

Some Reasons and Remedies for Poor Greens

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FOR every result a cause may be found; at least so we are taught and there seems little evidence to disprove such a simple logical statement. Yet, strange to say, there are so many instances met with in the realm of greenkeeping that apparently disqualify the foregoing remark, and the great majority of cases bear upon the greens. "That green has never been right"; "We have done everything humanly possible to bring that green along and still the turf is indifferent"; "I defy anyone to maintain a putting turf on that green"; these and similar utterances are familiar to one who poses as a physician to sickly grass. A large number of courses throughout the land have an "out-law" green or two that seemingly, will not submit to any sort of treatment, and continue season after season, to be "the cancer-worm of care." Measure upon measure has been tried with little or no result. These are hard cases to settle, and it takes a great deal of particular study to fathom the cause of such unresponsiveness. On the other hand, where all or the majority of greens on a given course are below standard, the reasons are not so obscure and improvement will usually follow after a change in the general policy of maintenance.

Causes of Poor Greens

We will briefly outline a few of the conditions or factors that are responsible for poor turf on the putting green. Each one would, if pursued at length, provide material for a book; but, let us just touch upon the outstanding facts of these that the reader might check them against specific cases, if he knows of any, which he likely will, and consider the possible remedies.

1. STARVATION. Very few will challenge the contention that, all in all, by and large, insufficient food supply in the soil is the most general cause of poor, lean turf and its attendant weed menace. We are making considerable progress along these lines as a result of the years of preaching on the necessity of feeding up the greens, but still there are plenty of clubs who have not yet learned that a strong turf cannot be maintained on air,

water and a pittance of fertilizer. Should there be any doubting Thomas' who want to see for themselves whether this be so, let each mark off a thousand square feet on the poorest green on the course and apply thereon five pounds of ammonium sulphate or ammonium phosphate, or the equivalent in any commercial mixture, and observe the difference a month or six weeks later. If the improvement is spectacular don't snatch at the idea that chemical or commercial fertilizer is the panacea for all cases of under nourishment; there is more to soil management than that, as will be shown under the next heading. The fact that a green is built upon a foot or two of the best soil procurable has little influence after a few years, since the continual mowing has curtailed the root growth and exhausted the food resources of the topsoil, and further, the constant watering will tend to keep the roots in the moist, though lean, upper stratum. There is no dodging of the issue: if a vigorous turf is required, the surface soil fertility must be replenished from time to time.

2. INCORRECT SOIL MIXTURE.—

Here is another frequent source of trouble and one that is closely linked with plant nourishment. The abbreviated root systems of the grass plants must be given the most ideal soil environment to encourage their fullest development. The soil, which, of course, must possess chemical food in abundance, must also be of a texture that will permit air and water to penetrate with moderate ease. This texture is largely controlled by the amount of decaying organic matter (humus) that is incorporated; material that is related very closely to normal plant nutrition and development. In nature, the decaying remains of former plant generations will maintain this requirement but, where every blade is removed, as is the case of putting green continually cut with a mower that carries a grass catcher, the ground will eventually become barren, even though actual nutrients are not lacking. Humus performs many functions in the soil, from regulating the water supply

to feeding the bacteria, each having a vital, constructive influence upon the turf. Fresh humus is furnished through properly composted topdressing.

Just what, then, is an ideal soil for the putting green? To this question we would reply that a medium to coarse sandy loam would be preferred, though, providing that plenty of humus is present, there need be no narrow limits prescribed. A sandy soil provides the best playing conditions, but even a pure sand will become hard and "boardy" under constant watering, if it lacks humus. A heavy soil, so called, (clay) packs too closely to allow for healthy root action. Such should have liberal quantities of sand and well rotted organic matter worked thoroughly into the top three inches. It is a blend of these constituents, not a layering that is required.

Drainage Mystery to Many

3. IMPROPER DRAINAGE.—Here we have perhaps, the least understood problem in green management and one of real importance. It embraces three phases: surface water drainage; underwater drainage; air drainage. Standing water is detrimental, in fact fatal, to any but aquatic plants and grass does not come in that category. Standing water on the green retards the grass growth by suffocation; (is an insufferable condition anyway, from the golfer's point of view), and is a matter to be kept in mind in green construction. While drains under the green will take away the water as fast as it soaks through, still, it must be borne in mind that, in winter, they do not function, and we must rely solely upon the surface slope to keep the grass clear of melting snow and ice. Under drains are installed to gather the water that collects from subterranean sources and take it off where it will do no harm. Many are of the opinion that every green should have a net work of drains as a matter of course, but such an idea is erroneous. Except in specific cases, e. g., where a green is built over springy ground, where surface drainage is inadequate, or in really tight heaving clay, there is little need for drains under the putting surface. The need for under-drainage comes, not from rain or sprinkler water, but that which seeps along underground. This seepage water should be taken care of before it reaches the green. Greens that lie under hills suffer from this sort of water and the problem should be tackled by running tile along the face of

the hill, even a concrete wall if necessary, to catch the water before it comes anywhere near the green. Tile should run across the slope of a hill, not up and down; two inches in a hundred feet is sufficient for well laid tile.

Air drainage is significant in those sections of the country subject to hot humid periods in summer; damp stagnant air will encourage disease. Secluded, wooded greens are very susceptible to summer complaints for this reason. These conditions can often be corrected in part at least, by judicious thinning of trees and careful management in the matter of watering and fertilizing.

4. POOR LOCATION.—There are some spots where it is very hard even with the most studious care, to make the turf thrive. Upland knolls, for instance, exposed to the desiccating winds of winter and the searing blasts of spring and summer, are difficult places to keep covered with a velvety mat of grass, and in the same way, deeply shaded, low lying positions, sheltered from sunlight and breeze, provide knotty problems for the greenkeeper. Treatment for such cases are so individual and varied in character that general solutions cannot be offered.

5. DISEASE.—A green effected with disease presents a case that, specific, as far as remedial measures are concerned, still bears some relation to the headings already discussed, in so far that a vigorous turf, properly located, is not as susceptible as one growing under adverse conditions and circumstances. Fore-warning is fore-arming: the greenkeeper properly equipped to combat fungus, algae and the like on its first appearance or to lay his defences when the weather is suspicious, stands a much better chance to keep his greens in tune than the man who has to requisition his supplies after the damage has commenced.

6. MANAGEMENT.—The blame or merit that attaches to the construction of a green is apparent within the first three or four seasons of play, after that it depends solely upon the personnel of the green committee and greenkeeping staff to make or mar the greens. Though much is being written on how to do this and that, what and what not to use and all sorts of timely advice on how to produce and maintain so called perfect putting turf, still, the fact cannot be over emphasized that individual study produces results.