

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.

1. *I am sending you a sample of worm destroyer offered by the ——— Company at ——— dollars per gallon. It works better than anything I have ever used. I would like to know if there is anything detrimental to the grass in it or if you think the price too high.*

I would also like to have an opinion regarding covering our putting-greens with rotted horse manure for the winter. Would it be better to put it on before the ground freezes or at any time later on before heavy snow comes? Or would a good covering of sand be just as good? J. P. K., New York.

The worm destroyer you send is the same preparation as described on page 212 of the October number of THE BULLETIN. Our data thus far do not indicate that the dissolving of the corrosive sublimate with the aid of ammonium chloride really gets more worms; but theoretically it should. You can certainly make the preparation much cheaper yourself than you can buy it as a proprietary article.

Covering your putting-greens with well-rotted horse manure any time during the winter is good practice. If the soil on the greens is already rich, any other litter that does not carry weeds would serve much the same purpose. The principal thing to look out for is not to pile on material so thickly that the grass beneath it is smothered. The top-dressing of greens in winter with sand is also good practice, particularly on clay or clay-loam soils, and especially if the soil is rich. Your choice between manure and sand or other litter will depend partly on the character of the soil and partly on its richness.

2. *We would like to change our putting-greens from sand to grass. Would you be kind enough to let me know the best seed to use and what time to plant the seed? The ground is a rich black loam. The fairway is Bermuda grass. During January the temperature drops at times below freezing. C. S. L., Georgia.*

Under your conditions unquestionably the best grass for the fairways is Bermuda grass, as it ought to remain green with you except for very short periods during the winter, when frosts will brown it temporarily. For putting-greens also the best grass we know of at present in the South is Bermuda grass, and the best results with Bermuda grass on putting-greens are gotten where the soil is of a clay-loam texture. As we understand it, your soil is a sandy loam. If it is possible to locate some clay to mix with this soil, together with a little fertilizer, so as to make the soil of the texture of a clay-loam, better Bermuda turf will be secured. Bermuda can be planted from seed, but there are a good many strains of Bermuda that can be propagated and planted vegetatively. We have one strain which is far superior to any other of which we know. However, to utilize these

vegetative strains it would require a year's time for your club first to grow the material; it should be planted in cultivated rows about 8 feet apart. It is too late in November to plant Bermuda, but the planting could be done early in the spring. Inasmuch as Bermuda-grass putting-greens under your conditions will turn brown during the coldest weather of winter, when it is desirable to have the greens a lively green color, it would perhaps be advisable to seed the greens heavily with redtop about November 1, or possibly a little earlier. The redtop comes promptly and makes beautiful greens during the winter, and disappears in spring as the weather gets hot, but remains green during the winter in spite of the heaviest frosts which you will get. You can convert your sand greens to grass by seeding immediately to redtop. Bear in mind that during the winter you will be putting only on redtop seedlings, which are quite as fine as creeping bent, the coarseness not appearing until the grass gets older; but the redtop will disappear, as stated, as the hot weather comes on in spring. In seeding the putting-greens are highly infested with insects that will serve as feed for recleaned redtop seed; a top-dressing after you have seeded will be beneficial.

The important point to observe in the upkeep of Bermuda greens is to apply rather frequent top-dressings, as the surface runners will get thick enough to deflect a ball, a trouble which is overcome by top-dressing. It is even better to have the turf first cut both ways with straight disks, and then lightly raked so as to remove these surface runners, doing this before top-dressing.

3. *We have had some trouble with brown-patch which did not yield to the treatment of Bordeaux mixture. Would it be better to reseed or sod the bad areas? G. S. F., Pennsylvania.*

The bare spots left by brown-patch can generally be revived by top-dressing with compost and applications of sulphate of ammonia. The manner of using sulphate of ammonia is treated of in No. 3 of THE BULLETIN. If, however, the grass is entirely dead it would be necessary to reseed or resod. If you have good sod to transfer to your greens you could get the greens in shape for play much more quickly than if you attempted to reseed them.

4. *The robins are damaging our putting-greens badly by picking holes in and scattering the turf. Can you suggest a remedy? E. B. K., Massachusetts.*

This indicates the presence of abundant earthworms, white grubs, or other larvae. Visits by robins and other birds seem to be general wherever putting-greens are highly infested with insects that will serve as feed for the birds. The remedy, of course, is to get rid of the worms and other vermin which are attracting the birds. It would be well first to find out just what the insect is.

5. *Our green-keeper informs us that he would like to give all our greens an application of nitrate of soda. It is his intention to apply this the first week in September, and we would be pleased to have you advise us if there is any danger of the nitrate of soda burning the young grass, which was seeded August 15 and thereafter. We understand, of course, that when the nitrate of soda is applied the greens must immediately be*

well watered, which would prevent burning of the older grass, but, as stated above, there is a doubt in our minds if the young grass, which is just three to four weeks old, can stand this solution without injury. E. A., Missouri.

If the young grass is growing vigorously we would not advise the application of nitrate at this time. If, however, it looks as if further fertilizing would help it materially there is no objection to using the nitrate. Of course, with young grass, as indeed with any grass, care must be taken not to burn the grass in applying the nitrate of soda. To avoid the burning effects we would advise you to apply it at not to exceed 5 pounds per 1,000 square feet. The material should be thoroughly pulverized before application, and it is preferable to mix with sand. The greens should be well watered after the application. Still safer is it to apply the nitrate of soda in a solution at the rate of 1 pound to 10 gallons of water, the solution being sprinkled on the greens. Even then the greens should be well watered after the application.

6. *Our greens, which were seeded a year ago this fall with a mixture of redtop and fescue (before we were a member of your Association), and which were reseeded again this fall with straight fescue, are showing quite a little clover right recently. Early this spring we applied crushed limestone to the greens. Could this have caused this growth of clover? It has come in patches as large as a foot in diameter, and on some of the greens these spots are very thick. Can you advise of any method to help us get rid of this? Although the coarse redtop from last fall's seeding predominates, we can distinguish quite a little fescue in our greens now.*

Any advice as to close cutting or trimming of the greens in early spring will be appreciated. R. A. Y., Indiana.

Lime certainly promotes the growth of white clover in putting-greens, but we would not expect a top-dressing of limestone to accomplish much along that line the first season. It is extremely difficult to get rid of white clover in a putting-green. We have been experimenting by spraying with solutions of ordinary table salt used at the rate of one-half pound of salt to 1 gallon of water. By spraying carefully with this we have been able to make the clover patches deteriorate and have practically killed them out in some places in four or five successive sprayings without injuring the grass to any appreciable extent. You understand, however, that salt will kill the grass if applied too heavily, and any attempt to get rid of white clover by this method will have to be made very carefully or considerable damage will be done to the greens.

With regard to the cutting of your greens next spring, we would advise keeping them cut down to playing condition just as soon as you can begin in the spring. We see no advantage whatever in allowing grass to grow beyond the putting stage, as it almost invariably thins up the turf, and it takes several weeks to bring it back into condition.

7. *Our soil is a heavy clay, yellowish gray in color, and bakes out very hard in summer so that we have a great deal of difficulty in keeping any quantities of turf on it. Can you suggest a remedy? A. H. F., Wisconsin.*

The best thing for you to do is to add large quantities of sand and humus material to the soil, mixing them in thoroughly, by harrowing or otherwise, until you get a soil of the consistency of a good garden loam.

Relatively large quantities of sand or fine cinders or similar material tend to break up the clay, as also do fairly large quantities of humus material. The best form of humus is well-rotted barnyard manure, although leaf-mold is excellent. If the land is already in turf you can gradually better matters by repeatedly top-dressing with sand and humus materials.

8. *We are contemplating building a new putting-green this fall. The ground is low, but well-drained and fairly shady. At present it has a luxurious growth of grass and clover. Would you advise a liberal application of acid phosphate, muriate of potash, and sulphate of ammonia before applying the seed? C. P. M., Pennsylvania.*

Well-rotted barnyard manure of good compost is, all in all, the most desirable fertilizer to use for turf grasses. The next best fertilizers are organic substances high in ammonia, such as bone-meal, fish-scrap, tankage, dried blood, etc. In the absence of either manure or organic fertilizers you may use sulphate of ammonia or nitrate of soda. The former tends to put the ground in an acid condition, desirable for bents and fescues; the latter tends to make the soil neutral or alkaline, not desirable for any turf grasses except perhaps bluegrass. Generally speaking, not much benefit is obtained from the use of phosphates or potash as fertilizers for turf grasses; the nitrogenous ones are the most effective. As a rule we would not recommend the use of lime, certainly not for the bents or fescues, and judging from our experience it has little to do with the success of bluegrass.

9. *We are building a golf course here and would appreciate a line from you as to the best grass seeds to use for the putting-greens and fairways. Our soil is a sandy loam with clay subsoil, and our course in places has become washed and the outcroppings of clay are in evidence. We have prepared the greens in a special way, by adding rich woods loam, crushed lime, stable manure, and bone-meal. The Bermuda is growing nicely, but after the first frost this Bermuda will naturally be killed down, and it is our idea to coat these greens lightly with rich sandy soil and then plant some kind of grass that will withstand frost, either Italian or Japanese rye-grass or perhaps Kentucky bluegrass. J. B. W., Mississippi.*

We take it from your letter that your greens are seeded with Bermuda grass. In order to maintain good putting-greens of Bermuda grass they should be top-dressed with good compost or rich soil about once a month, with a soil or a compost of a clay-loam character; with this type of soil Bermuda does very much better than in a sandy soil. We would not advise top-dressing with sand. For your winter turf you can use either Italian rye-grass or redtop, the latter being the finer but not growing quite so rapidly as the Italian rye-grass. The greens should be seeded heavily about the first of October. The grass comes on promptly and will make a nice green covering during the winter and disappear early the following summer, when the Bermuda begins to come again. For your fairways there are really only two grasses to be considered, namely, Bermuda grass and carpet-grass. Regardless of what you plant, the carpet-grass will occupy the lower areas of your fairway, but the Bermuda is likely to persist on the higher and drier areas. Probably the wisest thing to do, if your fairways are not already seeded, is to seed them to both Bermuda and to carpet-grass using each at the rate of eight or ten pounds per acre. This is rather heavy seeding, but that is desirable for fairways.