

CHAPTER XXVI

ROLLING

Effect of Rolling—When and How to Roll—Rollers—Spike Rollers—The Weight of Rollers for Golf, Lawn Tennis, Croquet, Bowls, Cricket, Polo and Racing—General Remarks.

The Effect of Rolling

Nature will explain many things if only one has the patience to observe, and does not fly to hasty conclusions, so let us see what she has to say about this subject.

Walk across the fields and no matter the quality of turf they may happen to carry, the best will be found on the trodden tracks, provided, of course, that they are not used to destruction. This result is not solely due to the consolidation of the soil, but partly due to the fact that the herbage is worn short.

The texture of soils varies very considerably, and this is sharply reflected by the turf carried. Light, porous soils usually carry a fine turf, and remain firm and clean, wet or dry, whilst a heavy, tenacious soil generally carries a coarser turf, and when wet puddles, becomes soft and muddy, and the more it is used the worse it becomes, until the turf is trodden out of existence. Another walk through the fields will prove this very conclusively.

The above clearly indicates that a firm surface is essential, and that it is idle to roll soft, wet soils to make them firm without first getting rid of the excess moisture, which is the root of the evil, by dressings of sand, charcoal, breeze, etc. Many are under the impression that an untrue surface can be rolled true if a very heavy roller is used. Can this be done, and if so is it expedient? Personally, I think that it is absolutely wrong. If it is possible to squash the mounds and crests of undulations down to the level of the valleys, it is obvious that the soil would be abnormally hard in places and soft in others, which would give a variable speed to the playing surface, to say nothing about the possible damage done to the turf. We all know that a 20-ton roller cannot smooth out ripples

or pot-holes in a road, so why attempt the impossible with a lawn. Soil will not flow under a heavy roller, it can only be consolidated evenly if the surface is level enough to take the roller, and locally if it contains depressions which the roller cannot touch.

It therefore follows that the function of a roller is to produce a uniformly firm, smooth surface, and if it is so much out of truth that the roller cannot give the desired results the lawn should be relevelled.

When and How to Roll

The ground should not be rolled when too wet or too dry, or when frosts are about, but when it is in a nice moist condition and the roller can take effect without any chance of puddling or capping the soil.

If a lawn is abandoned all the Winter, the surface will be puffed up and blown by the frost. This is very bad for the turf, especially should the Spring open with a long spell of dry north or east winds, consequently it should be rolled down early and before any damage can be done.

The direction of the roll should be frequently altered. If it is north and south one day, make it east and west the next, and if the lawn is rolled twice on the same day, the direction of the second rolling should be at right angles to the first.

Rollers

For a young lawn in the process of being worked up from seed or turf there is nothing to beat wooden rollers made of four sections of elm 12 by 12 inches.

Water Ballast Rollers 18 to 30 inches in width and diameter are the best for ordinary use as the weight can be varied between fixed limits as desired.

Where there are many courts or large areas to be dealt with water ballast horse rollers with a width of 42 to 72 inches are the best, as they have such a wide bearing and a variable weight.

Motor Water Ballast Rollers such as are used at Wimbledon and the Queen's Club are excellent tools, but can only be recommended for large Clubs.

Spike Rollers

Should the surface become too hard through excessive wear or heavy rolling, and so become capped and almost

impervious to air and water, it can very soon be reconditioned by the use of Sarel's Patent Spiked Roller. This tool is made in sections 12 inches long by 9 inches diameter, and each section is fitted with 90 spikes, so that a 4-foot roller carries 360 spikes, and punctures a full-sized tennis court 288,000 times.

This roller can be used with advantage before and after applying all classes of fertilisers and top-dressings, sand, breeze, charcoal, etc., and also before watering, particularly if the ground does not readily absorb the same.

It is a very useful tool, and punctures the turf to a depth of about an inch at the same speed that it can be rolled with a roller of the same width.

The Weight of Rollers

Rollers should be chosen to suit the soil and game as closely as possible, and whilst I feel it is difficult to lay down anything approaching rules, the following remarks may act as a guide.

Golf

The surface of putting greens should be firm, true and smooth, but not necessarily very hard, and as it is quite impossible to make soft muddy soils firm by rolling, do not try; it can only lead to disappointment, because this undesirable condition is brought about by an excess of moisture.

The softer the soil is when wet, the harder it will be when dry, so at all times it will be bad for the turf, and its condition can only be improved by draining with pipes or dressings of sand, charcoal and breeze.

As a general rule the occasional use of a double-cylinder iron roller weighing about 5 cwt. and the regular use of wooden rollers will be sufficient.

The same remarks apply to the course through the green, excepting that wide horse rollers either in iron or wood or roller tipping carts should be used.

Lawn Tennis

For fast games a hard surface is essential, and to obtain this the best implements are: for Winter use a double-cylinder iron roller weighing about 5 cwt., and for Spring use, when preparing the courts for play, a wide double-cylinder water ballast roller weighing from 19 to 35 cwt. when empty and 28 to 50 cwt. when full.

Motor water ballast rollers weighing 35 cwt. when empty and 40 cwt. when full are used by big organisations such as the All-England and Queen's Clubs.

Croquet

A firm, true surface, but not an excessively hard one, is necessary for this game, so it is not advisable to use very heavy tools. As, however, this game is usually associated to Lawn Tennis, the same rollers can be used, if they are not loaded up with water.

Bowls

This ancient game calls for an excessively true surface, so true, in fact, that many groundsmen will not use double-cylinder rollers, owing to the fact that they are apt to gape and leave ridges, almost imperceptible, but sufficient to deflect the woods.

Special single-cylinder rollers are made for bowling greens, both of the water ballast and ordinary type; if the former class is favoured choose one 24 inches wide weighing $4\frac{1}{2}$ cwt. when empty and 7 cwt. when full, whilst if the latter type is decided upon the $4\frac{1}{2}$ cwt. roller measuring 33 by 33 inches is the best.

Single-cylinder rollers are very difficult to turn, consequently they require very careful handling if damage to the turf is to be avoided.

When double-cylinder rollers are in use, the ridging can be overcome by finishing off with a one-piece wooden roller.

Cricket

Here again a hard, accurate surface is necessary, otherwise the ball will kick dangerously.

For the wicket a single-cylinder water ballast roller fitted for manual labour, weighing 10 to 16 cwt. when empty and 15 to 25 cwt. when full, is ideal.

If the pitch is hard and dry, saturate it with water and roll thoroughly and slowly a day or so before it is required for use. Double-cylinder water ballast rollers measuring 30 by 30 inches to 48 by 54 inches, or motor mowing machines, are best suited for the outfield, but here the question of cost enters so largely into the question that I will pass it over with the remark that any roller weighing 20 to 30 cwt. should give efficient service under ordinary conditions.

The heavy motor mowing machines are really at their best on cricket grounds, as they can be used either as mowing machine and roller at the same time, or as roller only by throwing the cutting gear out of action.

Polo and Racing

A smooth but not hard surface is required for galloping games. If the surface is too soft speed is lost and there is a chance of the horses slipping and ricking themselves, and if it is too hard it may damage their legs, serious considerations in view of the high values placed on clever polo ponies and fast race-horses.

These grounds therefore obviously require very careful thought and treatment. A Cambridge ring roller of medium weight is useful for pulling together a cut-up ground, but anything in the way of extreme weight should be avoided.

General Remarks

Luckily for turf, games that require a really hard rolled surface, such as Lawn Tennis and Cricket, are only played in Summer months, so the grounds get about six months' rest, which allows the weather to enter, ease and mellow the soil and so give the grass a chance to thrive under what would otherwise be difficult conditions.

Do not forget that the function of a roller is to make the surface as smooth and firm as the soil and the weight of the roller will permit and that they are not intended to level ground, within the meaning of the term, because this they cannot do usefully, to any appreciable extent, no matter what weight is used.