

There is one item which should perhaps be included in this summary since it has been brought to our attention from various sources during the past season. It has been claimed that there is abundant evidence that bichlorid, unlike the organic mercury preparation, accumulates in the soil and after being used a few times it causes discoloration and permanent injury to turf; such as is the case with bordeaux or other copper treatments. It is true that many cases of burning with bichlorid have been reported just as we have seen many cases of burning with Semesan or Uspulun. This "burning" is an immediate effect (either temporary or permanent) and is entirely distinct from the accumulative injury of copper compounds. That is, the damage is apparent soon after the application of the chemical, as is the case with ammonium sulphate, and the second or even the tenth is no more likely to burn than the first application. Much pseudo-scientific literature has been circulated emphasizing the difference between the inorganic bichlorid of mercury and the organic mercury compounds such as Uspulun and Semesan; pointing out the danger of an accumulation of bichlorid in the soil which it is claimed does not apply to the organic forms. Alarming as these arguments may sound to the greenkeeper or green committee not familiar with such complicated chemical distinctions, the fact remains that at Arlington after repeated and excessive applications of both forms we have as yet found no harmful accumulation of mercury from either. So far as we have been able to determine wherever both types of mercury combinations have been used against brown-patch any such unfavorable comparison between the organic and inorganic form is apparent only to those with direct financial interests in the sale of chlorophenol mercury.

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. Shade grass.—Please advise us whether you consider bluegrass or bent preferable for partially shaded tees. Or is there some other grass you recommend in preference to either of these? Water is available for watering the tees. (Illinois.)

ANSWER.—There seems to be relatively little difference between bluegrass and bent as regards ability to grow in shade. Neither is a particularly good shade grass, but of the two we would be inclined to choose the bent. A better shade grass than either is *Poa trivialis*, which is also called rough-stalked meadow grass, or bird grass. This is an excellent shade grass. It should be sown preferably with bent or redtop, as is the practice in sowing Kentucky bluegrass. It requires

moist soil, and since you have water available you could give it sufficient moisture.

2. Proliferations in turf.—We have Washington strain bent greens. They have a good color except for small light spots the size of a 25-cent piece. The light spots are bent and grow as fast and are as good turf as the green part of the grass. Can you tell us the cause of these spots? (Illinois.)

ANSWER.—It appears from the description of the light spots you report in your letter as appearing in the Washington strain of bent greens that this condition is the same that has been observed at Arlington over a period of several years. In the fall of the year, and sometimes in the spring, certain strains of true creeping bent and velvet-bent exhibit a mottled or spotted appearance due to small tufts of grass quite unlike the surrounding turf in color and somewhat unlike it in texture. The spots are rarely more than 2 inches in diameter. These spots are made up of young grass plants produced on the stems of the older plants. Botanically the tufts or rosettes are proliferations from the older turf. They are apparently not due to any disease. Applications of sulfate of ammonia and ammonium phosphate have not been beneficial in discouraging their formation. Light dressings of compost have had a tendency to cause the turf to return to a normal condition—that is, to discourage the growth of these somewhat unsightly tufts. The cause of their formation is still obscure. These spots are not objectionable from the standpoint of the game but they certainly are unsightly on fine bent turf.

3. Improving rough which is too easy to play from.—Our rough is too easy to play out of and we are trying to find the best method of making it difficult without making it more expensive to keep up and without increasing the likelihood of losing balls. (New York.)

ANSWER.—We know of cases where good results have been obtained by removing the sod from the rough and then sowing sheep's fescue at the rate of 40 to 60 pounds per acre. Sheep's fescue is an excellent grass for the rough, since it grows in bunches of about the proper character and does not make a tall growth that requires frequent cutting. Sheep's fescue and Canada bluegrass make a good mixture, or either used alone is good. The purpose in skinning off the sod where the rough is made up of really heavy turf is to get a poorer soil, since it is difficult to get satisfactory rough on rich soil. Both sheep's fescue and Canada bluegrass do well enough on poor soil to make rough that will penalize wild shots without causing many lost balls. When the rough is made up of a rank growth the treatment suggested above will not only vastly improve the condition of the course but will furnish valuable material for compost.

4. Grasses for rocky or gravelly mounds.—We have several mounds on our course made up of piles of rocks. What grass will grow on them? (Massachusetts.)

ANSWER.—Sheep's fescue is probably the best grass for this purpose. Blue lyme-grass is a beautiful grass for growing in bunkers on sand ridges, and will probably grow on your rock heaps where the soil is sufficiently deep.

MR. NORTHERN GREEN COMMITTEE CHAIRMAN:

You have undoubtedly passed a very trying season coping with numerous golf course problems, striving to keep the course in first class condition, and dodging balls and destructive criticisms which were purposely sliced and hooked in your direction by some inconsiderate club members who blamed their rotten game on the condition of the course and sought revenge on you.

Naturally after the playing season has passed your interest in the course and matters pertaining to its maintenance has a tendency to flag, you breathe a sigh of relief and try to forget golf for a time. Perhaps you feel that you deserve a vacation, which of course you do, but since you are Chairman of the Green Committee there is no time for a vacation just yet.

After taking an inventory you will be surprised to know how much new equipment is needed and what extensive repairs are necessary to various machines. Do not wait until spring to attend to these repairs. If necessary to send machines to the maker for overhauling do so now and if the work can be done by your own mechanic order the new parts for him at once.

And before you go South for a little golf why not review the work of the past season and make definite detailed plans for next year? Are there approach areas where a ball bounces badly or a long two shot hole where you too seldom get a wooden club lie? If so, how about some topdressing on these spots as early in the spring as possible and how many yards of material will be required for the job? Surely the inclusion of these items in your new budget is desirable.

Do you really know the area of each of your greens? If not how can the application of chemicals, fertilizers, or compost be anything but guesswork? The difference in appearance of a 6,000 and 8,000-foot green is not great but the difference in material to be applied during a season is. Then too, if you are not sure about this detail your estimate of sand, fertilizer and compost required for upkeep is only a hazy dream.

If tile should be laid to correct poor drainage anywhere on the course there will never be a better time to plan for it than now.

And why not clean up that bit of rough where the grass is so rank that a shot into it generally means a lost ball? The topsoil from that spot would be of value in the compost pile whereas now it is the cause of needless misfortune. Perhaps fescue would be better there than bluegrass anyhow.

All these things are still fresh in your mind. Jot them down for reference now and work them into your plan for 1927.

In case you must lay off several good men why not insure their return next spring by getting them jobs for the winter? Some club member is probably looking for just such men. You might be of mutual help to each other as well as to your club by making it worth while for the men you want on your pay roll to stay there. It will certainly help your greenkeeper if the majority of his force are trained to golf course work. Instructing greenhorns is a waste of valuable time.

THE GREEN SECTION.