OUR LETTER BOX

The Green Section receives numerous inquiries concerning local turf problems and is always glad to reply to them. With the hope that some of these questions and answers may be helpful to others besides the original correspondent, a few of them will be published. While most of the answers will have a general application, it should be remembered that each recommendation is intended for the locality designated at the end of the question.

Topdressing Greens.—Two of our greens are Cocoos bent and 16 are Washington bent. They have never been smooth. Since we topdress our greens only three times a year, I am wondering if more frequent topdressing would not help. What number of topdressings do you recommend during the six months of playing season, beginning in April? (Illinois.)

ANSWER.—Topdressing is ordinarily applied primarily for the purpose of truing the putting surface. Therefore, since your greens are not smooth, the chances are they would be improved by more frequent topdressing.

Sometimes topdressing does not work down into the grass properly due to a heavy mat of grass. In such cases the greens remain irregular even when a liberal topdressing is applied and well worked in. When this condition develops it is well to rake the green thoroughly to remove as much of the excess grass as possible. The raking should be done when the grass is growing vigorously either in late summer, early fall, or spring. The smoothness of the green should be the guide as to the time for topdressing and the number of times it should be applied during the playing season. On some greens one or two topdressings a year are ample whereas under other conditions it is best to topdress lightly every other week.

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Air Circulation Reduces Severity of Brownpatch.—We have been having trouble with brownpatch on our greens each summer in a wooded section of the course. The mercury treatments seem to be less effective there than on the other greens. I should appreciate your suggestions for improving this situation. (Maryland.)

ANSWER.—If the greens which are difficult to maintain during the summer months are partly surrounded by large trees, the low-

hanging branches may be cutting off the free circulation of air. It has been demonstrated that adequate circulation of air reduces the severity of attacks of brownpatch and other turf ailments. If some of the lower branches could be removed in such a way as to open air channels and permit the wind to blow across the greens, we feel sure that you would have less difficulty in maintaining the turf during the hot sultry periods each summer. Such openings need not detract from the landscaping effect of the trees and would be an advantage from the standpoint of playing conditions as well as of the maintenance of nearby turf.

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Avoid Excessive Use of Fertilizers.—Playing our course one week day in the spring I was so delighted with the freshness and color of our greens that I invited the Chairman of the Green Committee of a nearby club to be my guest over the week-end. On our arrival at the course, however, I found the greens lifeless and almost a slate gray and learned that the greens had been topdressed the day after I had played. Subsequently I noticed that the same thing occurred after each topdressing.

Later, in August of the same year, when extremely high temperatures and moisture alternated for several weeks, nearly half of our greens had brown, dead spots (not brownpatch although that was a complication) averaging from 5 to 10 percent of the entire surface.

Our fertilizing program for the last several years has been as follows. The first topdressing has been compost reinforced with a liberal quantity of cottonseed meal. Thereafter we have topdressed once a month with compost to which has been added a complete organic fertilizer, 6-8-5, with a tobacco stem base, using 8 to 10 pounds to 1,000 square feet.

It has been my feeling that our applications of fertilizer have been excessive, and that consequently the turf has become tender and lacking in resistance. I should appreciate having your opinions and recommendations on this question of the fertilizing and topdressing of our greens. (Pennsylvania.)

ANSWER.—If your topdressing is of a good quality and high fertility and is applied liberally you no doubt are using entirely too much fertilizer. In figuring fertilizer rates, greenkeepers often overlook the amount of nutrients applied in compost. In recent years there has been a tendency to do less and less topdressing, and applications of fertilizers have

been increased to compensate for the reduced amounts of nutrients applied in compost. The rates which you have mentioned would be entirely satisfactory on a poor soil, but if your program has been continued over a number of years you no doubt have built up a fairly rich soil which should not require so much fertilizer as you are applying. We regularly advise that the fertilizer be applied much more sparingly during the summer months than in spring or fall.

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Time Required After Planting Bents Before Greens Are Ready for Play.—We are considering planting some of our greens with New Brunswick, Washington, or Metropolitan bent. Our present plan would be to plant a turf nursery and transplant the sod from there to a green when it is sufficiently far advanced to be used within a short time after being laid. How much time should be allowed for the development of the sod after the planting of the nursery and how soon after sodding can the greens be used for play? (Ontario.)

ANSWER.—For planting a nursery and doing a resodding job it would be advisable to plant the nursery this year and plan to use it next year. When sod is a year or two old it is much easier to handle than when it is much younger. When the sod in your nursery is well established it should be practical to move the old sod from your green and replace it with new sod, so as to be ready for play within 2 weeks from the time the old sod is lifted. There are many cases on record where greenkeepers have had everything in readiness and a good staff on hand Monday morning to remove the old sod, regrade the green, cultivate the surface soil, etc., lay the new sod and topdress it ready for the Saturday and Sunday play of the same week. Such newly sodded greens are by no means perfect putting surfaces but are passable and usually better than temporary greens. It does not hurt the new sod to be played on while it is growing and gradually being trued up by repeated topdressing.

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Control of fairy rings.—We realize that there is not much that can be done about fairy rings, but do you think it would be worth while to try iron sulfate or corrosive sublimate? (Ohio.)

ANSWER.—So far as we know there is no satisfactory method for the control of this pest. To our knowledge wherever iron sulfate and corrosive sublimate have been given a thorough test they have failed to

control the fungus. The trouble is that the fungus causing the rings grows well down in the soil. The fungicides are filtered out in the surface soil and do not penetrate deeply enough to kill the fungus. With this in mind, we have tried punching holes in the soil with an ordinary fork or with a tubular-tined fork but the results have not been satisfactory. The only method of control appears to be to remove the infested soil and replace it with new soil. Of course, this is impractical on a large scale.

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Control of Turf Weeds.—The two weeds, samples of which are enclosed, infest our bluegrass turf in patches. I have been successful other years in getting rid of them by hand-weeding and reseeding. This method, however, is rather expensive. If there is a better and cheaper way to rid our turf of these weeds, I should appreciate having your recommendations. (Illinois.)

ANSWER.—The weeds you sent were the larger mouse-ear chickweed (*Cerastium vulgatum*) and purslane speedwell (*Veronica peregrina*). Both are easily killed by treatments with sodium arsenite or arsenic acid, as described in the December, 1939, issue of TURF CULTURE. You can use either the spray method or the dry method. If the patches are scattered you may find the dry method best. In that case apply the chemical at the rate of about ¾ pound to 1,000 square feet. If you use the spray method apply only 3 to 4 ounces to 1,000 square feet.

You will, of course, not be applying it solidly over 1,000 square feet, so you will have to make some tests to determine the amount of water or sand to use in which to mix the arsenicals. One of the simplest ways to determine this is to mark off an area of 100 square feet. If a knapsack sprayer is to be used, put 2 gallons of water in the sprayer and spray the 100 square feet so as to thoroughly wet the foliage without causing any noticeable run-off. Then measure the amount of water left in the sprayer. By subtracting this from the original amount you have the quantity of water necessary to spray 100 square feet with your particular spray nozzles and at the covering you are using. Multiply this quantity by 10 and use the resulting amount of water in which to dissolve the 3 or 4 ounces of sodium arsenite. If the foliage is wetted with this solution approximately the same as was that in the test plot of 100 square feet, the arsenical will be applied at the recommended rate.

A similar test with sand on an area of 100 square feet will determine for you how much sand is needed to give a fairly even distribution. You do not need a great deal of sand but you want enough to scatter it pretty well over the patch of weeds.

The patches will be brown but can be reseeded immediately after treatment. If you find the burn on the turf is a little excessive simply cut down on the amount of arsenical that you use.

If you use the spray method, get the white sodium arsenite because it dissolves more readily than does the gray. If you plan to apply it in sand the gray sodium arsenite may be used equally as effectively as the white.

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Grass mixtures.—What do you consider the best grasses for seeding fairways and the rough on golf courses in the eastern part of the United States, including the New England section and in the Middle West? I should also like to know what percentage of each of these grasses is most desirable in your estimation for establishing a good turf under the respective conditions. Also, where a mixture of grasses instead of a single grass is to be used in seeding a green, what should be used? Any information which you can give along these lines will be appreciated. (Connecticut.)

ANSWER.—For fairway purposes, we generally recommend a mixture of about 85 per cent Kentucky bluegrass, 10 percent redtop, and 5 percent Colonial bent. Farther north where conditions are likely to be favorable for fescue we include anywhere from 20 percent to 60 percent fescue in the mixture to replace the Kentucky bluegrass. The amount we recommend depends on the likelihood of success with fescue. In the New England district where bent is likely to do well we usually recommend that the amount of Colonial bent be increased to 10 percent or 15 percent.

For seeding the rough, sheeps fescue is about as satisfactory as anything, although when sheeps fescue cannot be obtained we ordinarily recommend Chewing's fescue. Canada bluegrass also is satisfactory for this purpose, especially on poor soils in the more northern regions.

In the case of mixed bent greens, we have been recommending a mixture composed chiefly of Colonial bent, with from 5 to 10 percent seaside bent, and from 5 percent to 30 or 40 percent velvet bent, depending on whether the recommendation is for a district where velvet bent thrives.