

ROLLING OUT

by

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So to speak

You can restore and maintain a dominance of the finer grasses in your greens without compromising on playing quality. It is perfectly possible to maintain quick surfaces that allow the ball to borrow and finish-out without resistance while also developing the finer grasses. The Disturbance Theory says so. This article focuses on the role of rolling.

On the other hand

The stress-based way of restoring the finer grass often resulted in slow and bumpy greens. This is because it usually involved increasing the cutting height 'to give the finer grasses a chance' and withholding fertiliser and water inputs 'to starve out the annual meadow-grass'. The loss in playing quality from this approach meant that many lost interest.

The best of both worlds

The major challenge of modern day greenkeeping is to establish better and more sustainable putting surfaces that the golfers can really enjoy and without any deterioration. The Disturbance Theory provides greenkeepers with an answer to this challenge. Greenkeeping with an appreciation of plant growth strategies can bring the finer grasses *and* attend to playing quality. There doesn't have to be a downside.

Changing your nature

To restore the dominance of the finer grasses "the DT way" will require a change in approach. In essence, you will need to implement less aggressive surface preparations to create a more settled environment. Believe us, if you reduce the amount of damage imparted onto the turf then the finer grasses will come. This simply means brushing, cutting, rolling and top dressing rather than scalping low and verticutting incessantly. This change in maintenance practice will deliver improvements to the botanical

composition of the turf and it will also delight the golfers as they see the ball rolling out under its own weight. Rollers are a big part of the process.

Roll on!

Until recently, turf rollers were not widely available (nor were effective top dressers, high lift trailers and good brushes for that matter). However, the use of the triplex mounted vibrating rollers or the self-propelled Turf Iron units is now being widely adopted to maintain and improve playing qualities.

Rolling brings speed without imparting any negative selection pressure. It is not damaging and so allows free competition to develop. Their use has accelerated botanical progress at many clubs when used instead of aggressive and damaging measures. With regular use (as long as the surface is firm and true after brushing and top dressing), we can sustain a good pace at higher cutting heights and without having to verticut too much. This method creates healthier turf and provides the settled conditions in which the finer grasses can thrive. Rolling allows us to keep a handle on green speed during the transition phase. It gives the surfaces the golfers desire.

A rolling programme

The triplex mounted rollers continue to be the most popular throughout the UK but the self-propelled Turf Iron units continue to increase in popularity. Both units have their advantages and disadvantages, which are outlined below...

- The Turf Irons provide greater and longer-lasting increases in pace. In many cases, our experience is that one pass with these units' increases pace by 12-18 inches on average. Use them once or twice a week or less regularly depending on priority. They run as self-contained units and don't place any demands on the mower or mowing. Their disadvantages are that they can be more difficult to operate, transport around the golf course and they are slower to use than the triple mounted versions.
- The vibrating rollers are quicker and more efficient to use and come alongside a "total refinement" type cassette system. They can be used to improve green

speed, to vibrate top dressing into the base of the turf and settle the surface back after disruptive treatments. However, they do seem to offer less of an impact on pace with one pass delivering an additional 8-12 inches of ball roll that often wanes over a 24-hour period. The newer adjustable rollers might help optimise or improve this situation. Research is always most welcome.

At present the jury is out on which method is best but both are clearly beneficial. Each type does a different job in a different way so you will have to undertake an extended weeklong trial.

Negative impact?

When suggesting rolling, we are often met with the question of soil compaction and the potential detrimental effects it may have on the turf. To calm these concerns, research by The USGA showed rolling could be implemented as often as four times a week (on sand based greens) with no negative effects to the long-term health of the turf. In the UK, most greenkeepers who roll seem to do so 2-3 times a week at most. The American example might be for a different league of course in terms of its manning, but even with such a frequency no compaction is evident even after several years of use. This is because the ground pressure of the rollers is very small and the action is one of smoothing rather than compacting. Regular surface pricking and/or pencil tining should be undertaken as a matter of course and will prevent any perceived sealing of the surface.

The answer might be

To us STRI agronomists, there is nothing better than seeing a putting green mown by hand. A motorised roller with a cutting cylinder and a greenkeeper attached. This operation enhances the speed, trueness and visual presentation of the turf. It also gives the greenkeeper a better connection with the growing environment via the senses of touch, smell and better sight. We know the downsides but love the positives.

Due to the configuration of different hand mowers, the size of the rear roller and the weight of the machine, some hand mowers will have more positive effects than others on the performance of the turf. To describe this point, during the final preparations

for the Open at Carnoustie 2007, the weightier Toro Flex 21 mowers were be used to build the pace of the greens but once appropriate pace was obtained the lighter weight Toro 500's were be used to retain it. Of course this is finesse greenkeeping but we can all learn something from it.

Not for nothing

To increase the dominance of the finer grasses in our greens we have to ease the disturbance pressure on our turf. We need to relax verticutting intensities and possibly raise the height of cut. If this were done alone, it would cause a deterioration in playing quality. We don't compromise on playing quality. We therefore implement other methods to prepare our surfaces. Regular top dressing, brushing and rolling will help us attend to the demands of the golfer and progress the turf. The triplex mounted vibrating rollers and Turf Iron self-propelled units help us maintain green speed without damaging the turf. It's not called the Disturbance Theory for nothing. It's the damage that halts the progress and it has done so now for too long.

Richard and Henry reside at the STRI and are here to help. They may be contacted by email at disturbance.theory@stri.cu.uk for feedback and advice. All the Disturbance Theory articles are freely available at www.stri.co.uk.