted as sod.

Many member-clubs will doubtless wish to try out the vegetative method. To a limited number of such a supply of one of the best selected strains of creeping bent sufficient to start a turf garden can be supplied. These runners should be planted in well prepared ground, in rows 6 feet apart, in September. A 100-foot row will in one year give enough material to plant one putting green.

Killing Chickweed with Arsenite of Soda

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Some years ago my lawn was infested with chickweed. In turning to that ever-present help in all grass troubles "Turf for Golf Courses," I found that the annual variety could be killed with a spray of arsenite of soda in solution but that the perennial kind could only be gotten rid of by cutting out. The difficulty was that I was too ignorant to know whether my chickweed was annual or perennial. Some time later two of my friends who were in the neighborhood looked over the lawn and told me that as far as chickweed, went I was entirely catholic, as I had both varieties. I knew it would be quite impossible to explain the difference between the two to the gardener, especially as I was not at all clear about it myself, and so I bought him the arsenite, told him the proper amount to use, and instructed him to spray every patch of chickweed he could find on the lawn, thinking that in this way we would at least kill the annual variety.

The results went beyond all expectations, as the solution not only killed the annual but also the perennial, and without at all injuring the grass. This was reported to my friends with the statement that their medicine cured more than they claimed for it, and while they did not frankly disbelieve me I suspect they thought the result of the experiment was a pure freak.

This year the third fairway on the west course of the Merion Cricket Club was in rather bad condition and was literally filled with chickweed, patches from 6 to 18 inches in diameter, some of the common kind (the annual), but nearly all, certainly 98 per cent, of the perennial or mouse-ear chickweed, the fellow with the deep green color and the hairy leaves (*Cerastium vulgatum*), also called "Creeping Charley."