dressing into the turf surface
present for working top
top dressing, Greens performance and the
Laurence Pithie examines
need for regular top dressing,
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
top dressing into the turf surface.

**Brushing-in top dressing - the options**

**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
via the back of a rake or perhaps
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 level-
ing 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 aerify-
ing 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 is carried out before and after
the main playing season when sur-
faces are damp and temperatures
cooler.

**Options Available**

Brushing very light applications
or ‘dustings’ of sand dressing
into the turf canopny can easily be
achieved using a variety of methods
that are quick and effective.

**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 gollferse
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 renova-
tion work that has been a challenge
for many years is the filling of core
holes with sand top dressing. A
core hole 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 the
work is carried out before and after
the main playing season when sur-
faces are damp and temperatures
cooler.

Following hollow coring however,
this is a different challenge.
A typical 50mm (2 inch) tine pat-
tern using 15mm (half inch) wide
coring tines to a depth of 125mm
(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
kilo dried sand still requires a dry
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Brushing-in top dressing - the options

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What isn’t clear however, is how this was ‘worked-in’ to the surface in these bygone days; possibly via the back of a rake or perhaps 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 levelling out ruts, hollows and animal scrapes.

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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 drugged 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 dressing with besom brushes was not uncommon, particularly on the more traditional golf courses. Even 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’ covering 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...
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 is 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 play 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 Green-tex ‘Multi Brush’ which can hold up to give a ‘triple’ action spread for top dressing. These range from the older rotary 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 for lifting and lowering the machine. 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.

**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.

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**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.

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**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**

Laurence Pithie MG

Laurence Pithie MG runs his own training and consultancy company, Turf Solutions, which works on large multi-site golf operations in the UK. He has spent many years working in a number of different ‘sense study’ roles.

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