

During the month of September, 1925, five thousand square feet of the velvet bent turf, and three thousand square feet of creeping bent sod—the entire nursery—was cut, and used to sod the new ninth green of Baltusrol's Upper Course. The approach and back of the green received the creeping bent.

The turf was a little too young for moving, but it soon became established, and is now in fine condition, although, not yet as dense as the mats to be found in the older seeded greens. It would seem that it takes three to four years for the dense mats of turf to form.

In the treatment of velvet bent in the nursery, it was found that it did not require, and in fact would not stand, nearly as much topdressing as creeping bent, and the quantity of ammonium sulfate that can be applied to it with safety is also less.

Little brown-patch has attacked the velvet bent green, but not to any greater extent than other greens. There was no loss of turf.

As a putting green grass, velvet bent has the following advantages:

Excellent color, fine texture, and a dense turf. Weeds made little headway in well established velvet bent. Less topdressing is needed. The growth of the grass is less rapid than creeping bent, and mowing is much easier. Velvet bent appears to require less water than does creeping bent. There are several greens at Baltusrol in which velvet bent amounts to as high as 80 percent of the turf; yet in those greens little brown-patch gives the least trouble.

Whilst one can not draw conclusions after so short an experiment, the writer has proved to his own satisfaction the following:

1. Velvet bent turf can be produced from stolons in the state of New Jersey.
2. Topdressing must be very light. Application of sulfate of ammonium and similar fertilizers must not exceed two-thirds the quantity normally applied to creeping bent.
3. Surface drainage is imperative. Velvet bent winter kills much more easily than does creeping bent.
4. When once established, velvet bent does not send out runners on the surface as does creeping bent.

Metropolitan Bent at Marble Hall

By H. C. Toomey

Marble Hall, Philadelphia's only "Pay-as-you-play" course, was designed and laid out during the summer of 1924, but the planting did not begin until the last week in September, was held up by heavy rains, and was not finished until the first week of November.

All the tees, fairways, and greens, with the exception of three holes, were sown with the Metropolitan strain of creeping bent by the vegetative process. The soil on the greater part of the course was heavy clay, more suitable for making bricks than for growing grass.

No manure or humus was used on the fairways, but 400 pounds of tankage to the acre was applied. Very little growth was noticed during that fall.

The following spring was dry and hot with very high winds. A water system had been installed when the course was built, and 300

gallons of water per minute was sprayed on the fairways during several torrid spells in April and May. As a natural result, because of the intensity of the sun's rays and high winds, the ground was baked hard, and cracks as wide as an inch appeared in many places.

In building the Marble Hall links it was decided to give the Metropolitan strain of bent as severe a test as possible to see if it would produce the results claimed for it without being coddled, so to speak. That was why no manure was applied on the fairways and why the planting was carried on the previous fall even during bad weather, only being interrupted for a part of October when conditions were impossible because of continuous rain.

The peculiar weather of the spring of 1925 capped the climax of this test, and yet the bent made headway in the summer of 1925 without the use of fertilizers and with only cutting to help it along.

In the middle of June, 1925, the course was opened and has been in use steadily ever since, save for several months each winter. Many of the players were novices at the game of golf and would have utterly ruined fairways of ordinary grass.

In spite of all these handicaps, the bent continued to thicken and reach out to cover bare spots during the remainder of 1925, and during the cold and unseasonable spring and summer of 1926. In fact, by the fall of 1926 the bent had healed practically all the bare spots on fairways and tees, while the greens were in remarkably fine condition.

This spring the fairways were among the best in Philadelphia district, while the greens were in perfect shape. There is hardly a place on any of the fairways where a player can complain of the lie.

These Marble Hall fairways have been cut regularly, and in consequence the turf is firm and springy and there is no trace of the fluffy condition that has often cropped up at courses where the grass has been permitted to grow long and not been mowed consistently.

Three of the fairways were laid out over old pasture land with thick turf of good bluegrass. These fairways were not plowed up and sown with bent, but were left as they were except that they were treated with topdressing and fertilizer. There is a striking difference today between the bluegrass turf and the new bent turf on the other fairways, very much in favor of the latter.

It will not be necessary again to put this strain of bent to such a severe test. Further experiments have demonstrated that if 10 cubic yards of manure per acre had been disced in the fairways before the bent was planted the grass would have come through in much shorter time and the heavy clay soil would not have baked and cracked.

If the soil had been light and fairly good it would not have been necessary to use any humus or manure.

The cost would have been prohibitive to plant these fairways by hand, and so a special set of machinery was devised by the engineers who built the course, and with its aid three men did the work of 50.

Because it is a semipublic course, Marble Hall is crowded during the summer months, especially on Saturdays, Sundays, and holidays, and, naturally enough, a great many divots are taken up in the

fairways and on the tees. But during the growing season the bent heals itself with truly amazing swiftness.

The tiny runners reach out from every side of the hole in the turf until they meet each other, and in no time it seems the gap has disappeared. This ability to swiftly hide its own wounds is one of the most valuable qualities of the creeping bent grass.

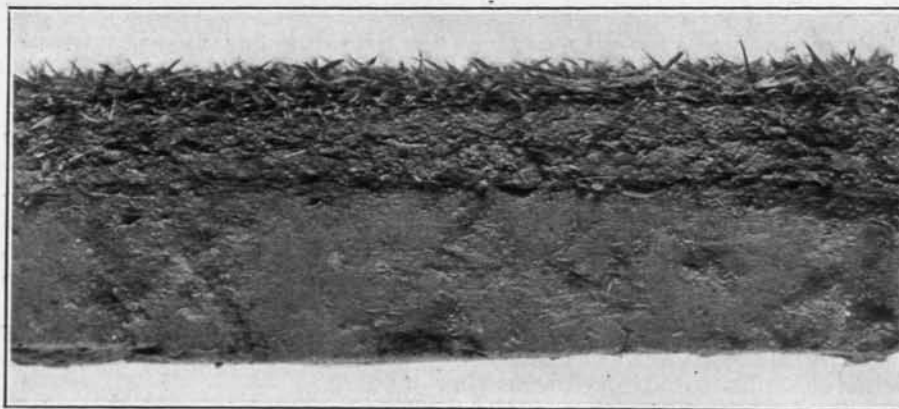
The Putting Surface

By George Cunningham

All good greens have one quality in common, a true "putting surface." Fine greens may be composed of mixed bent, creeping bent, velvet bent, fescue, redtop, Bermuda grass, bluegrass, or various combinations of grasses and other plants such as clover and yarrow and still be excellent if the ball runs true. That the ball shall run truly is always the most important requirement.

A turf of perfectly uniform texture often seems to the inexperienced greenkeeper to have a true "putting surface" when it may in reality have nothing of the kind. This error has led directly to much criticism of creeping bent greens.

Good putting is impossible on an insufficiently topdressed creeping bent green, but as such greens generally present an attractive appearance because of their uniform texture and color, many players have condemned the turf whereas the real cause of trouble was because improper maintenance methods were used.



Cross section of properly topdressed creeping bent turf. Note that the surfaces of the soil and turf combine to form the real "putting surface."

A putting green may be compared to a billiard table, the ball depending on the trueness of the slate for its accuracy and on the texture of the cloth for its speed. The slate, or soil surface, must be true or good putting becomes a matter of luck instead of skill, the fact that the cloth, or turf, may be thin is of less importance, but if the turf is so long and matted that the underlying slate, or soil surface, can no longer directly guide the rolling ball the game becomes a farce. On many creeping bent greens the latter condition exists simply because the importance of the true "putting surface" is either not recognized or is thought to depend on the surface of the turf it-