



Top Dressing

HARDWARE

Most golf courses use a variety of top-dressings for their greens, these varying greatly in moisture content and particle size and thus in their 'flowability' and ease of application. In addition there are a number of other materials, such as salt, grit, fertiliser and seed which may need application and which can be spread by specific machines. However there is always the danger of seeking a 'jack of all trades' machine which may be 'master of none'.

As with any machinery purchase it is vital to establish priorities, be they price, accuracy, longevity, low ground pressure or any other feature, and to establish which materials need to be spread, with what accuracy and at what volume and rate. Having set these goals it becomes easier to select or reject specific machines. Prices of spreading machinery vary from a low of around £500 – if you are prepared to accept the limitations of a spinner broadcaster – to £11,000 for a state of the art Turfco LA2 Mete-R-Matic.

Spinner broadcaster machines range from the simple single disc tractor mounted machines such as the Amazone EKS through to trailer spreader models of which the Charterhouse Bulk Dresser is an example. There are also many other makes of broadcaster with single or double discs. Critical appraisal may be needed with the former, ensuring that there is adequate agitation, but the latter in trailed form and designed or adapted for spreading volume material should be cost effective for high outputs.

More conventional for top dressing are machines such as

those produced by Sisis, Huxley, Modus T, Turfco, Charterhouse, McConnel and Ransomes. These machines place the material over a fairly narrow well defined band, often assisted by a rotary brush to break up and impel the dressing into the ground. They are available variously in fully mounted, semi-mounted (with rear support wheels) and fully trailed versions. Prices range from about £2,000 upwards. A number of machines, such as those from Sisis and Modus T Systems, are available in mounted or trailed versions and are easily converted – as is the Amazone spinner broadcaster. The most suitable form for specific situations will depend upon a number of factors, such as the prime mover available and capacity required.

The options for the prime mover range from (compact) tractors to turf maintenance vehicles (TMVs), such as Hydromain or Cushman. However there is a growing range of such machines, including those from Huxley, Jacobsen, Hauler, Kawasaki and John Deere. Compact tractors may need a more expensive trailed type of top dresser, as many are too light to be stable when the implement is fully loaded. For non-linkage, non-PTO prime movers, such as ATVs, a bogie or chassis with an independent engine is available, capable of carrying virtually any mounted implement including spreaders and sprayers.

Three types of drive are common for spreaders and top dressers: ground wheel drive, PTO or hydraulic. The advantage of ground wheel drive is that distribution is ➔ 50

HUGH TILLEY
reviews the
latest
hardware and
equipment for
top dressing

Pictured:
the Charterhouse
Bulk Dresser



Amazone Ground Care - GS15 dresser



Cushman Turftruckster fitted with fifth wheel attachment



SISIS Powaspred with Hydromain Twin 25

RED VALIANT

This machine can apply up to 500 tonnes per day of sand and top dressing material from 5mm to 100mm in depth.



SPECIFICATIONS

Capacity 6 tonnes	Unladen weight 1300kg
Spreading width 2m 30cm	Max. gross weight 7500kg
Transport width 2m 50cm	P.T.O. 15 h.p.
Height 1m 70cm	Tyres 12.5/80 x 15.3 14 ply
Length 3m	Minimum tractor requirement 45 h.p.

4 tonne and 2 tonne versions are also available for use with the smaller compact tractors.

FOR SALE OR HIRE



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49 → related directly to the area covered irrespective of engine speed or gear ratio, the disadvantages being a danger of wheel slip, an impracticality for mounted machines, and spread cannot be instantly instigated or altered without forward travel.

PTO output is dependent upon gear ratio – double forward speed and you halve application rate – this being both an advantage and disadvantage. Most PTOs are now independent, thus making it easier to start and stop the run without having to stop forward travel, but perhaps the greatest advantage is that PTO drive is simple and inexpensive. A few tractors (such as some M-F 35s) have a ground speed PTO which forms an even more certain ground related drive. Hydraulic drive provides the most flexible system of operation, as speed can be infinitely adjusted within the limits of prime movers flow and pressure, and is equally easily stopped and started. Several machines use the PTO to drive a hydraulic pump for the implement's own closed circuit hydraulics. Hydraulic drive is also gear ratio dependent, but because of the system of pressure control it may be remarkably little effected by variations in engine speed, thus the operator may even be able to increase spreading rate or density by reducing engine speed.

Spread rate is normally controlled by either metering the dressing with a feed roller (or belt), or by using an adjustable gate. Some machines use both methods. Adjustment can be made by changing the speed of rotation of the roller (or belt) or by widening the feed gap or both, according to model. Some machines are easier and quicker to adjust than others. The feed roller system should give the most positive output and the ability to crush lumps, while a gate feeder has the advantage of equalising out the feed rather better. Rates with both types will vary according to the consistency and moisture content of the material being spread, thus if accurate rate control is needed then calibration is essential.

Some machines cannot achieve

very high or very low rates with certain materials, whilst others, such as the Modus T, have an optional fine material kit available for dry sand. Specific models may offer greater flexibility if pulleys (or sprockets) can be interchanged, thus reducing or increasing belt or roller speed. Some machines need the roller or belt to be clean in order to work with damp materials, but the fast rotating brush common to most top dressers has the double advantage of cleaning the belt/roller and 'flicking' the top dressing down into the turf. Damp materials also need a hopper design which prevents bridging, or a machine with an effective form of agitation. Not all machines offer agitation: on some it is optional, stoppable or removable, and this must be ideal (assuming that it is needed at all).

Most brochures give dimensions: weight, height, capacity, hopper opening size etc. Height and opening size will tell you how easy it will be to fill and how it will fit with existing or proposed manual or mechanical handling equipment. Mounted models may be difficult to fill with a large loader bucket and high sided models are not popular for filling by hand from bags – although it is usually possible to build a ramp or load from a trailer. The Charterhouse Easy Spread is unique in its ability to scoop up its own load.

Weight and capacity data provides several useful indications, while tyre size is important where compaction is a problem. Capacity can be equated very approximately as one kilogram per litre of capacity. Limited capacity can be compensated for if re-filling is quick and easy, say by fast travel speed or proximity to the heap, or filling from the trailer etc. Ease of cleaning, maintenance and servicing are other features which have values in terms of time, trouble and length of life, and which are thus worthy of consideration before you buy. On-site demonstration and the testimonial of a colleague (another greenkeeper) with experience of the machine are other 'musts' before committing cash.