



With ever more emphasis on greens performance and the need for regular top dressing, Laurence Pithie examines the methods used past and present for working top dressing into the turf surface

Brushing-in top dressing - the options



Dressing and drag matting
(1984, Minchinhampton)



Modern day drag matting on
the 9th green at Frilford Heath

The Early Days

The spreading of a sand based top dressing onto putting surfaces for improving playability has been in use for around 150 years. It was certainly an essential part of Old Tom Morris's program of work, first on Prestwick and then latterly at St Andrews during the middle part of the 19th century.

What isn't clear however, is how this was 'worked-in' to the surface in these bygone days; possibly using a broom or yard brush. There are no records of the amounts or frequencies used but it is likely that this would be relatively small and used more for turf repairs and leveling out ruts, hollows and animal scrapes.

Rolling was the other mainstay of 'early' greenkeeping. Ironically this is back in vogue after an absence of nearly 100 years when it was found that after prolonged use of heavy iron rollers, greens were becoming 'hide-bound' or compacted.

More Modern Times

Although Sisis had developed various pedestrian driven aerifying units soon after William Paul's three prong coring fork invention

circa 1920, it wasn't until the 1950s that a powered coring aerifier was introduced by the American, Thomas Mascaro. He would later produce a vertical cutting machine for thatch removal.

The use of powered aerifying and vertical cutting machines became ever more popular as the demand for improved putting greens became greater. This also meant that larger amounts of top dressing were required to follow up these cultural practices and so began the next phase in how to move this material into tine and core holes, as well as vertical grooves. Chain link drag mats were introduced which could be pulled by hand or towed by machine, thus allowing material to be dragged into the surface once dry.

Prior to 1980, top dressing in the UK was still largely confined to spring and autumn following pre and post season renovation work to coincide with the golfing calendar; a topical issue at many clubs some 30 years later! Course Managers introduced or developed various techniques to spread top dressing, some of which are shown in the accompanying photographs. Lines of greenkeepers brushing greens with besom brushes was not uncommon, particularly on the more traditional golf courses. Even



Drag brushing the green after top dressing

the use of hover mowers to blow the sand into the turf canopy has been used in recent times.

A Remaining Challenge

The introduction of 'spinner' type top dressers presented Course Managers with the opportunity of applying top dressing little and often, very quickly and ahead of play. A few passes with a drag brush or similar implement soon made the material disappear and following a dry cut, the golfers were largely unaware that this work had been carried out. This is a popular practice throughout the turfing world, whereby the amount of organic matter build-up is balanced and diluted by the application of top dressing every 7 to 14 days.

However, one aspect of renovation work that has been a challenge for many years is the filling of core holes with sand top dressing. A common issue is that core holes are not being filled leading to uneven and bumpy turf surfaces.

Not filling the core holes is also a lost opportunity for dealing with thatch accumulation, since the holes quickly close up again. It often appears that the holes are filled but when profile samples are taken, it indicates merely a 'bridged' cover-

ing whereby the wet sand lies above the hole with the void remaining. This is especially the case when this work is carried out before and after the main playing season when surfaces are damp and temperatures cooler.

Options Available

Brushing very light applications or 'dustings' of sand dressing into the turf canopy can easily be achieved using a variety of methods that are quick and effective. Since only very small quantities of material are involved, this is a straightforward exercise, although it could be argued that some of the dressing is removed during the first two cuts.

Following hollow coring however, this is a different challenge. A typical 50x50mm (2 inch) tine pattern using 13mm (half inch) wide coring tines to a depth of 100mm (4 inches) requires around 3 tons of material per average sized green to completely fill the holes.

In warmer and drier climates this is perhaps less of an issue but in our cool temperate climate, this is harder to achieve, especially if the sand is wet or even just damp. Purchasing the more expensive kiln dried sand still requires a dry surface; by no means a guarantee



ABOVE: Brushing in top dressing using Greentek Multi-brush (Cotgrave Place)
BELOW: Sweep n Fill brushing sand dressing into core holes (West Hill)





in the UK, particularly in western regions. Therefore what are the options available to course managers?

Drag Matting

This is a quick and low cost method whereby the drag mat can be towed behind an assortment of vehicles from a bunker rake to a golf cart. It is not suitable for working in larger quantities of material but ideal for light dustings and has been a common practice for decades.

Drag Brushing

A towed drag brush achieves similar results to the drag mat but has the same limitations. A brush mounted on the three point tractor linkage inserts more pressure but still has some limitations in what is achieved. However it is a useful ploy for producing more upright growth prior to being mown.

There are all sorts of mounted brushes available ranging from a Sisis 'Zig-Zag' brush to the Greentek 'Multi Brush' which can fold up to give a 'triple' action spread for top dressing, while dispersing dew or grass clippings on fairways when fully extended.

Brush Attachments

These range from the older rotary brushes that can be mounted on the front of a greens triplex or similar mowing unit, to more specialised brush units that are fitted in place of cutting units or verti-cutting reels.

Blowers

These are less common in the UK but the objective is to direct high volumes of air to blow the dressing into the core holes and turf canopy as opposed to dragging or brushing which can be abrasive to the turf.

The Buffalo Turbine Sand Devil blower is an American unit for this purpose with other models suitable for blowing cores to the sides of greens, tees or fairways for collection.

Contra-Rotating Brushes

These are more commonly referred to as 'Sweep and Fill' brushes, with two variations available: the original Sweep n' Fill brush from JSM or the TB220 from R&K Kensett Ltd.

The two rotating brushes have the ability to move larger volumes of sand into core holes in a few passes, even when the sand is damp.

Both types come complete with transport wheels which are raised when brushing and can be towed behind a basic vehicle.

For the first time it is possible to completely fill all core holes under reasonable conditions quickly and efficiently without requiring large numbers of staff.

These brushes are also useful for grooming greens surfaces and helping to increase green speed. It also gives Course Managers the option of using slightly smaller and less disruptive coring tines while still able to fill the holes.

TOP LEFT: Drag brushing green with home made unit after coring Kaskada

SECOND TOP LEFT: Grains keeper brushing in dressing South Essex

MAIN ABOVE: Drag matting dressing using astro turf mat upside down Hertfordshire

In-house variations

The use of an old upturned range mat which is towed behind any small vehicle gives a very satisfactory performance for working-in small amounts of dressing for next to no cash outlay.

When these mats become worn and unsuitable for use on the range or winter tees, they can still prove useful for this purpose.

Another variation is to use a metal frame and pallet and then cover this with astroturf or similar to form a small robust unit with additional weight.

SUMMARY

Course Managers are always looking at ways to improve efficiency and the quality of putting surfaces. There are brushes, mats and blowers available to meet these objectives and to suit all course budgets, some more capable than others.

For completely filling core holes, the most effective method to date is the use of one of the contra rotating brushes which overcomes an age old problem.

For courses that have little or no need for coring, then any of the other alternative methods will serve the purpose at a relatively modest cost.

Much depends on what you intend to achieve and also the timing, since working top dressing into the putting surface is better achieved when playing surfaces are dry and the grass is actively growing during warmer temperatures.

about the author



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Laurence Pithie MG runs his own training and consultancy company, Turf Master One Ltd. Previously he spent 17 years managing multi-site golf operations in the UK. With 42 years in the golf industry, Laurence has used his experience and knowledge to produce a number of recent 'case study' articles.