

Greens rolling

Like many turf maintenance operations, the rolling of putting greens has yo-yoed in and out of fashion over the years.

As technology and the design of rollers have advanced from those used in years gone by, the rolling of golf greens has grown in popularity again. This is the result of the demand for consistently quicker greens, as well as the reduced risk of surface compaction and potential turf damage as a result of using modern rollers.

Rolling has a number of benefits in the preparation of golf greens. Both research trials and practical experience has shown that rolling putting surfaces leads to increased green speeds without having to reduce the height of cut and all the possible negative effects associated with excessively low mowing heights. In addition to the benefit of increased green speed, rolling also tends to improve surface smoothness, as any small inconsistencies associated with immediate turf surface are ironed out.

If the desired green speeds can be achieved through a combination of mowing and rolling it is possible that the frequency of cut could be reduced. Some of the existing research on greens rolling has demonstrated that alternating between rolling and mowing can lead to speed improvements without the need to mow every day.

However, there are a number of pieces in the rolling jigsaw that are still missing. Whilst we understand that rolling increases green speed and smoothness we don't have any consistent data on the optimum conditions for rolling. It is hard to imagine that the conditions under which rolling is carried out will not significantly affect the end result. The key questions that we currently don't have scientifically rigorous data on include:

- *How do ground conditions, especially soil moisture content,*

influence the effect, the magnitude and longevity of effect of rolling?

- *Does the optimum window for rolling, in terms of ground conditions, vary based on construction type (sand-based greens versus natural soil greens)?*

- *What effect does moisture presence on the leaf blade at the time of rolling have on the resultant green speed and smoothness? Does rolling when the leaf blade is moist affect the longevity of any improvements in green speed?*

- *What is the effect of different roller types under any given set of conditions? In other words, do different types of roller perform at their best under slightly different conditions or is their performance similar under all conditions?*

- *Does the use of plant growth regulators with an alternating rolling/mowing regime lead to reduced plant stress, whilst producing the same, if not improved, level of performance at a reduced cost?*

- *How consistent are the effects of rolling, in terms of surface performance improvement, and what factors influence these effects?*

If we could answer these questions we'd certainly be in a better position to optimise rolling regimes to get the best out of this important maintenance operation.

One of the interesting questions that often gets asked is which roller is best, the dedicated ride on roller or the triple mounted vibratory roller. From experience, it seems that both types of roller can be highly effective but differences may exist in their optimum window for use, especially on different green constructions.

This is why it is important that we can investigate which factors need to be taken into account when it comes to implementing an effective rolling regime.

If we had more information we could give better advice to help greenkeepers make more informed decisions on when and how much rolling they do.



This kind of information can be gained for individual courses if enough monitoring is carried out to identify when the rolling is most effective. However, this is not really an option for many golf courses. We require universally applicable advice on the appropriate conditions and the effect that conditions have on rolling efficacy. This can be achieved by investigating, under controlled field trial conditions with an intensive testing programme, the influence of various environmental conditions on greens rolling. It would also allow a thorough examination of the effect of rolling on both the smoothness and trueness of golf ball roll.

If I can leave you with one key message from this column, it is that rolling can have real benefits on playing surface performance. The evidence is out there on many golf courses around the world. What we still need to do is make sure we are maximising the benefit from greens rolling by understanding the effect that surface and turf conditions have on its efficacy.

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