

As to weight of rollers, a gang of three rollers weighing about 600 lbs. each is sufficiently heavy.

Greens and tees can usually be rolled sooner than fairways. A roller weighing from 250 lbs. to 300 lbs. is heavy enough for this purpose. Greens and tees I roll both ways; the reason for this is a green roller is in two sections and when rolling it will be found that small strips have been left owing to the opening between sections.

The same judgment should be used as to the proper time to roll as on the fairways.

By GEORGE SARGENT, Pro-greenkeeper Scioto Country Club, Columbus, Ohio

PRIMARILY, rolling grass in the springtime is done to press into the soil the roots of the grass which have been partly raised out of the ground by heaving and thawing during the late winter.

Secondly, it serves to smooth out the inequalities of the surface of the fairways and so gives the player a much better chance to get a good lie than he would have if the fairways were cuppy.

A great deal of care must be exercised on the time to roll the fairways. If the soil should be rolled whilst too wet, a packed soil would be the result; this would prove disastrous to the grass during hot weather, as air cannot penetrate to the roots of the grass should the soil become packed. To get the best results, rolling should be done when the soil is reasonably soft; so that the roots of the grass can be pressed into the ground, and not crushed onto a hard surface such as would be the case if the soil were dry and hard.

The best time to roll is immediately after the wet, soggy condition has passed, and the soil is in what might be termed a mealy condition; that is, soft, but not wet. Ordinarily this condition does not last more than a few days and the greenkeeper should be on the lookout for it, and seize the opportunity with both feet. If at all possible it is advisable to have two rolling outfits ready so that an eighteen-hole course for instance could be gone over in three or four days.

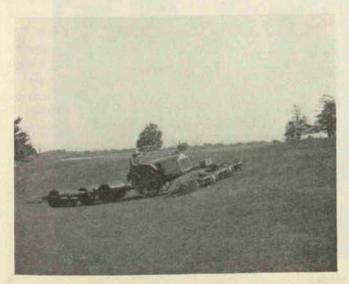
The weight of the roller can better be determined by the greenkeeper in charge, as the texture of the soil varies so much; generally speaking, a sandy soil will stand much heavier rolling than a clay soil. On a clay soil such as most of our golf courses are composed, a roller weighing from 1500 to 2000 lbs. and eight feet wide is ample weight for the job. I would not recommend anything heavier than those weights, it being much better to use too light a roller than one too heavy.

The number of times the fairways should be rolled can best be governed by conditions. If the greenkeeper feels that he has a satisfactory condition with one rolling, he will be well advised to let well enough alone; if he considers the grass is not sufficiently pressed into the soil, or that the surface of the fairway is still too uneven, he must watch for a second opportunity and perhaps a third; but by all means give them one thoroughly good rolling.

By W. J. SANSOM, Greenkeeper Toronto Golf Club, Long Branch, Ontario

IN REGARD to rolling of fairways in the spring, I consider that judicious use of the roller is a matter that calls for the exercise of considered judgment. For whilst it is highly essential that fairways should be rolled as much as necessary to maintain a firm root run for the grass and a smooth even surface for play, it is a grave error to overdo it.

A great deal of harm may be done and often is done by using too heavy a roller, especially where the soil is of heavy clay. Rolling when the turf is saturated with moisture will do more harm than good. It is well to bear in mind that a healthy growth and



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proper functioning of roots is impossible when air is excluded from the soil.

Sandy or stony soil may be rolled a great deal and still allow access of air simply because stones and gritty particles of sand cannot be bound tightly together, but will maintain a fair degree of openness or porosity in the soil. Where the soil is heavy and retentive of moisture, rolling should be done when the ground is dry and never immediately after heavy rains.

Spring rolling of fairways should be done as early as possible after the frost is out of the ground and the surface water has drained away. A strict watch must be kept upon the conditions of the soil and the advantage taken of every opportunity. The time to roll in the spring depends on the locality, texture of the soil and rainfall. Light sandy soil or loam can be rolled much earlier than a heavy loam or clay.

The rollers I use were made in Toronto and consist of three-sections, each section being four feet in width and weighing one thousand pounds—that is three thousand pounds spread over a width of twelve feet. I have been using these rollers for the past eight years with good results. In having a set for each of my Toro tractors I am able to get my rolling done just as soon as conditions are favorable in the spring.