

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. *We have a very good stand of grass on all of our greens, but it is largely *Poa annua*, and now that it is possible to get some bent seed I thought that by sowing some of it in the spring and fall we could gradually get bent greens. Do you know whether this method has been tried out and what the results have been? I have been led to believe that the nature of the bent was to crowd out the other varieties of grass. We use "—— humus," as our green-keeper thinks it very desirable to top-dress with this humus mixed with sand. Is there the same danger of burning the greens when using bone-meal, dried blood, fish-scrap, or tankage, as there is when using chemical fertilizers? What is your opinion of using lime on greens? T. G. S., New Jersey.*

If your greens are largely *Poa annua*, by all means put bent seed in them. More or less of it will catch, particularly the velvet bent and the creeping bent, and in time you can get a bent green. The bents will certainly compete with *Poa annua*. Where a green is practically pure bent already we have the gravest doubts that putting in more seed does any good; but it certainly does no harm. With a thin stand of pure bent the turf can be thickened by proper treatment, including fertilizers, which as a rule is very much more satisfactory than putting in seed. Most golf courses put some seed on their putting-greens every fall, even if they have practically perfect turf. This is done more or less on the theory that it will do no harm and will please the members. Where a green is practically perfect we can see no possible advantage in putting in more bent seed. Your case, however, is somewhat different and we would by all means suggest that you put in the bent seed. In reference to "—— humus" or any other humus, our objection to them is that they are expensive out of all proportion to their merits. As a result of experiments we have reached the conclusion that a ton of well-rotted barnyard manure is worth at least five tons of humus, and usually the manure can be purchased very much cheaper than the humus. Besides, some commercial humuses are very toxic, so toxic indeed that grass seedlings will not grow in them. We have never seen any burning of grass from the use of bone-meal, dried blood, fish-scrap, or tankage. You will, however, secure burning from the use of cottonseed meal or other seed meals unless they are mixed with considerable soil. We do not advocate the use of lime on greens at all. The bents and the fescues thrive perfectly in acid soils; and besides, the use of lime encourages weeds. Lime also speeds up nitrification of the humus in the ground, which, it is true, furnishes more nitrogen for the plants, but on a golf course it is cheaper and better to apply your nitrogen as such. You don't want to burn the humus out of your greens, as you want the resiliency it gives.

2. *We are sending you for purity and germination test six packets of turf grass seed samples representing a set of two lots of three kinds from two different firms—namely, a mixture of one-half redtop and one-half*

fescue, a mixture of one-half redtop and one-half Kentucky bluegrass, and a specimen of Italian rye-grass, which we propose to use on our golf course this fall. H. E. B., Florida.

May we express the opinion that you are making a mistake to seed any other grass for your winter greens than redtop alone or Italian rye-grass alone? We prefer the redtop, as the turf is somewhat finer, but it does not grow quite so rapidly as the Italian rye-grass. There is no possible advantage in the mixtures which you have sent us. We are sure you will get very much better results by seeding redtop alone or Italian rye-grass alone, and besides save a good deal of money, as the seeds of these two grasses are cheap. It might be of interest to you to plant one green to redtop and another to Italian rye and compare the results, or to plant one-half to redtop and one-half to Italian rye, so you will have the two grasses side by side; but most of the southern clubs have been using redtop.

We are having the samples you send examined for purity and trueness to name and will report results. The germination tests usually require some time and you can usually save time by planting a little of the seed in a bed a foot or two square. There is rarely any question about the germination of redtop, Kentucky bluegrass, and Italian rye-grass, but New Zealand fescue varies greatly in germination.

3. *We are informed by a club in California that they have had great success with New Zealand fescue seed. Would you advise planting it in August so that our greens would be green all winter? Our average frost date is November 12, and after that date the Bermuda grass gets brown and all growing stops until next spring. C. B. B., Texas.*

We are very dubious about the chances of New Zealand or Chewings' fescue for putting-greens in Texas. We would suggest first of all that about the first of October you plant an experimental putting-green, which can be any size from 10 feet square up. Keep this under putting-green conditions for a year. That will give you definite information as to whether or not it is going to succeed under your conditions—a matter which we gravely doubt. Conditions in California, with its dry climate, are radically different from those in Texas. On account of the high price of Chewings' fescue seed and its slow growth, it is not at all the grass for you to plant on your Bermuda greens to keep them green throughout the winter. The grass for you to use for that purpose is redtop, the seed of which is cheap and of high quality, and seedling redtop makes really good putting-greens. It will disappear the following spring after hot weather comes and the Bermuda starts growing. As your average frost date is November 12, we would advise that you seed the redtop between October 1 and October 15, seeding it heavily, at least 5 pounds to 1,000 square feet, using recleaned redtop seed.

4. *We would appreciate full information and suggestions as to the best grasses to meet our requirements in southern Florida on rolling, high, cut-over pine lands, not flat-woods. V. W. H., Florida.*

For your fairways you have two choices—carpet grass on the lower, moister lands, and Bermuda grass on the higher, drier lands. At the Belleair course, near Tampa, when visited several years ago, the fairways were then largely carpet grass, although they had been planted to Bermuda. Wherever the soil conditions are suitable for carpet grass we would advise using that, otherwise Bermuda. As a hit-or-miss proposition you could seed all the fairways to a mixture of Bermuda and carpet. Your putting-greens we assume will be Bermuda grass. If these are seeded about

three weeks before frost, or let us say, in your latitude, as soon as the weather is fairly cool, about the end of October, with Italian rye-grass or with redtop, you will have nice green putting-greens all winter. Formerly Italian rye was mainly used, but now all the better clubs are using redtop, which we regard as distinctly superior. The redtop or the Italian rye makes a putting-green during the winter and disappears as the Bermuda begins to grow with the recurrence of warm weather in spring.

5. *I would like to have your opinion as to the best methods of getting rid of crab-grass. Would you recommend cutting it out early in the season or raking down later? Also, what fertilizer would you recommend for use on a green which has been troubled previous seasons with crab-grass? E. H. B., Massachusetts.*

We regret to say that we have found no easy method of eradicating crab-grass from turf. In fact, about the only method that has proved successful is hand-weeding, and where this method is followed and the greens are protected from overwash from the rough and fairway, the crab-grass problem usually lessens in importance from year to year. We have tried a great many experiments with the hope of finding some treatment that would obviate the necessity of so much hand-work, but our results so far have been almost entirely negative. Reaction of crab-grass to fertilizer is such that there appears to be no fertilizer that will give the desirable turf grasses material advantage over crab-grass. There is an advantage, however, in fertilizing the greens properly. The advantage lies in the fact that if this is done it is possible to keep the desirable turf grasses in vigorous condition, and by a few years' careful pulling out of crab-grass very little of it appears in the greens thereafter, provided, of course, good treatment is given the greens.

6. *We are going to seed our Bermuda greens this winter to redtop. As the greens are used until well on into the season, would it be absolutely necessary to plow up the Bermuda to get good results or would a good, heavy top-dressing answer the purpose as well and give a good stand during the winter months? The soil here is light and sandy, deficient in humus and does not retain moisture very long; so we thought that unless the top-dressing was incorporated thoroughly in the soil by means of plowing and harrowing it would dry out too readily. F. M., Florida.*

In your locality the best date to seed your Bermuda greens to redtop would probably be October 15 or perhaps a little later; at any rate it should be about three weeks prior to the first frost that you get. We would not advise spading up the Bermuda, although this can be done if you so desire. It is sufficient to skin the green—that is, cut off the Bermuda as closely as possible, then seed heavily to redtop (the seed is cheap), cover with a light top-dressing of good soil, and roll. By heavy seeding we mean 5 pounds to 1,000 square feet. Bear in mind that all through the winter you will be putting on what is practically seedling redtop, and therefore the number of young plants should be sufficiently large to make a complete turf. In case you decide to spade up the greens so as to have a stimulating effect on the Bermuda for next year, we would advise that you fine the soil sufficiently well before you plant the redtop seed, and in this case it will not be necessary to top-dress. We might advise in this connection, however, that if you can manage to get a soil containing considerable clay about the consistency of a rich clay loam and use it as a top-dressing you will get very much better Bermuda turf than it is possible to get with a sandy soil.