

New Member Clubs of the Green Section

Pittsfield Golf Club, Pittsfield, Mass.
Country Club of Rochester, Brighton, N. Y.
Winged Foot Golf Club, Mamaroneck, N. Y.
New Brunswick Country Club, New Brunswick, N. J.
Greene County Country Club, Waynesburg, Pa.
Coshocton Town and Country Club, Coshocton, Ohio.
Oberlin Golf Club, Oberlin, Ohio.
Madison Golf Lakelands Club, Madison, Ohio.
Colonial Country Club, Memphis, Tenn.
Mattoon Country Club, Mattoon, Ill.
Crawford County Country Club, Robinson, Ill.
Lawrence Country Club, Lawrence, Kans.
Country Club of Havana, Havana, Cuba.

Questions and Answers

All questions sent to the Green Committee will be answered as promptly as possible in a letter to the writer. The more interesting of these questions, with concise answers, will appear in this column each month. If your experience leads you to disagree with any answer given in this column, it is your privilege and duty to write to the Green Committee. While most of the answers are of general application, please bear in mind that each recommendation is intended specifically for the locality designated at the end of the question.

1. Soil preparation and seeding of new putting greens.—Can you advise me the best procedure for building a new putting green? The ground is good garden loam and well drained. What fertilizers and seed would you recommend for our location?—(New Jersey.)

There are a great many methods of constructing a putting green and we shall attempt to give you only general recommendations on the subject. It is generally considered advisable to work in a considerable amount of well-rotted manure before seeding. Men who have had considerable experience use from 15 to 25 loads of manure to an ordinary-sized putting green of about 6,000 square feet. This manure should be thoroughly mixed with the soil. It is cheaper to do it with a team and a disk harrow than with forks, and the results are fully as satisfactory. We would also recommend the use of about 10 pounds of bone meal to each 1,000 square feet of green. We do not advise the use of lime, as we have found that it is not necessary for growing fine turf grasses, and lime encourages clover, crab grass, and a number of other weeds that are very troublesome. The best grasses for putting greens in your location (and, in fact, the only ones which are entirely satisfactory) are the bents. We would recommend either German mixed bent seed or Rhode Island bent seed. Be sure to have your seed analyzed when you buy it, as a considerable amount of redtop seed has been sold as bent seed, and redtop is very unsatisfactory as a putting-green grass. The best time to seed in your location is about September 1. You might get fairly good results from seeding early in the spring if you can get your ground ready in time, but we advise a late summer seeding in preference to spring seeding.

2. Renovating putting-green turf.—Our greens were built 10 years ago, and have suffered from drought due to the fact that only last year we installed a watering system. Our soil ranges from a clay loam to a heavy black loam. Will you please outline a method of renovating the turf now on the greens, which is, indeed, in a rather deplorable condition?—(Alberta.)

Get all the well-rotted manure you can and make a mixture of one-third manure, one-third rich loam top soil, and one-third sharp sand, such as builders use. Screen the mixture and apply about 3/16 inch of top-dressing on the grass in early spring. At the same time apply ammonium sulfate at the rate of three to five pounds to 1,000 square feet of surface. The top-dressing should be spread evenly and worked into the turf by the back of a wooden rake or long bamboo pole, or by dragging a door-mat back and forth across the green. Water the grass as needed, say two or three times a week when you do not have rain.

3. Applying corrosive sublimate for earthworm extermination.—Will you please furnish us with the best method of using corrosive sublimate for extinction of worms on our greens?—(Ohio.)

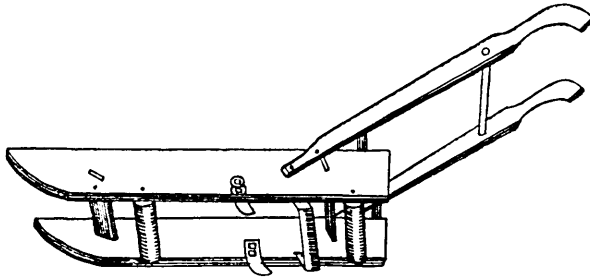
It has been our experience that the easiest way to apply corrosive sublimate to greens is to mix it with dry sand, scatter this over the greens, and then water it in with a hose. Some greenkeepers prefer dissolving it in water and applying it in a liquid form. There is a barrel outfit with a spreader pipe at the bottom covering a strip of 6 feet in going across the green that makes the operation a little faster than can be done by a sprinkling pot. It is necessary to get an even distribution of the poison, or there is considerable danger of burning the grass. It should never be used at a heavier rate than 1 ounce to 100 square feet of surface. We have found that this application is perfectly safe in the spring here at Washington, although we get some burning from as heavy an application as that in midsummer. In hot weather we usually cut the application down to about one-half ounce to 100 square feet of green. If a thorough job of watering is done there is less danger from burning than if it is not watered in sufficiently.

4. Renovating turf.—We were surprised to hear the other day the statement made that some putting greens in the East have had no new seed put on them for years. Without doubt, through ignorance and wrong advice in the past, greenkeepers have committed blunders in their anxiety to produce good putting greens and fairways; but we would like to know whether the statement above made to us is correct. We can well imagine how a creeping bent green would require no new seed but how about bluegrass, fescue, and redtop? These grasses, in our experience, are not free from thinning out and becoming more infested with weeds, the eradication of which necessitates new seed or new sod.—(Minnesota.)

There is no question in our mind that most of the seed that has been put on old turf has been money thrown away. We have seen some evidence of creeping bent seed being used on old redtop turf and gradually changing the turf from redtop to bent; but to put redtop seed on redtop turf or bent seed on bent turf we consider money wasted. In practically all cases it is possible to thicken the stand of grass by the judicious use of fertilizers and compost.

5. A home-made sod cutter.—We want to make a sod cutter, as we do not feel that we can buy one ready-made. Can you furnish us with a working-plan for a sod cutter that can be made at a low price?—(Massachusetts.)

There is no reason why sod cutters could not be made by any blacksmith, but the price of those on the market has usually been low enough to justify buying the ready-made ones rather than having a club make up its own cutters. We have no detailed plans for the construction of a sod cutter, but from the accompanying illustration there should be little difficulty in building one. The sled is usually about 3 feet in length with rollers at each end approximately 3 inches in diameter. The knife is



made of a strip of metal about $2\frac{1}{2}$ inches wide and $\frac{3}{16}$ -inch thick and which is pounded out to a sharp cutting edge on one side. The ends of the knife are bent at right angles to the blade, so that it can be bolted to the sled. There should be several bolt holes so that the knife can be raised or lowered according to the thickness to which you want to cut the sod. A pair of old cultivator or plow handles complete the equipment.

6. Weeds checked by proper use of fertilizers.—Heretofore we have mulched our greens every winter with partly decomposed manure that has weathered in the river bottoms, and we have reached the conclusion that this covering has been responsible for a large portion of the weeds in our greens, and that winter covering of greens is not absolutely necessary. To prevent the importing of weed seeds into the greens we intend to top-dress them at various times during the spring, using 100 pounds of bone meal to the green (about 3,600 square feet), omitting the application of top-soil, and establishing a true putting surface by raking, dragging, and light rolling. Our approaches, which are also infested with crab grass, have never been top-dressed. Owing to poor water pressure we were forced last summer to resort to some daytime watering, the two watering shifts being from 8 p. m. to 4 a. m. and 4 a. m. to 12 noon. Would day watering cause weeds, or have the weeds been washed out of the soil on the greens and been deposited in the terraces?—(Missouri.)

It has been our experience that a large amount of weed trouble can be avoided by composting manure and soil for at least a year before applying it as top-dressing to the greens. This usually destroys all the weed seeds, and it makes it much better to handle. No matter how careful one may be in not using anything which has live weed seeds in it, there will be a crop of weeds just the same. Crab grass seed is very easily scattered about and is probably spread by birds, who eat large quantities of it, and it is also tracked on the greens by the players. The watering could hardly be responsible for spreading the crab grass seed: a heavy rain would do more in washing seed from one point to another on the course than would ordinary watering. It has been our experience that ammonium sulfate is about the only fertilizer that has any effect in discouraging the growth of weeds and that will at the same time improve the texture of the grass. It has been demonstrated that the continued

use of ammonium sulfate (not over 20 to 25 pounds to a 6,000-square-foot green) will discourage the growth of clover, crab grass, plantains, and dandelions. We have never observed any injury to bluegrass by this treatment, but on the contrary have found it to be very helpful. We would advise you to try one or two applications of ammonium sulfate this summer in addition to the bone meal. The first application should be given when the grass starts growing in the spring. Applications of lime in compost encourage the growth of the weeds above mentioned and offset for some time the beneficial effects from the use of ammonium sulfate. We have never found that lime is necessary for growing bluegrass, provided the soil is rich.

7. Fertilizing Bermuda greens.—Kindly give your opinion on the following plans we have made for fertilizing our Bermuda greens. We will first apply dehydrated lime at the rate of 175 pounds to a 2,500-square-foot green. Following this, in about ten days, we will apply about 75 pounds of bone meal to the green. We shall also probably use 50 pounds of cottonseed meal to the green in conjunction with the first top-dressing we apply at about the time the grass begins to grow. We have used practically no fertilizer for the past two years. We believe that by liming we will materially reduce the number of runners, which is one of the big objections to Bermuda greens.—(Arkansas.)

The lime will do no good; but it will do no harm. We believe the bone meal and the cottonseed meal will be very beneficial to the grass. It has been found by a number of greenkeepers who have experimented with the growing of Bermuda grass for putting greens that it pays to top-dress the grass quite heavily in order to keep the runners buried so that they will not deflect a ball; and this is the only method that has been discovered that shows promise for overcoming the chief objectionable feature of Bermuda grass for putting greens.

8. Adaptability of bent and fescue to "sour" soil; effect of ocean spray on grass.—Our course is at the seashore. It is bordered by salt meadows. At one time the soil of our greens was said to be sour. The greens are fescue, bent, and redbtop. These flourish in acid soil. If that is so, would a sour condition of the green injure the above types of grass? In other words, what difference is there in sour and acid conditions of the soil?—(New Jersey.)

The terms "acid" and "sour" as applied to soil mean the same thing. In agricultural language it is generally taken to mean a soil that will turn blue litmus paper red and which has to be limed before it will grow red clover, alfalfa, etc. In our experience we have never found a soil so acid that it would not grow bents and fescues. We have even grown bluegrass on so-called sour soils, by applying plenty of plant food, without the use of lime. It has also been found that a turf on sour land is freer from weeds such as crab grass, white clover, dandelions, plantains, etc., than is a turf on an alkaline or neutral soil. For this reason we recommend that very little, if any, use be made of lime on a golf course; it does help in the decay of a compost bed, but other than for that purpose we would not use it. From what we know of your situation we do not think your greens near the salt meadows are what are generally termed sour. We believe the trouble is due to too much salt from the ocean. The greens may have been flooded during storms, and on these greens it would be very difficult to grow grass. Even if the salt water did not rise over them, there may have been enough spray from a storm to deposit too

much salt for the turf plants. This condition will correct itself in time if no more ocean water hits the greens. We believe it would pay you, if you think that the ocean water is causing the trouble, to dike along the meadows so as to be sure that the water does not come up over these greens. One flood a year would be enough to prevent grass growing successfully on such greens.

9. Correcting heavy growth on the rough.—We have a few very heavy spots of rough, in which balls are easily lost, so that the game of everyone on the course is delayed by hunting for balls. It is our idea to eliminate these spots by using sheep's fescue. We believe the correct thing to do is to plow the spots, cover heavily with sand and harrow the sand in, and then plant to fescue.—(Massachusetts.)

The method we would advise in treating your rough on which the vegetation is too heavy is to plow it shallow—say 4 or 5 inches in depth—and remove this sod and put it in a compost pile. If you can mix some manure with it at the same time it would be advisable to do so. After the ground is scalped in this manner then seed to fescue. Sheep's fescue is probably the best thing to use, although the ordinary red fescue is a little finer in growth and makes an excellent rough in your locality. By this means you could produce a lot of valuable compost for treating the rest of your course and reduce the productive power of your rough so that it will not be troublesome. We believe you would find this much cheaper and more satisfactory than to haul on enough sand to cut down the growth of the grass.

10. Soap suds as an earthworm exterminator.—We have read that the application of ordinary soap suds to turf is effective in bringing earthworms to the surface. Would you advise its use for this purpose?—(Ohio.)

Soap-suds solutions have been used for this purpose with fairly satisfactory results. They are not, however, as satisfactory as solutions of corrosive sublimate or applications of mowrah meal.

11. "Aldehyde" from grass cuttings.—To what extent does the aldehyde formed from grass cuttings injure the turf?—(New Jersey.)

If there is any aldehyde formed from grass cuttings, no chemist has ever been able to detect it. We fear you have been listening to some "turf expert."

12. Preventing injury to putting greens from wheelbarrow wheels when applying top-dressing.—Is it necessary to lay planks or boards on the greens to prevent the wheel of the barrow from scarring the turf?—(Maryland.)

The tires of ordinary wheelbarrows average about 1½ inches in width. These will cut badly into the turf and should never be used on a putting green without the protection of a plank. If you will have a blacksmith make a tire out of ¾-inch metal 3 to 3½ inches wide, this can be shrunk over the old tire. When thus equipped it is possible to wheel ordinary loads of dirt across greens without injury. The load should be dumped over the wheel and not tipped out sidewise, otherwise the edge of the tire will mar the turf.