

sire to visit the Arlington Turf Garden, we are planning an informal meeting at Washington following the Atlantic City meeting. At that time we will have the numerous plots on the Turf Garden well labeled and will arrange for a complete demonstration of the experimental work in progress there. These two meetings will be independent so greenkeepers can attend either or both. Those coming from the West or South can arrange for the stop-over privilege at Washington on their through railroad tickets and so will be able to include the visit to Arlington with no additional transportation expense. The meeting at Washington will be altogether informal and will enable those who are interested in the work to discuss the experiments more thoroughly than was permitted in the brief time allotted to the Turf Garden visit last August. Many changes have been made on the Turf Garden since last summer's meeting, and we feel sure interested greenkeepers and green committee chairmen will find many experiments in progress which will fully justify the time and expense of such a visit. Plans will be given in greater detail in the May number of THE BULLETIN.

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. **Liming fairways.**—Recently we found that one-third of our fairways were sweet while the others were found slightly sour, and we were advised to use three or four tons of limestone per acre. Our fairways are not in a bad condition but the turf could be a little thicker for perfect fairways. What is your opinion concerning the use of limestone? (Illinois.)

ANSWER.—We certainly would not advise you to apply lime as a topdressing on your golf course. In some cases a limited amount of lime worked into the soil before seeding seems to be advantageous, but as a topdressing we seldom recommend its use. It has a tendency to encourage clover, which is quite objectionable on most golf courses, and ordinarily stimulates the desirable turf grasses only slightly if at all. It would be much better for you to invest your money in some fertilizer that is relatively high in nitrogen, such as cottonseed meal, Milorganite, or ammonium sulfate. We have seen some very excellent results in improving turf on fairways from the use of such fertilizers.

2. **Seaside bent in Georgia.**—We have been informed that the California golf courses are having considerable success in the plant-

ing of seaside bent grass on their greens. Do you think it would be worth our while to make an experiment with this grass in Georgia? (Georgia.)

ANSWER.—While we have had very little experience with seaside bent in the southeastern states, judging from the results obtained with closely related grasses we doubt that seaside bent would survive your summers satisfactorily. One of the puzzling phenomena connected with most grasses growing in temperate climates is that every one of them has a fairly definite southern limit. In the East the southern limit of bent is about the northern limit of the Cotton Belt. Curiously enough, in the drier half of the United States the bents succeed farther south than they do in the eastern part of the country. There are some very excellent seaside bent greens in Southern California, where the summer temperatures are higher than in Georgia, but the humidity conditions are entirely different. As yet we have no record of any one having been successful in making a permanent putting green of bent as far south as Georgia. While we do not care to say that it can't be grown, the chances of success are very small.

3. Tobacco stems as a fertilizer and worm killer.—We do not wish to cover our bent nursery with manure as it will bring worms and weeds. Could tobacco stems be used instead? Our regular greens are infested with worms. Would the juice from boiled tobacco stems kill worms and be of benefit to the grass? (North Carolina.)

ANSWER.—We have had no experience with tobacco juice in ridding a green of earthworms. From knowledge gained through other sources we are pretty well convinced, however, that it would not be as efficient or economical as the bichloride treatment.

4. Fertilizer to replace compost.—Will you kindly give us your opinion regarding a statement in advertising literature that golf greens can be satisfactorily maintained, and in fact, better maintained without the use of compost for topdressing? What do you think of a published statement that the use of such compost is sometimes the cause of brown-patch? (Ohio.)

ANSWER.—We always look with suspicion on any new theory on golf course maintenance when that theory is apparently prompted chiefly by the obvious motive of increasing sales. Compost, in addition to carrying plant food, serves to improve the putting surface. There is still some question as to the best amount of compost needed for maintaining good greens but there seems to be a united opinion throughout the country that some compost is necessary to maintain a good putting surface. Many greens are kept in good condition with much less than the usual rate of topdressing, but in spite of all the elaborate claims made for some fertilizers, we have yet to see a clear demonstration which could be interpreted as adequate proof that a fertilizer can entirely replace compost, especially on bent greens planted with stolons. We feel that the published statement concerning compost as the cause of brown-patch is merely "sales-talk."

AS WE FIND THEM

Sitting at a banquet table with some "turf nuts" we overheard this conversation. One green committee chairman asked, "Why is it we have all this bother with fertilizing turf in this country? They scarcely ever think of fertilizers in England and Scotland."

All turned to hear a veteran G. C. C. boldly reply: "You see it is this way." (His start showed he was also a veteran golfer with a poorly-disguised alibi habit.) "Under certain conditions plants can take up nitrogen from the air and over there grass apparently can get all the nitrogen it needs from air. In this country we have to supply the nitrogen by means of fertilizers."

The amusing part was the seriousness of both speaker and listeners.

Wires crossed somewhere! We always had a notion air was the same stuff the world 'round. Perhaps the "such a different atmosphere in the old world" we hear so much about is due to some different chemical composition.

Or did he have his botany mixed? We are told leguminous plants take up nitrogen from the air but plants of the grass family do not. Some "turf nuts" become so seriously afflicted that they recognize no other plant than grass. When one speaks of "other plants" such a deranged individual thinks the speaker is simply referring to "grass on some other course, or in some other country."

A mid-western G. C. C. remarked, "Those people who say 'commercial humus' is of little value for golf greens are all cuckoo. Why don't they come to life and learn something about topdressing? Why, that is all we use on our greens and we sure do get wonderful results. Come over and look at our pile of black humus. We use it just as it is without mixing with anything."

What crimes are committed in words! We took one hasty glance at his pile of so-called "commercial humus" and with what little eloquence we could summon, spoke thus:

"Sir, the gods of all greens and fairways are smiling upon you. There you have a pile of the very finest type of rich black prairie soil. That soil built the Middle West, it is renowned throughout the world for its fertility and general agricultural productivity. It has no peer, whether used for buffalo pasture, corn fields or golf greens. A pile such as that on every golf course in America would undoubtedly result in an average prolongation of life of G. C. Cs. of at least five years—and oh! how sweet and untroubled those added years would be! But please, sir, don't degrade it by calling it 'commercial humus.'"