

FAIRWAYS: Today's Problem

By H. B. Musser

IT IS an all too common habit to judge the condition of a golf course primarily by the quality of its greens, an area that hardly averages more than one or two per cent of the total course. Probably it is quite natural that this should be so, in view of the fact that the degree of perfection of this limited area so profoundly affects scoring. But it is unfortunate in that it has tended so frequently to concentrate the attention of both player and superintendent on the condition and maintenance of greens that the rest of the course gets only such thought and often even budget allowances as may be left over.

There are definite evidences on many courses today that this failure to clarify our thinking beyond greens, with the consequent uncertainties about maintenance practices, is beginning to pay dividends in the development of very acute turf maintenance problems on fairways. While it might be too strong a statement to say that fairways are getting poorer, it certainly is true that at least they have not kept pace with the improvement in the quality of putting areas. Anyone who has an opportunity to visit a considerable number of courses can not help but be impressed by the fact that a much larger proportion of them have good greens than satisfactory, or even adequate, fairways.

And so we have the picture on many fairways of *Poa annua*, clover, crab grass and an endless variety of weeds crowding each other for the ground cover job. Playing conditions are definitely poorer than they should be and golfers are becoming increasingly vocal about it. On the many courses where conditions have become acute, it is fast developing into the major headache of the superintendent and the time has come for the best thought of the profession to concentrate on the development of a sound set of principles for the

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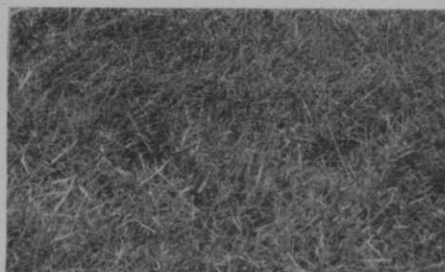
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Weeds and thin turf generally follow close clipping. Grass at left received $\frac{3}{4}$ " cut; grass at right, from same fairway and with same maintenance treatment, had $1\frac{1}{4}$ " cut.

maintenance and improvement of fairway turf.

The first step in such a program must be recognition of at least the main causes of fairway troubles. All of them fall pretty definitely in two categories: the accidental and the chronic. Of course, there is some overlapping, and some that start as accidents may develop chronic tendencies. For example, neglect of adequate fertilization, starting perhaps with an inadequate budget, may develop such poor soil condition that not much imagination is needed to call it chronic. Similarly, over-watering may have the same result.

On the other hand, there are causes of inadequate fairway turf that stem directly from such things as bad drainage, poor physical condition, low fertility and even certain types of maintenance. These produce chronically poor turf for which there is probably no permanent cure except a major operation. And the only hope for bringing fairways to the same level of excellence that has been attained with greens is to apply the same concentrated thinking and basic principles.

Unpredictable Often Happens

Of course, accidents will always happen. Witness the results of excess precipitation. And there is always the chance of insect attacks reaching epidemic proportions. Then there is the ever present disease threat. More than one course has seen labor of years in building a good bluegrass turf completely ruined in a single season by leaf spot, while many a bent fairway has been so severely injured by brown-patch that it has taken several seasons and constant care to bring it back.

To all these must be added the always present drought menace. Few things are so discouraging as to watch a good turf gradually go to pieces in dry weather. Like all the others, drought is a hazard of the game and is just another of the chances we must take when we grow

grass. But certainly, the chances of damage are minimized and the rate of recovery speeded up if turf is healthy.

Conditions May Be Chronic

Well, let's come back to that question a little later, and look, for a minute, at fairways which are chronically poor. Among the most common causes of the failures to bring fairway turf to the high degree of perfection common on greens are a group of fundamental soil conditions. The headlines of this group are poor drainage, high acidity and low fertility. The correction of such causes of poor turf is, of course, the basis of any sound turf improvement program. And keeping them corrected is the foundation of sound maintenance practice.

This is such a fundamental, such a basic part of any well-conceived improvement and maintenance policy that it would hardly seem necessary even to mention it. And yet, the fact remains that it is frequently either neglected or at least not thoroughly thought out as a necessary and normal part of the program.

For example, Dr. Fred V. Grau of the Extension Service of Pennsylvania State college reports that out of a total of 54 fairways on eleven courses in Pennsylvania, tested for acidity in 1936, thirty-nine, or over 70 per cent, showed a pH lower than 5.5. Most of these were so-called bluegrass fairways. In addition, it is quite generally true that the large majority of fairways that have been tested for available phosphorus show a very low concentration for this material. Of course, the ultimate result necessarily is a chronically thin turf with weeds and undesirable grasses gradually taking possession.

While this is particularly true of Kentucky bluegrass turf, because of the more delicate adjustment of this species to the soil environment, it may eventually become just as serious a factor on fescue or

Pathe's golf movie made at Pinehurst last year got the biggest showing of any strictly golf propaganda to date. It was shown in more than 4,000 theaters and was so well received by the public and picture-house owners, it stirred up a demand for other golf subjects.

Another golf picture was made at Pinehurst late last fall. Billy Burke competed with golf shots against the arrow shots of Jean Tenney, famed archery expert.

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bent sward. Although we usually think of these species as having a wide range of tolerance to acidity and fertility conditions, it is just as definitely true that there is a limit to what they can take. It is all too common to find fescue struggling along under such highly acid soil conditions that the normal processes of dead root decay have been definitely checked and a dense felt of this material is formed. When this happens it is a real job to get water down through it, even on very gentle slopes; to say nothing of the difficulty the plant has in developing an adequate root system. Just another case of chronically poor turf which will not be improved until a sound maintenance program is developed that will correct the basic conditions causing it.

Killed by Kindness

Then there is the other side of the picture. It is entirely possible to develop a chronically poor turf by trying to be too good to it. Over-watering is a case in point. There are a whole train of evils following in the wake of too much water too frequently applied. The chief evil, of course, is a shallow root system that makes the turf just a set up for the severe conditions of mid-summer. But in addition, there is over-stimulation of *Poa annua* and the development of poor physical condition of the soil, to mention a few others.

And over-watering is not by any means the only way to baby turf too much. Over-fertilization or untimely fertilization, particularly with readily available nitrogen, can do the same job. It is just as hard to carry over-fed turf through the summer months as it is over-watered turf. If any confirmation of this is needed it is only necessary to examine the literature on results of pasture fertilization experiments during the past 20 years. Almost invariably over-stimulation with nitrogen has resulted in poorer turf by the end of a growing season than no stimulation at all. Not many repetitions of this type of maintenance practice are required to reap

a harvest of chronically weak, sickly grass.

But among all the causes of chronically poor fairways probably none is more serious, none harder to cope with and none more definitely understood by the men whose job it is to grow grass, than over-clipping. It is serious not only because of its ultimate effect but also because of its insidiousness. Over-clipping doesn't kill grass over night. The weakening comes so gradually that very often it is not taken seriously until the damage is done. Some morning, usually after it is too late, we wake up to the realization that our fairways are not what they should be.

They Want Short Turf

Right here is where we run into the first snag. It is the very definite conflict between playing demands and what is best for the grass. Our modern golfer insists on short fairway turf and when he says "short" he really means "short." Any height much over $\frac{3}{4}$ " means a hay field to him. After all, he pays his money to play golf and in the vast majority of cases he sees the course only from that point of view. If an inch and one-half cut makes it even only a little harder to execute a shot, why then—cut it shorter.

However far this may be from the ideal attitude on the part of most of the golf playing public, the fact remains that it is the situation. It is probable that nowhere among all the maintenance operations on the golf course is there such definite information on the effects of a given practice as there is in the case of clipping heights and frequencies. To most of us the clipping experiments of Harrison at the University of Chicago and Graber at Wisconsin are so well known that they hardly need be quoted. And back of them, in addition, is our own common sense reasoning, that it is impossible to continually remove the bulk of the food manufacturing area of a plant and still expect it to grow normally. The picture is entirely clear; and yet, because what constitutes the best maintenance practice runs contrary to what the golfer insists is the best for play, we have the irony of chronically poor turf due to a set of conditions which we know, definitely, how to correct, but which too often must persist because no satisfactory solution has been found for the conflict between the method of correction and playing requirements.

(To be continued in March GOLFDOM)