

QUESTIONS AND ANSWERS

All questions sent to the Green Section will be answered in a letter to the writer as promptly as possible. 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 Section.

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. Topdressing with pure sand in fall.—The question arises as to whether we should cover our greens for the winter or leave them uncovered. Heretofore we have given the greens a light topdressing of sand alone and found that this gave us good surface drainage and little or no winterkill. However, some think a heavy compost topdressing better. We should be glad to know your experience in such matters. We have found cases in which a heavy topdressing on greens over winter has caked and held the water, to the injury of the grass. (Illinois.)

ANSWER.—We have topdressed greens with sand and other materials over winter and have obtained best results from a topdressing of compost to which a little more sand has been added than is customary with compost used during the growing season. Compost of this character, applied at a rate not to exceed 1 cubic yard to 5,000 square feet of surface, is not liable to pack or cake over winter.

2. Grasses for sandy soils in the North.—We are constructing a golf course on land which contains quite a bit of sand. The vegetation on this soil consists of scrub pine and a few scrub oaks. We realize it will be more or less difficult to grow grass on this sort of soil, and are writing for your advice as to what is the best procedure in the preparation of fairways and putting greens. (New York.)

ANSWER.—It is very difficult to grow turf on land that is very sandy. If any grasses will succeed on the land in its raw state it will be Rhode Island bent and red fescue; it is extremely difficult, however, to get a good stand of red fescue. White clover will also be a useful element, especially on the fairways. It would be much better if the soil could be improved. This could be done by mixing clay or clay loam in the top two or three inches of the soil, using sufficient clay to bind the particles of sand together. With careful fertilizing you should then be able to grow good turf, using the grasses mentioned above, and bent alone for the putting greens. It will pay you first to get the soil in good condition before attempting to grow grass on it.

3. Use of cinders and sand in lightening heavy clay soil.—I understand that cinders have been used to good advantage in lightening heavy clay soil and that they are highly beneficial in the treatment of soils that approach the gumbo or prairie clay type. Please let me know how the cinders should be applied, and in what quantity. (Quebec.)

ANSWER.—In the case of heavy clay soil, any granular material not too coarse that can be mixed with the top few inches of soil will help materially. Coarse sand is about the ideal for this purpose, while cinders or any similar material will accomplish good results. It takes relatively enormous quantities of such material, however, to modify the texture of a soil. The best way of applying the material is to scatter it over the surface and harrow it in well. An application of 2 inches of sand or cinders should be harrowed into the top 3 or not to exceed 4 inches of the soil. The amount to use, however, depends a good deal on the heaviness of your clay soil. Before making a complete application therefore it would be well to experiment on a small plot of ground to ascertain the quantity of material needed to produce the results desired.

4. Peat-moss for putting greens.—Please let us have your opinion as to the value of peat-moss for putting greens. (New York.)

ANSWER.—We have done considerable experimental work with peat-moss but we can see no benefit from its use in either putting green maintenance or construction. All the evidence we have found indicates that ordinarily good soil, well drained, is all that is needed to start a putting green, and that turf of the highest quality can be maintained from this start by topdressing with soil and fertilizer. If used to excess we can see how actual harm might result from peat-moss.

5. Value of seed harvested from a creeping bent nursery.—Having no use for our creeping bent nursery the past season we allowed it to go to seed and have harvested the seed from the nursery. Would you consider this seed of any value? (Pennsylvania.)

ANSWER.—We have succeeded in satisfactorily germinating seed harvested from creeping bent nurseries.

6. Controlling weeds in traps and bunkers.—Will you please tell us the best way to sterilize the soil of traps and bunkers so as to kill all vegetation and prevent the ingress of grass and weeds? (Massachusetts.)

ANSWER.—The chemical weed-killers mentioned in the article in *THE BULLETIN*, Vol. IV, page 169, are suitable for the purpose. Probably the cheapest of these is common salt. A saturated solution may be made of this and applied to the soil. An application of about 1 quart to the square foot should be sufficient. The salt will of course in time wash out of the soil, so that the application will eventually have to be repeated.

7. Utilizing manure containing a large proportion of straw.—There is a hunting club about four miles from our course and it is anxious to contract with us to give us free all their manure if we will contract to keep their bins clear. This would mean about 300 loads of manure a year. There would, of course, be a large proportion of straw in the manure, since we would be obliged to clear it out frequently from the bins. Would you advise us to use manure of this character, and if so in what manner? (Ontario.)

ANSWER.—We would suggest that you lose no time in accepting the contract. We believe you could easily make use of 300 loads of manure a year by composting it. Even if it contains a considerable proportion of straw, it will compost well with soil, especially if you

add ammonium sulfate. A number of clubs have obtained good results from mixing ammonium sulfate with straw and manure in compost piles, using about 100 pounds of ammonium sulfate to about the equivalent of a ton of dry straw, which of course would mean in your case considerably more than a ton of the material to get this amount of straw, since it would be mixed with manure. The compost should be kept moist and worked occasionally. It should be screened before using and the coarse material thrown back for further composting. Rotary screens are very helpful for the purpose of screening. We have about reached the conclusion that it is practically impossible to have really first-class putting greens without compost. The applications should not be heavy, nor should the compost contain a large proportion of organic matter, such as straw and manure. Twenty to 30 percent, preferably 20 percent, of organic matter is all that is needed in the compost; the other ingredients, such as clay or clay loam and sand, should be added in proportions to suit the character of the soil on the course. The working of the compost can be economically done by driving over it with a harrow, provided the material can be spread out thickly over a rather large area.

8. Seeding as late as October 30.—We are building some new fairways which we are anxious to have ready for play next summer. Do you think it is too late to plow and seed these now, or should we postpone the work until spring? (Northern New York.)

ANSWER.—We would advise you to defer your seeding until early spring rather than attempt it as late as the end of October in your latitude. Fortunately spring seeding in your latitude gives fairly good results. South of that, however, spring seeding should be avoided whenever possible. Unless there is some special reason, such as danger from washouts, we should think it would be advisable for you to plow your land any time in the fall or early winter when it can be satisfactorily worked, so that it may be made into a good seed bed as early in the spring as possible.

9. Winter planting of bent stolons.—Please advise me whether or not creeping bent stolons could be successfully planted during the winter months. My plan would be this: Catch the soil in a moist condition after a light thaw, broadcast the stolons very thickly over the surface, and press them firmly into the ground as they are planted. I would follow this with a topdressing during a spell of freezing. Would not this method prove satisfactory if moisture conditions were properly taken care of? (Missouri.)

ANSWER.—We should hesitate to plant stolons during the winter in your climate, as during the very cold weather they would be pretty apt to die. We believe you could safely plant them up to the end of November, but after that the chances are they would die. Your best plan would probably be to put them on the prepared ground just as early as you possibly can in the spring. That is not as good as late summer planting, but we believe you could look forward to success.

10. Applying cottonseed meal.—How is cottonseed meal applied as a fertilizer for putting greens? (Virginia.)

ANSWER.—It may be applied either straight or mixed with sand. You would be safe in using up to 10 pounds to 1,000 square feet, on putting greens.

MR. GREEN COMMITTEE CHAIRMAN:

This fall we furnished many of you with enough bent of the Washington or Metropolitan strains to plant two nursery rows, each 100 feet long, and you were perhaps discouraged because you wish to plant all your greens to one strain soon. So you can in two years, provided you don't use your nursery stock next year.

Each of those two rows, planted from one square foot of turf, will by next fall, if properly cared for, have grown from a thin green line into at least 300 square feet of turf—a total of 600 square feet—enough to plant one green 6,000 square feet in area. But don't make the mistake of planting it. Be patient. Replant your 600 square feet of turf about the quality of which you have no doubt just as you did this fall. Then tell your Board of Directors that in 1928 you can convert all your greens to the Washington or Metropolitan strain. And so you can, for in 1928 your 600 square feet will have become a turf garden containing 180,000 square feet of as fine creeping bent as is known.

If your greens are very large, perhaps averaging 8,000 square feet, the area to be planted is 144,000 square feet.

Plant them at the rate of 1 square foot of nursery stock to 1 square foot of putting surface, if you wish, although 1 to 10 is absolutely safe. You will still have a surplus of 36,000 feet, part of which it would be well to care for exactly as you would a green so that resodding can be done whenever advisable.

But if we receive a request from you next season for more Washington or Metropolitan we will know that you are probably working on an 18-year program, so make haste slowly, cultivate your nursery, weed it, water it, and if necessary fertilize it.

THE GREEN SECTION.