

James de Havilland takes a closer look at the intricacies of current machinery

The anatomy of... Top dressers



When choosing a top dresser, job one is to select between broadcast and direct drop designs. Each has its merits. Try and think beyond the unit's most obvious use and consider alternative applications, such as filling a bunker or moving bulk material.

Modern top dresser units have enough design variation within them to make selecting the right one more involved than it may at first appear. We look at the all-new Rink SP950 pedestrian and Rink DS800 trailed models from Charterhouse Turf Machinery

Charterhouse Turf Machinery Rink top dressers

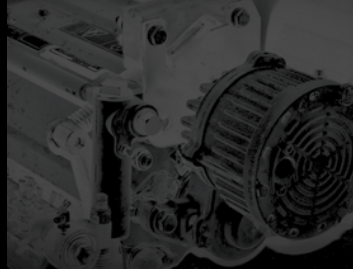
Rink DS top dresser model numbers helpfully indicate the unit's level load hopper capacity in cubic metres. So the DS800 has a capacity of 0.80m³, the DS1200 offering 1.2 m³ and so on. The DS range is offered in capacities of up to 3.8 m³, with the DS800 coming in both trailed or mounted versions, fitting kits for the latter enabling them to bolt directly to turf trucks such as a John Deere ProGator or Toro HD Workman. Trailed model Prices range from £9,000 for the trailed DS800, the extra high capacity DS3800 listing at £26,778. Mounted DS800 units are £8,800 plus a mounting kit specific to a given turf truck costing £938.

Rink direct discharge models are offered in mounted and trailed versions with spread widths from 1005mm through to 2020mm – as indicated by the model number. Prices start at £8,000 for the Rink 1000.

New for 2011, the pedestrian SP950 is a direct discharge design with a capacity of 0.33 m³ and a spread width of 950mm. It is ideally suited to top dressing bowling greens and any turf with restricted access. Priced £7,600, the SP950 is powered by a 6.5hp Vanguard petrol engine and features a hydrostatically driven tricycle undercarriage. This is designed to enable the unit to turn within its own length.

Step-by-step Analysis...

Top dressers



Top dressers fall into two main designs types; those that broadcast using spinning discs and those that 'drop' the material to a spread determined essentially by the width of the unit. It also follows that these designs can be offered in versions that are trailed, turf truck mounted or, as is the case with the Rink SP950, pedestrian controlled.

With a broadcast design you can vary the spread width, with some models spreading up to 16.0m dependent upon material and the capacity of the unit in question. A Rink DS800 has a spread width range of between 2.0 to 12.0m. If the aim is to discharge in a 'windrow', the discs of a broadcast machine can either be slowed right down to narrow the spread width or, as is the case with the Rink DS models, removed completely for a direct discharge to the conveyor width.

A 'drop' discharge top dresser works at a fixed width. Once the desired application rate has been determined by the rate of flow from the hopper and the forward speed of the unit, it should be relatively easy to match each bout pass for an even application of top dressing material. Direct discharge machines are ideal where the spread material needs to be tightly contained.

Where wide areas need to be covered productivity will typically increase using a broadcast machine. For some jobs, such as top dressing a golf green, some users will set the unit to dress the total area in a single or dual pass. This can save a great deal of time. The appeal of a machine that can spread material wide needs to be countered by the requirement or ability to accurately match bouts at these widths.

Once the type of machine has been selected, other top dresser points that may need to be considered will include versatility. As an example, several higher capacity trailed machines can be readily converted into a bulk loader, the addition of a rear conveyor allowing them to discharge directly into a smaller spreader, trailer, a bunker or even into a heap or windrow on the ground.

On trailed models, the variety of wheel and tyre options to consider varies too; choices can include a relatively narrow track but with four wheels across the width of the dresser body. A conventional axle with wide flotation rubber may also be offered.

On smaller models, both mounted and trailed, there may



The drawbar of trailed Rink spreaders can be adjusted to suit the towing vehicle, the unit suiting tractors of 25hp plus with one double acting remote valve and delivering 25 l/min hydraulic flow.



Pictured in its storage bracket, the single lever control for Rink DS top dressers will control the discharge conveyor; the rear discs continue to spin when the discharge conveyor stops. The conveyor, rear shut off and discs draw power from a single hydraulic outlet, this ensuring the unit cannot be operated without



The contra rotating spinning discs can be set to spread at widths from around 2.0 to 12.0m, with variable application rates from light to heavy. Quick couplings enable the discs to be removed for direct dropping into a windrow for trench filling or be replaced with a cross conveyor.



Swing axles ensure the wheels of trailed Rink DS models retain full ground contact over undulations. With any model of top dresser, the amount of material loaded can be cut down to reduce ground bearing pressures.



By spreading the load across four wheels, a trailed top dresser can offer a low ground bearing pressure. In the case of the Rink DS800, the four 24x13.00-12 tyres are inflated to 0.8bar.



The Rink SP950 runs on six 13x6.50-6 tyres, four at the rear and two up front. The full width nylon brush helps ensure spread material is applied in an even layer and follows the same design as existing Rink top dressers.



The Rink SP950 controls are simple, the operator engaging drive by raising the 'T' bar. In work, the units forward speed can be adjusted via the engine throttle, the unit proving simple to operate and match up between bouts passes.



New to the UK, the pedestrian controlled Rink SP950 has a capacity of 0.33 m³ and a spread width of 950mm. Powered by a 6.5hp Vanguard petrol engine, the units is ideally suited to spreading over small greens and areas of turf with restricted access.

be a choice of an integrated power unit. These 'self-contained' models can often be used in conjunction with equipment that would otherwise not have the power, hydraulic flow or PTO to drive a spreader but are otherwise ideally suited to top dressing and spreading duties.

Next up are hopper capacities. It is all too easy to assume that a large trailed top dresser will be too heavy, but it is always worth remembering a nominal 3.0m³ capacity machine can be partially loaded when working on sensitive turf.

In fact a 'big' top dresser filled with 1.0m³ of material may offer have a footprint that is less than a smaller machine on narrower tyres with the same load on board.

This leads on to the issue of tyre types and inflation pressures. Without getting into the complex territory of how much load a tyre can take at a given inflation pressure, a simple guide is that a tyre will impart the same ground pressure as its inflation pressure.

This is perhaps a bit of an over simplification, but a big trailed

spreader and tractor combination running on tyres inflated to 0.8bar may well exert less pressure on the ground than a turf truck with its rear tyres blown up to 1.0 bar to enable it to take a fully loaded mounted spreader.

So, if you are looking for a new top dresser, you have a few pointers to consider beyond the spreader type.

Entry-level direct drop tractor mounted models with a 3.5m³ body and a nominal spread width of 1.5m will retail from under £5,000, utility vehicle equivalents listing between £6,500 and £7,500.

Spinning disc broadcast spreaders occupy a diverse range, those designed to fit a utility vehicle retailing from £7,500 for a top specification machine. When it comes to trailed models, prices may well start at under £6,000, large trailed units costing over £20K.

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To help whittle down your options, it can be useful to set out a few requirements and preferences. These can include:

- Mounted or trailed. Consider units designed to fit to a turf truck
- Vehicle driven or fitted with own power pack
- Direct drop or broadcast
- Ability to spread range of top dressings
- Application rates and hopper capacity
- Versatility. Will you want to spread solid fertiliser?
- Tyres sizes and inflation pressures
- Compatibility with existing equipment
- Projected workload and capacity
- Type and area of turf to be dressed
- Additional options offered to improve versatility
- Ease of operation and setting up
- Fitting and removal from tractor or vehicle
- Local support and budget
- Electric and remote control options

