

Mid-Summer Pointers on Maintenance

By C. A. TREGILLUS

THE dog-days are upon us, the sun beating down with scorching impartiality upon protesting greens and the worried heads of perplexed and perspiring greenkeepers. With no relief from heat, blazing sun and high humidity, the care of highly nurtured and temperamental grass becomes a very exacting business. A slight mischance, a small neglect, and the greens may become, in short space of a few hours, a mere memory of their former excellence.

The mid-summer period, especially in those sections of the country where turf suffers from fungus disease and where the heat is intense, is very strenuous on our northern grasses. The indigenous species of this continent and those imported from other temperate countries, have the habit, when weather conditions are not conducive to growth and development, of going into a dormant or semi-dormant state and resting until suitable temperature and moisture returns, when they will again take up their activity. In this way they can withstand the extremes of climate and survive our cold winters and burning summers. This fact should be fully appreciated by greenkeepers and course managers, since, in earnest endeavor to keep the grass growing at top notch at all times, it is so easy, by a misstep—too much fertilizer at the wrong time, too little water at the right time—to throw the greens into a relapse from which there is slow recovery. The skilled greensman can do remarkable things with grass but there are limits it is well to keep within.

Grooming for Heat

For some years courses have suffered from poverty of soil underlying the greens with starvation of the greens thereon, and much preaching has been done to correct this glaring evil. The excuse has been, largely, that golf course fertilizers are expensive, and a mistaken idea that grass, nature's most generous provision for covering the earth, should not need much in the way of sustenance. However, to allay in part the cost of manures and to impress

upon the green committees the importance of feeding the greens, clubs have been urged to experiment with ammonium sulphate and other chemicals carrying a large percentage of plant food elements. The results were so startling that, on the theory of a little being good, more must be better, the inclination of late has been to debauch the greens with high-powered nitrogenous compounds. Now, ammonium sulphate, one of the most excellent manures we can use, is, if one may be pardoned the expression, a 'lopsided' fertilizer, and must be handled with extreme care. A 'complete fertilizer' has in it some quantity of each of the three elements necessary to plant growth that ordinary soil may lack, namely: nitrogen, phosphorus (phosphoric acid) and potash. When supplying all three in logical proportion, we feed the plant a 'balanced ration'; by the inordinate use of one of these and neglecting the others, we have unbalanced the ration and, by forcing certain organs of plant structure beyond their powers of endurance, may reduce the whole plant to a low state of vitality even though it may appear large and flourishing. The test of constitutional vigor in turf is its ability to withstand abnormal weather, harsh treatment and disease, and this fact may be brought home forcibly when a fine appearing green suddenly goes sick. The discerning and careful greenkeeper, knowing that the turf will have a hard struggle over July and August, builds it up during the cooler months of spring and early summer and keeps it well in hand during the critical time, while the thoughtless one, seeing the grass decline when the hot weather approaches, may rush out with stimulating fertilizers in an effort to get his color back, and do far more harm than good.

Another factor of vital importance to the health of the greens during this trying time, is water, without which, in plentiful supply, the greenkeeper might just as well throw up his hands. Water and more water—though not in excess—is the only hope of keeping the grass green and growing. It is necessary in two ways, sup-

plies the plants with much needed drink and, through evaporation from the soil, moderates the temperature of the ground around the roots and so affords some protection from the heat. This is a point to be watched most carefully as a day's neglect may result in severe scorching of these roots which are soft and succulent, particularly so if they are used to liberal sprinkling. The quantity of water that is required is a matter of individuality of the green and also the habit formed from the quantity it expects daily. Thus a green heavily watered is more quickly affected when water is withheld than one that has to get along on a meager supply. Water must be used discriminately, with due regard to the soil underlying the turf, location exposure, weather, atmospheric humidity and so on. Over saturation of the ground will suffocate the roots; too much surface moisture over too long a period will promote algae, slime and fungus growth that will throttle or penetrate the living grass.

Mid-Summer Mowing

Further protection of the roots should be afforded by setting up the mowers. Scalping the greens at this time is courting trouble. Observing nature's scheme we find that at this time of year the grass roots are well safe-guarded from the sun and heat, by the stems and foliage. While not able to shade it as generously, still, the extra length that we can allow will be beneficial and will help in preserving the color of the green. The scantier the turf, the greater the danger from root exposure. This precaution does not apply only to the greens but all mowers may be set up a trifle. The grass on the fairways is not growing quickly at this time and the balls get tremendous runs because the ground is dry and hard; this may be checked a mite by the extra length allowed the turf.

All in all, the troubles that beset the greenkeeper during the mid season, come largely, as a logical sequence following the system of management prior and approaching this critical period. The hot weather will come just as certainly as the seed time and harvest and the right time to prepare for it commences at the opening of the season. In the spring we have favorable weeks in which to fatten up the greens and make them strong, vigorous and hardy. Then by using all reasonable methods of precaution, we may feel fair-

ly sure that they will ride the crises easily. In the regions where fungus disease is rampant we will always have that demon lurking near at hand and can do no more than use whatever preventive measures we can afford and prepare to attack boldly whenever the spectre lifts its head, remembering that one ounce of prevention is worth a pound of cure.

Then, with the mind as much at ease as the cares of the greenkeepers position will allow, what better time is there than during dry, sunny days, to set about preparing the autumn supply of compost.

Mid-Summer Methods in Nebraska

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KEEPING plenty of moisture in the ground is the first essential in correct mid-summer care of a golf course. Water well the aprons and approaches to protect your putting surfaces from drying in from the outside.

Compost every 24 to 28 days, with good rich compost mixture of 50 per cent sand, 35 per cent animal fertilizer (preferably horse manure) and 15 per cent of good top soil. Use treatment for brown patch as occasion requires. I have had good results with pure calomel. Apply sulphate of ammonium at the rate of 1½ pounds per 1,000 square feet of putting surface, once every 10 days. This should be applied late in the afternoon. Use plenty of water after each application.

Use ammonium phosphate every 30 days at the rate of 1¼ pounds per 1,000 square feet putting surface. Follow this application with plenty of water also.

Mow greens every day. Adjust the mower to the proper height and never change it during the mid-summer season. To change it will cause your turf to become very fluffy, making a bad putting surface. Greens should be watered at night during this season, using water from 7 p. m. to 6 a. m. Blue grass or clover tees may be watered any time, day or night, just so they are kept moist and in good growing condition. It is a good idea to give tees an application of ammonium phosphate every 30 days. We follow this plan and have no trouble with our tees.

Fairways should not be mowed too often