

## Turf and Golfing Turf

(Continued from August Number)

There are a few other little pitfalls which are quite easy to fall into, such as the different rates of growth; that is to say, some grasses take twice as long to reach maturity as others; the area covered by one grass plant may be two to ten times as large as the area covered by a single plant of another variety of the same age, and some grasses amalgamate and go well with other grasses, and some will only grow in isolation.

By just pointing out a few little difficulties, such as the above, one can easily understand why there is not much good golfing turf on fair greens in America.

### *The Advantages of Heavy Sowing*

The rate the seed is sown per acre is another very important question, and no matter from what point of view the subject is tackled—financial, common-sense, or golfing—heavy sowing is undoubtedly the best and cheapest.

For a start, let us assume that the course in question is a first class venture, with sixty acres to sow, calling, all told, for a capital of, say, \$250,000 and an annual upkeep of, say, \$10,000, the latter of which is very reasonable. If money is worth six per cent., which I understand it is in America, the club has to face a steady outgo of six per cent. on its capital, which, in this case, would be \$15,000, plus the cost of the upkeep, \$10,000, or \$25,000 per annum in all, or, say, \$2,000 per month. Now, if the greens and fairway are sown at the minimum standard rates of one ounce per square yard on the greens and two hundred pounds per acre on the fairway, the approximate cost of the sowing would be for eighteen greens of, say, nine hundred superficial yards, \$330, and sixty acres of fair green, \$3,360, or \$3,690 in all.

The above rates per acre are the minimum standard rates as used in England, which admittedly possesses the best grass-growing climate in the world, and are calculated to produce a

turf fit for play in from nine to twelve months from the date the seed is sown; so if I allow a full year to produce a playable turf in America, where the climate is difficult, to say the least of it, I am being over rather than under sanguine.

I will now bring the figures into collision; the upkeep bill, all told, is \$2,000 per month, and the sowing cost \$3,690.

If the seed is sown at the double rate of two ounces per square yard on the green and four hundred pounds on the fairway, the sowing cost would be \$7,380, which should bring the course into play, given normal seasons, sometime between six and nine months from the date it is sown; but assuming that a saving of only two months is made, it will pay for itself. These are hard figures which no doubt will be carefully scrutinized, and whilst not being a financier, I do not think I have made a mistake.

A friend, after reading a rough proof of my notes, tackled me on the upkeep question by saying, the sooner a course is got into play the sooner will one have to start paying for its upkeep, a truth so palpably true that it is untrue!

The upkeep of a course does not start from the time it is fit for play, but from the time it is sown, and between these two dates the course is not earning a red cent.

There is another very valuable point for the consideration of the financial committee which is usually not given proper thought, and that is the speed of growth or quantity of herbage produced in a season by various varieties of grass.

Grass, from the standpoint of the farmer, who is, of course, the greatest producer, is valued solely by its feeding value and weight of herbage produced per acre, whilst the golfer, who constitutes a small part of the small minority, values the same family wholly by its texture, the lie it affords the ball, and the cost of mowing. Generally speaking, the most valuable grasses from the farmer's point of view are of

the broad-bladed, fast, tall growing, non-creeping class, which give the heaviest cut; and, conversely, from the golfer's point of view, they are of the fine, dwarf, creeping varieties, which give the smallest cut.

It follows, therefore, that a valuable farmer's turf is uneconomical to the golfer, and that a good golfing turf is uneconomical to the farmer.

Now, as the farmer is in such a great majority, it is safe to assume that his requirements keep the boards of agriculture and seed merchants' experts busy, and that the golfer is badly served unless the latter fully understand his requirements and has sufficient knowledge, which cannot be acquired in a day or a year, to meet his case.

The above will be more readily understood when I explain the well-known fact that a good farmer's turf will grow to a height of about thirty inches on an average soil, in an average season, whilst a good golfing turf will only grow about ten inches in the same period.

I do not, however, wish my readers to think that the mowing bill of these two classes of turf is exactly in the ratio of three to one, as this would be wholly inaccurate; it is more like four to one.

Speaking generally, the growth of the coarser grasses is stimulated by repeated mowing, as there is no other outlet for the energy of the plant, whilst the surplus energy of the finer grasses is absorbed by their spreading, creeping nature.

If it were possible for me to produce a turf which after reaching perfection would cease growing, it would easily be worth \$1,000 per acre, and as I can produce one the upkeep of which is at least one-third of that of an ordinary meadow turf, I feel that my reputation stands on a sound base.

Judged from the commonsense point of view, the advantages of heavy sowing are just as striking, especially if one remembers that a close turf is either composed of relatively a few large

grass plants, which may take a year or more to mature, or a multitude of small ones, which can be produced in a few months and which improve with age. Furthermore, if a club decides to sow lightly and wait for the turf to mature, not only does it face a long, tiresome, costly wait, but, worse still, the chances of a partial or total loss through adverse weather are increased about three-fold.

If the seed is sown heavily at the right season, the little grass plants are crowded together, and so afford each other shade and protection from wind or sun almost from the start; whereas, if light sowing is resorted to, the little grass plants have got to stand alone, and a poor chance they get if adverse weather sets in either in the shape of a cold, dry wind or a hot, scorching sun. It is wonderful what a little shelter will do; I have frequently noticed that the seed in the hoof-marks made by horses harrowing and rolling in the seed gets quite a start on its exposed neighbors, and where the seed has been gathered together by a wash-out, it comes up like hairs on a cat's back and is self-protecting from the very start.

When a golfer joins a club, he wants to play on the course as soon as possible, and not wait for a year for the turf if it can be produced in a shorter time.

Most of the golf courses I have seen in America possess interesting natural features, which, if properly handled, are of sufficient importance to earn reputations for their clubs in exactly the same way as they do at home; as a matter of fact, a goodly few have already done so and have been copied, such as the tenth at Brookline.

To my mind, however, to copy the work of another is a sure sign of weakness, and any attempt to reproduce nature futile and ridiculous; a genius accepts hints from both and produces original masterpieces.

Before writing *finis*, I will discuss in a few words one or two points in regard to keeping the course "through the

green," which are peculiar to the North American continent.

Although water and fertilizers are freely used on the greens, the fair greens get none, and yet the play of the long shots is, or should be, just as important as the short shots, and if it is necessary to have good, true putting greens, surely it is equally necessary to get a good lie on the fairway; yet, as a rule, little or no attempt is made to improve matters.

If the above is admitted—as it must be—I ask, why is the turf on the fair green allowed to peter out from sheer starvation, when it could not only be kept alive but improved year by year by an annual dressing of fertilizer at a cost of about \$15 per acre and an occasional sprinkling of water? The answer to the question is always the same: the area is too big for any club to handle; but is this true?

A course six thousand yards long by fifty yards wide occupies approximately sixty acres; from this deduct, say, fifteen acres for the rough in front of the tee and short holes, where good fair green is unnecessary, which leaves forty-five acres to deal with.

The fertilizer for forty-five acres would cost about \$675, but that of the water I cannot even guess at; but surely it would not be prohibitive to put in hydrants, say, one hundred yards apart, and devise some method of semi-automatic watering by means of demountable perforated tubes, after the style of the Skinner system, or a complete system similar to the Cornell system.

An occasional watering would not only be a great help to the grass, but it would also improve the play of the whole course by reducing the hardness of the soil and the abnormal summer run of ball.

The next question is the use of heavy automobile mowers, weighing 2,000 pounds or more. These heavy tools may be economical so far as the wage-sheet is concerned, but I am quite sure that there are few soils and less turf

that can stand their regular use without injury.

If they are used on medium to heavy soils when they are wet, they cap or seal the surface and so arrest the natural flow of air and water and generally get it into a state inimical to the growth of grass, and they crush and bruise the grass if they are used when the ground is dry. On light soils they do not do so much damage, assuming that the turf is thick and well-rooted, but where it is not, the back thrust of the driving roller actually moves the surface soil, especially when starting or grunting up a gradient.

If one with a knowledge of mathematical engineering was to calculate the hammer-stroke imparted to the turf by the driving roller in terms of pounds per square inch, the result would be simply staggering.

The ideal automobile mower does not weigh more than 1,200 pounds, it cuts thirty inches wide, and is operated and steered by a man who walks behind it.

Those who own a heavy automobile mower and do not wish to scrap it, can use it with advantage in the early spring as a roller when the frost is out of the ground, provided that care is taken to see that the soil is neither too wet nor too dry, or, in other words, is in good condition for rolling.

If the few suggestions that I have made are given careful consideration, especially those in reference to the making and upkeep of fair green turf, I am sure good will come of it, as the fair greens of the American golf courses are undoubtedly their weak spot.

THE END.

If silt soil is used without at least a year's weathering, you may be reasonably certain that after seeding, fertilizing, and all else is done, sooner or later the acid constituents will be brought to the surface and the grass will die out in patches, or possibly altogether. In such cases, fertilizers are absolutely useless.