

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. If your experience leads you to disagree with any answer here given it is your privilege and duty to write to the Green Section. While most of the answers are of general application, it must be borne in mind that each recommendation is intended specifically for the locality designated at the end of the question.

Bulbous bluegrass as winter turf on Bermuda greens.—We understand that bulbous bluegrass (*Poa bulbosa*) teams admirably with Bermuda grass, one being dormant while the other is verdant, thus giving excellent greens for golf play throughout the year. The Bermuda grass here is killed by frost each year, or if not killed it becomes very thin. Do you think bulbous bluegrass would be satisfactory to use in southern Texas? Would the hot summers hurt it, and would it become dormant in time in the spring for the Bermuda to get a proper start? Would the fact that our winter is late interfere with the growth of the bulbous bluegrass? We have our first killing frost in early December, although the Bermuda begins to get thin about the middle of October when the nights grow cool. Would cool nights and hot days affect the growth of the bulbous bluegrass? How should it be planted? (Texas)

ANSWER.—We have been doing some experimental work with bulbous bluegrass, but chiefly at Washington, D. C., and at Gainesville, Fla. The main benefit of bulbous bluegrass for golf course purposes would be as an alternate with Bermuda grass. We recognize that it would be most convenient if the bulbous bluegrass would come into the greens in the South as soon as the Bermuda grass becomes dormant and if the Bermuda would return in the spring as soon as the bulbous bluegrass becomes dormant. This condition, however, has not developed in any of our experimental work to date. At Washington the Bermuda becomes dormant a month or so before the bulbous bluegrass does much growing, and the Bermuda comes back very patchy in the late spring when the bulbous bluegrass dies. The second winter the bulbous bluegrass comes in patchy, especially if the Bermuda has been vigorous during the preceding summer. We recognize, however, that Washington is too far north for ideal conditions for early Bermuda growth in the spring and for early winter growth of bulbous bluegrass. At Gainesville it was found that the bulbous bluegrass grew well in late fall as soon as the Bermuda grass began to get thin, but that much of it died during the summer. It was thought that the soil was too hot and the bulbs were thus killed during the summer. This experiment was carried on in sand. In our opinion, the rotation of Bermuda grass and bulbous bluegrass would take place more uniformly in Texas than it has at Washington and in Florida, since it is possible that the grass would not die during the summer on the heavier Texas soil. Cool nights do not at all affect the growth of the grass. We also know from our results at Washington that an occasional warm day does not interfere with it; but this might not hold true under Texas conditions, since your days

might become considerably warmer and the air much drier than at Washington. We would advise you to try the grass in a small way. It may be planted from either bulblets or bulbs, both of which may be obtained from seedsmen. We have had much better results from the bulbs than from the bulblets. The bulbs are planted about $\frac{1}{2}$ inch deep and are fertilized and watered the same as grass seed.

Ridding putting greens of clover; sulphate of aluminum.—What information have you as regards the use of sulphate of aluminum for ridding putting greens of clover? (Ohio)

ANSWER.—In some work we have done with sulphate of aluminum we have severely injured grass, and we do not believe it is safe to use it on turf in the control of clover. For the purpose of ridding putting greens of patches of clover the following treatment has proved satisfactory. With the advent of fall and its better growing conditions, clover can be considerably set back by dusting the patches of it with sulphate of ammonia early in the morning when the dew is on the grass. This will severely burn the clover. As soon as the burning of the clover is apparent the green should be watered to prevent the chemical's injuring the roots of grass that may be in or around the clover patches. Much can be done to enable turf grasses to compete with clover by regular fertilizing so as to keep up the nitrogen supply in the soil. Organic fertilizers high in nitrogen should be used in the spring and fall, supplemented during the remainder of the season by occasional light applications of nitrogen in a soluble form, such as sulphate of ammonia. Attention must also be given to preventing the introduction of clover seeds to a green in top-dressing material. Manure usually contains clover seed. Before being used, top-dressing material should be tested for the presence of clover seed, by setting out flats of the material and keeping them under growing conditions to see whether or not clover develops in the flats.

Plantain in bent seed.—We recently had some samples of seed of seaside creeping bent tested by the state seed laboratory and were informed that while the content of weed seeds was low the samples still contained as large a number as several thousand seeds of black-seeded plantain to the pound. We have been told however that this would make very little difference in seeding putting greens, as black-seeded plantain is easily killed. Is this true? (New York)

ANSWER.—If soil conditions and the fertilizing program are satisfactory for the proper development of bent putting green turf, weeds such as the different kinds of plantain are seldom given an opportunity to develop, due to close clipping, and therefore are not ordinarily serious pests. For ordinary use it is therefore improbable that plantain seed contained in the bent seed to which you refer would be objectionable.

Is lead shot falling upon a green from trap-shooting harmful to the turf? (Connecticut)

ANSWER.—The only harm the shot could do would be to your mowers. It would be no more harmful to the turf than coarse sand or gravel. In order to protect your mowers it might be necessary to drag a steel door mat over the green previous to mowing, thus collecting any shot which may be on the surface.



Sixteenth hole (175 yards), Country Club of Buffalo, Buffalo, N. Y.



**It is well for a man to respect his own vocation,
whatever it is, and to think himself bound to uphold
it, and to claim for it the respect it deserves.**

Charles Dickens

