



## DATA SHEET

### FERTILISER APPLICATION

Fertiliser may be applied to maintain the health and appearance of the grass., it is also used to help pitches recover after a long period of play. As with all turf surfaces different nutrient levels are applied at varying times of the year:-

- Spring/summer - more nitrogen is needed as the grass plants are actively growing.
- Autumn/winter - more phosphate and potash is applied to encourage root growth.

The best condition for the application of fertilisers are when the immediate surface is dry, but with moisture present in the soil. Dry, windy conditions are to be avoided, which may result in an uneven distribution followed by scorching of the sward. Fertiliser applications must always be followed by watering, in one form or another. Always check the calibration of the machine prior to an application in order to determine the correct rate at which the fertiliser should be introduced, as detailed by the makers instructions.

#### **FERTILISER DISTRIBUTORS**

Fertiliser distributors are used widely in turf culture for spreading fertiliser evenly and efficiently. Distributors may be pedestrian controlled or tractor mounted. Any distributor should be able to carry out the following functions:

- able to spread both granular and powdered fertiliser at a wide range of application rates.
- the application rate should be easily adjustable.
- they should be adaptable to sow grass seed on lawns and apply top dressing.
- they should be designed and built in a way that will reduce corrosion as far as possible.

There are three basic types of distributor: spinning disc, conveyor belt and oscillating models.

#### **Spinning Disc Spreader**

Spinning disc distributors have a hopper in the shape of an inverted cone with an agitator at the base to prevent any blocking. The fertiliser drops from the hopper onto a horizontally rotating disc driven by land wheels. This flings it out in all directions. These machines have a wide distribution width, so you can do the job relatively quickly.

However, there are disadvantages with all machines, except the very latest, as less fertiliser falls at the edges of the distribution width than at the centre. This gives uneven application. To compensate, plan the runs so that they overlap. The distribution will also vary with any changes in forward speed.

To calibrate these distributors, adjust the slide in the base of the hopper. Quantities are rather difficult to judge. This method is useful:

- Place a 1m<sup>2</sup> sheet of corrugated cardboard on a surface
- Pass the distributor over it
- Collect up the fertiliser on the cardboard and weigh it
- Keep adjusting until your quantities are right.

#### **Conveyor Belt Distributor**

This type of spreader produces an even distribution and is generally used where a top quality finish is required. The machine consists of a hopper, the bottom of which takes the form of a rubber conveyor belt. The belt is driven by land wheels or gears and as it rotates it carries the fertiliser to the front of the hopper. The fertiliser falls out, through a gap between the base of the hopper and the belt, to the ground.

The application rate will not be affected by the forward speed as there is a direct link with the belt and the land wheel. Calibration can be carried out as for the spinning disc machine. The application rate can be adjusted by;

- altering the distance between the bottom of the hopper and the belt, if widened, more fertiliser will pass through the gap and the application rate is increased.
- where a gear drive is used the gear ratio can be changed to increase or decrease the speed of the belt in relation to the forward speed.

*Remember that different materials will have a different flow rate and require re calibration.*

### **Oscillating spout distributors**

Oscillating spout distributors are powered by PTO from a tractor or similar engine. Emerging from a conical hopper, the fertiliser is ejected at high speed through a spout onto the surrounding ground. The spout oscillates backwards and forwards in a horizontal plane. As with the spinning disc, this gives a spread much wider than the machine itself. The pattern is rectangular.

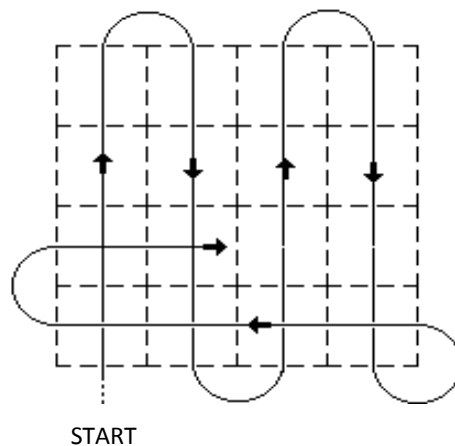
### **Maintenance of Distributors**

Corrosion of distributors can occur very easily due to the chemical action of the fertiliser if they become damp. This can result in annual replacement of parts, which is an unnecessary cost. A wide range of distributors use plastic, rubber and fibre glass to try and prevent corrosion. It can be kept to a minimum by taking the following precautions:

- all traces of fertiliser should be cleaned from the machine after use.
- fertiliser should not be left in the machine overnight.
- the distributor should not be left outside when not in use.
- at the end of the season all working parts should be stripped down and thoroughly cleaned.
- if any parts are worn they should be replaced so that the distributor is ready for use at the start of the following season.

### **APPLICATION**

The principle of fertiliser application. When applying fertiliser with a belt type distributor the quantity should be split into two and two runs made over the whole area, the second run being at right angles to the first.



For more information about our short courses please contact us at the address below.