



Care of the Course

The month of April is possibly the busiest of the greenkeeper's year. The weather generally remains cold, with sudden rises of temperature at intervals, but the ground itself has not warmed up sufficiently to start vigorous growth. Members of the club who are seated in steam-heated offices looking out at the glorious sun, wonder why the greenkeeper hasn't opened the regular greens for play.

Owing to freezing and thawing more damage can be done to greens in less time at this period than any other during the year. But when "Forsythia" blooms, the greenkeeper knows that the cutting time is nigh. This is the infallible guide to commence cutting greens; and it is good to keep on temporary greens for at least two weeks after the commencement of cutting, in order that full advantage be given the grass roots to expand, and not to have the growth stunted by the eager golfers of early spring, which if persisted in will be detrimental to the turf for the rest of the year.

In the first part of April greens have to be top-dressed and a more generous amount of nitrogen can be added to the compost now, than at any other time. Fairways should be fertilized 200 to 300 pounds of sulphate of ammonia mixed with 500 to 800 pounds of bone meal, milorganite or any of the grass fertilizers made by reliable houses can be applied to an acre. 700 pounds of mixed fertilizer to the acre should be considered as a minimum, this can be applied now without any fear of burning.

The arsenate of lead treatment for Japanese beetle, worms, and weeds, referred to in the February number, will have to be done now, either by mixing with the fertilizer and put on with a fertilizer spreader, or with a power blower which I am told will shortly be on the market. The putting green applications will be added to the compost. The earlier that this work is finished the better, as *rolling* time is near. The greenkeeper is the best judge when to roll, but he must be fully prepared when the moment arrives to keep the tractor and roller going without stopping even for lunch, if necessary; this can be done by having an extra driver. The reason being that one day's wind will so dry, a course as to render it unrollable until after another rain.

Naturally all the equipment has been overhauled and painted during the winter months. Many courses, even in our days, try to economize by dispensing with the greenkeeper during the winter months, or some without greenkeeper hold back on hiring one until April. Nothing is farther from economy or more costly to the club itself than this practice, because every hour men spend on a golf course has to be paid for and if the greenkeeper arrives on the job in April, he has to hire men immediately in order to protect himself later when labor is scarce. Without having a program worked out, with machinery to be put in order, you can reckon that ten men will lose most of the first two weeks waiting for materials to arrive and repairs to be made, thus in two weeks all the winter savings have gone.

In all outside work the weather is the factor which controls activity. If

members of golf clubs would realize that the greenkeeper does not want to retard the opening of the greens but is doing the thing which will bring the greatest pleasure to the greatest number by protecting and encouraging the reviving grass, and on the contrary his supreme delight is to see his course crowded with contented golfers.

When purchasing grass seeds you will, of course, look for a high percentage of purity and germination, for the best is none too good. Insist also, on a low weed seed content. Seeds may show a high degree of purity and yet carry many harmful seeds of weeds; take, as an instance, high quality Kentucky blue grass, guaranteed to be ninety per cent. pure. Out of one hundred particles ninety are actually blue-

As to laying the turf, very thorough preparation of the receiving soil, and a true but loose surface is necessary, and the raking in of a little sulphate of ammonia (one pound per 100 square feet) just before placing the turf is advisable. Lightly tamping each sod, and cementing between the joints with mixed seed and soil is necessary. An elaboration of the work is to lay bent stolons in the cracks between the sods and to cover them with a compost top-dressing; this taking the place of the mixed seed and soil. After removing turf from the garden the stripped areas should be handforked and a two-inch layer of good soil added, some fertilizer or bone meal raked in and the land seeded again or revegetated. The foregoing remarks deal with turf gardens. The stolon

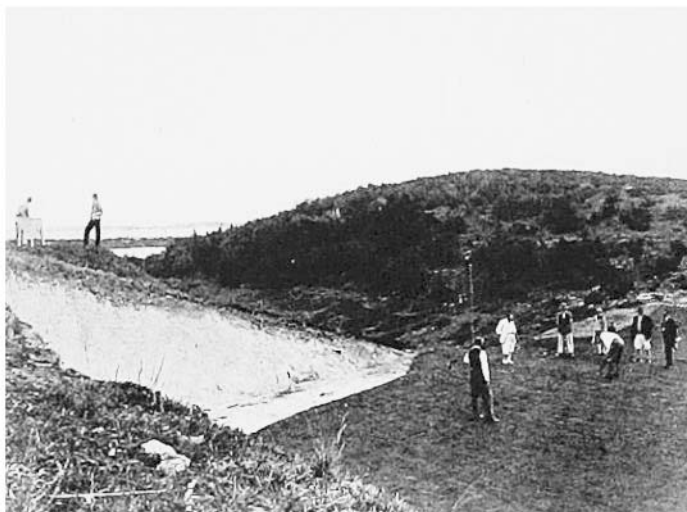
scale new methods, his past experience will give him a somewhat conservative attitude towards the numerous suggestions which continually find their way to the green committee. Many courses are money wasters in their readiness to accept and follow every new proposal that is put before them. Economy rests in a safe and sane policy of routine, testing new ideas freely, but only adopting them after they have proven effective and economical on your own course; for methods and materials used in one section of the country may not be ideal elsewhere.

In building new greens there is sometimes the opportunity and the temptation to mix unusual and untried materials with the soil to enrich it. Sometimes factory byproducts are used, but in an instance recently brought to the writer's notice a comparatively small quantity of refuse from a packing house was plowed under, including among other garbage, some decomposing eggs. The entire failure to produce a turf which followed is ascribed to the products of decomposition, probably some of them of a gaseous nature and harmful to plant life. If quick and good results are looked for it is well to stick to the materials sanctioned by long usage: rotted manure, black wood soil or spent mushroom soil worked into the top four inches; pulverized sheep manure or bonemeal raked into the surface soil.

A dressing of bone meal will go a long way towards producing fine turf in the spring; one pound to each fifty square feet, mixed with compost, would represent an average generous dressing of this valuable material.

A good friend has expressed the opinion that the contributions to this column are not up-to-date. Intended as a criticism, yet it may be taken as a compliment, for methods that are conservative and proved are to be preferred to those which may be radical and largely untried. After all, the general principles underlying turf growing are fundamental and age-old, agriculture being one of the first efforts of civilized man; groping blindly, he must have quickly discovered many centuries ago, that rich soil, good drainage and intensive care produce good grass. What the unlettered farmer of bygone ages and the humble greenkeeper of the past few generations worked out by rule and thumb methods has now been systematized by scientific effort, and the reasons for various processes have been explained, yet there is surprisingly little that is new. The vegetative method of producing bent turf is probably the most outstanding development in recent years, but much that we think modern is not modern at all; sulphate of ammonia, for example, was used as a grass stimulant before the first golf course was built in America. The compost heap has been a help to the grass farmer for many years, and descriptions of compost identical with that made on a modern course were published eighty

(Continued on page 74)



BERMUDA'S NEW COURSE

This is the seventh green of the Shore Hills Golf and Country Club at St. George's, Bermuda. The eighth tee is also shown

grass seeds: but what of the remaining ten particles? Are they mostly empty seed husks or chaff, or do they include some weed seeds to cause you trouble later? Know the purity and germination of the seeds you use, and know also the percentage of weed seeds and their nature; the supplier is in a position to give you a detailed analysis of the seeds which are offered to you, and you should avoid grass seeds containing any appreciable quantity of seeds of mouse-ear, plantain, dandelion, pearlwort, chamomile or lotus.

A word as to the thickness the turf may be cut. One inch is sufficient for bent or blue-grass, but when you lift mixed turf so thin as this you will punish unduly the deeper rooting fescues. Probably you will have noticed how *poa annua* (annual blue-grass) often will survive an unsuccessful sodding job on account of its shallow roots not being damaged, when other grass plants will have died. Turf or tees may well be cut two inches thick.

nursery will be treated later.

If lime is to be added to turf, early spring is a good time to spread it. Lime is one of the essential food elements required by grass; if it is absent from the soil the plant cannot live. It is true that grass plants do not need a great quantity of lime, and that most soils contain enough to sustain them; yet where fairways have been cut through the woods, where a growth of sorrel indicates acidity, where blue-grass in the North or Bermuda grass in the South needs to be encouraged, then lime may with advantage be applied to fairways. Pulverized limestone is the best form of lime to use, and from one to two tons to the acre is the usual allowance.

Lime often encourages some weed growth as well as grass, therefore its use should be restricted to the fairway; only under exceptional circumstances would a light dusting of lime be given to greens.

The most economical practice in the long run is to employ a good greenkeeper, experienced and with a perfect record. While a good man would always be open to try on a small

Care of the Course

(Continued from page 53)

years ago. German bent grass seed has been available under the name of "Fiorin" for the best part of a century, and even the names of the grass plants we use on the course today were given to most of them by the Swedish botanist, Linnaeus, who died in 1778. Not only is there little that is new in greenkeeping, but it is doubtful if the best turf today is much superior to the best of past generations. There is doubtless much more good turf now than there was then, and we aim for higher standards than our forefathers did.

A new variety of grass has been put on the market; it is called *poa bulbosa*, or bulbous bluegrass. Something of a plant curiosity, it does not produce seed; instead it has small bulbs, and it is these bulbs which are now available and which are planted to produce a turf. It is similar to *poa annua* in color, though the leaves are narrower, but the valuable characteristic of the variety is the fact that it only grows in cold weather. Green during winter, as soon as warm weather arrives, it dies back, to pass the summer in a dormant state in the bulb and to commence growing again the following autumn. It will be extremely valuable in the South in conjunction with Bermuda grass, to be used instead of Rye-grass for the winter turf: when *poa bulbosa* is established the turf will automatically swing from Bermuda in the summer to *poa bulbosa* in the winter without the annual reseeding with Rye-grass.
