

## 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. Leaching of compost piles.**—We are getting at the rate of 100 tons of manure a week from our local stock yards, and when the weather permits we are putting the manure into compost piles. The question has arisen as to whether it is safe to leave these compost piles in the open or whether they should be covered with lumber. If not covered with lumber, should the compost pile come to a point at the top or should it be flat? We are told that the compost pile should take in the water. We might add that the piles are all covered with top soil.—(Indiana.)

We think that under your conditions it is entirely safe to leave the compost piles in the open, as the leaching will be relatively insignificant, especially if the top is covered with soil or sod. It is, of course, a good idea always to make these compost piles in localities where whatever leaching occurs is not entirely lost but is confined to the soil in the immediate area of the stack.

**2. Steaming compost.**—The farmers in this vicinity thoroughly steam their soil before sowing tobacco seed. They claim the steaming of the soil kills all germs and that during the season they have no weeds in their tobacco beds. They also claim that the soil becomes absorbent—that is, it is more porous and will absorb more water. The steaming also adds to the fertility of the soil. You understand, there is quite a lot of tobacco grown in this country and the seed is sown in small beds for the growing of the plants, which are later planted out in the fields. It occurred to us that by steaming the compost a great many weeds would be eliminated, and it may be practical where new greens are built to steam the soil covering, say, three or four inches from the top. What has been your experience with regard to steaming compost before applying it as a top-dressing on a green?—(Pennsylvania.)

We know of no attempts to steam top-dressing for putting greens. We are familiar with the method of sterilizing soils for tobacco beds but the conditions are a little different. Young tobacco plants are very susceptible to fungous diseases, and it is impossible to grow them on beds which have been used before for that purpose without sterilization. While sterilizing the top-dressings for putting greens might kill some of the fungous diseases as well as the weed seeds that might be in the top-dressings, yet the turf where it would be applied would be probably infested, so that no great good could be expected. We have in mind starting some experiments with top-dressings this year bearing on this matter.

**3. Money value of mushroom soil; soil tests.**—I am sending you a sample of mushroom soil offered for sale by \* \* \*. It is priced at \$2 per ton f. o. b. shipping point. How does it compare with other mushroom soil? Also will you please have it tested?—(New Jersey.)

The sample is a good one, and at \$2 per ton is very much the cheapest and most effective fertilizer you can secure. As regards specific

tests, there is no laboratory analytic method which is entirely satisfactory. The only tests that are of real value are the comparative plot tests, which require time.

**4. Planting crops to be turned under for soil improvement.**—I would like to have some information on green manuring of fairways. Our soil is rather thin and in some places the gravel or sand comes close to the surface with almost no loam on top. We haven't sufficient funds to enrich these fairways quickly and propose to plow up the rough adjacent to the portions we desire to improve and sow a manuring crop which can in turn be plowed under in two successive crops and the enriched soil obtained in this way could be dragged over the adjacent fairway at slight expense. What crops would you suggest sowing for this purpose?—(New York.)

We would recommend seeding the rough land to oats and Canada field peas, using about a bushel of each to the acre, as soon as the land can be prepared this spring. This could be plowed under about the first of July. A fairly good crop of buckwheat could be grown if planted immediately thereafter, and we are inclined to think it would be advisable to use that crop also and then plow the buckwheat under and seed to rye about the last of September. The rye could be plowed under in May, and the soil should then be sufficiently enriched so that it would help much in fertilizing your fairways in the manner you describe or in composting with manure for top-dressing the putting greens.

**5. Depth at which tile should be laid.**—We are now getting ready to lay our tile and water mains. It has been suggested to us that we should go below a 30-inch level with our tile on account of freezing and drainage, also moisture. In this section of the country farmers usually lay to a depth of from 30 to 36 inches. What would your suggestion be as to the proper depth of golf course tiling with a clay soil such as we have?—(Indiana.)

We believe that a depth of 30 inches will be entirely satisfactory. The tiles must necessarily be placed below the frost line, as otherwise there is serious danger of breakage. Even in heavy clay soils satisfactory drainage is secured at a depth of 30 inches.

**6. Renovating northern putting green turf; seed for northern fairways.**—Would you advise our sowing on our greens this spring as soon as the frost leaves the ground, a mixture of creeping bent and Colonial bent, and on our fairways a mixture of fescue, bluegrass, and redtop, and if so in what proportions?—(Rhode Island.)

We would recommend nothing but bent grass for greens in your locality. Rhode Island bent, German mixed bent, and Colonial bent are all good. The only difference between them is that the German mixed bent contains some velvet bent, which is not found with Rhode Island bent or Colonial bent seed. We consider it best to apply a very light seeding on established greens that have a pretty good stand of turf; in fact, an application of ammonium sulfate as a fertilizer at the rate of 20 to 25 pounds to a 6,000-foot green will usually thicken up the stand of grass better than spending the same money for seed.

For your fairways we would recommend a mixture of Kentucky bluegrass and redtop at the rate of 4 pounds of the bluegrass to 1 pound of the redtop. You may moreover have a good deal of bent in your fairways, and it would be well to encourage the spread of that. We would advise you to place more dependence on top-dressings and fertilizers than on additional seeding to put your turf in good condition.

**7. Rolling putting greens.**—An inspection now (February) of six greens which we planted last October by the vegetative method indicates that they are apparently coming along in excellent condition, but the ground is quite soft, and we have thought that as soon as the frost is out of the ground and it becomes dry it might be a help to roll the greens. What would you think of a light rolling first and a somewhat heavier one a little later if conditions warrant it? What weight of roller should we use? We have hand rollers of two weights, and also power walking machines, which are fairly heavy?—(Pennsylvania.)

We would advise you by all means to roll your greens as soon as the soil becomes dry enough so that it will be safe to go on them. We do not believe you can injure them by hand rolling, no matter how heavily, provided the men do not scrub the roller about on the grass. The green should be rolled straight across and the roller turned after it is entirely off of the green. We have noticed a border effect on greens where the grass is killed for a foot or two around the edges of the green. It has been our observation that most of this damage is done by the turning of the rollers and lawn mowers on that strip. If it is not possible to take the roller off of the green for turning, it should start back in the same track and gradually creep out on the unrolled part. A little care in this detail will prevent considerable injury.

**8. How soon after planting can vegetative greens be played on?**—We are now (February) contemplating the replanting of several of our greens with bent stolons from our nursery with a view to having them ready for play by the time of our spring tournament, which will be held May 10 to 12. The top soil of the greens was prepared for that purpose late last fall. Do you think we would be safe in undertaking this?—(Pennsylvania.)

You will not be able to plant greens this spring and have them in shape to play on by May 10. We have frequently made turf suitable for putting in forty days of good growing weather, by the vegetative method, but we do not get good growing weather, as a rule, in April. If your tournament were a month later we would say there would be no risk in planting the greens this spring and having them ready for play. We would advise you to begin mowing the newly planted greens just as soon as the ground is sufficiently firm and growth starts, keeping them, from the start, just as you would greens in play.

**9. Weed seeds from creek water; controlling chickweed.**—We are troubled considerably with chickweed on our putting greens, both the mouse-ear and the common varieties. This condition we think is largely due to the water we are using for irrigation. Our water is pumped from a creek which is really a country drain and is by no means clean, and by the time it has reached our course it has gathered weed seeds and debris from surrounding land. Can you suggest some means by which we could filter or clear this water?—(Michigan.)

So far as we know there has never been any satisfactory method discovered for screening weed seeds out of irrigation water. A great many devices have been tried in the west, but none of them have proved of value. A screen with mesh small enough to remove the weed seeds would soon clog. While chickweed is very troublesome when it gets all over a green, if it is once weeded out it can be kept out without much trouble, provided it is recognized when it first starts and the plants are removed. The chief trouble comes from allowing it to grow and seed until the whole green is badly infested.