ISSUE No. 01

SUMO DD

DIRECT DRILL

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The SUMO DD (Direct Drill) is a disc based drill designed for zero-till establishment where optimum seed placement is required with minimal soil disturbance, as part of integrated conservation agriculture, benefitting the environment and also increasing margins.

DD
DIRECT DRILL

There are many benefits of the Direct Drilling system, not only the immediate cost savings which are considerable, but this system can benefit your land and soil structure as well. By having the ability to plant seed through previous crop residues or beneficial green covers into undisturbed soil, organic matter levels are allowed to build, worm counts increase and the general fertility, drainage and wellbeing of your biggest asset is restored.

The DD has been designed and engineered with these aims in mind, to give optimum seed placement in a wide range of conditions. We have built into the machine a number of innovative designs like slim line single disc openers, adjustable disc down force and our own in house designed ORGA metering system for both seed and fertiliser combined with the ruggedness and simplicity you have come to expect from Sumo, which together makes for one of the best direct drills on the market.

There are many benefits of using the Sumo DD to establish crops on both agronomic and economic levels. Here are a few figures to highlight possible cost savings that could be achieved by switching to a Direct-Drill system - CAN YOU AFFORD NOT TO LOOK??

COST **TIME**

Conventional Tillage	£/ha	Ha/hr	Hr/ha
Plough	60	0.8	1.25
Press	20	1.5	0.6
Power Harrow	37	1.25	0.8
Drill	30	3	0.3
Roll 8m	9	4	0.25
	156		**3.2**

Min Till	£/ha	Ha/hr	Hr/ha
Min Till Cultivator 3m	40	2	0.5
Heavy Press 4.6m	18	4	0.25
Spraying	14	7.5	0.13
Tine Drill 4m	25	3	0.3
Roll 8m	9	4	0.25
	106		**1.43**

Direct Drilling	£/ha	Ha/hr	Hr/ha
Spraying	14	7.5	0.13
4m DD Drill	25	4	0.25
Roll 8m	9	4	0.25
	48		**0.63**

Typical plough based establishment system

Typical min-till based establishment system

Typical DD direct drill establishment system

70%
Cost saving over conventional tillage

55%
Cost saving over min-till

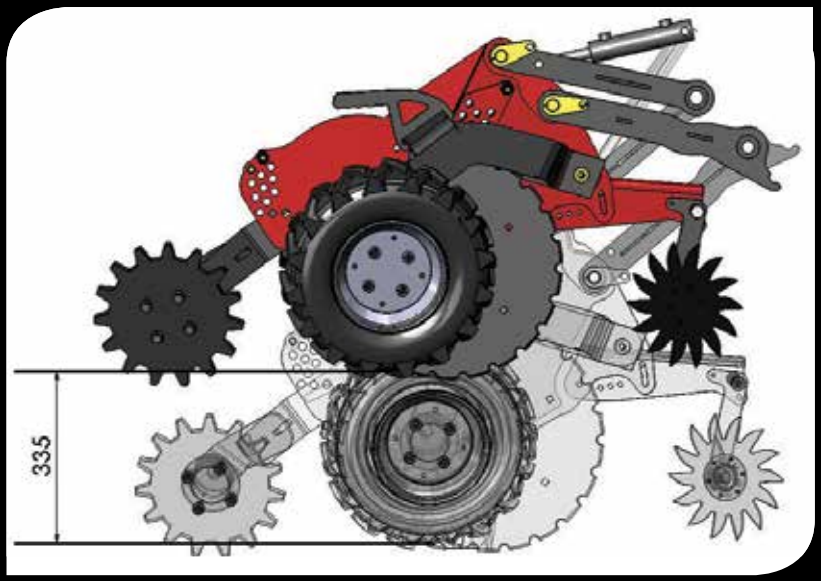
80%
Labour saving over conventional tillage

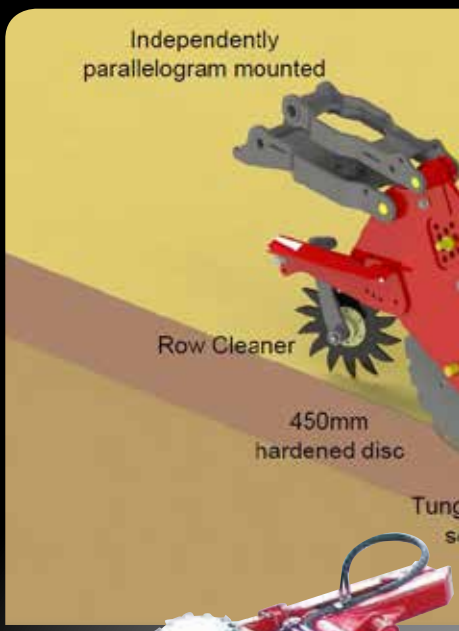
55%
Labour saving over min-till

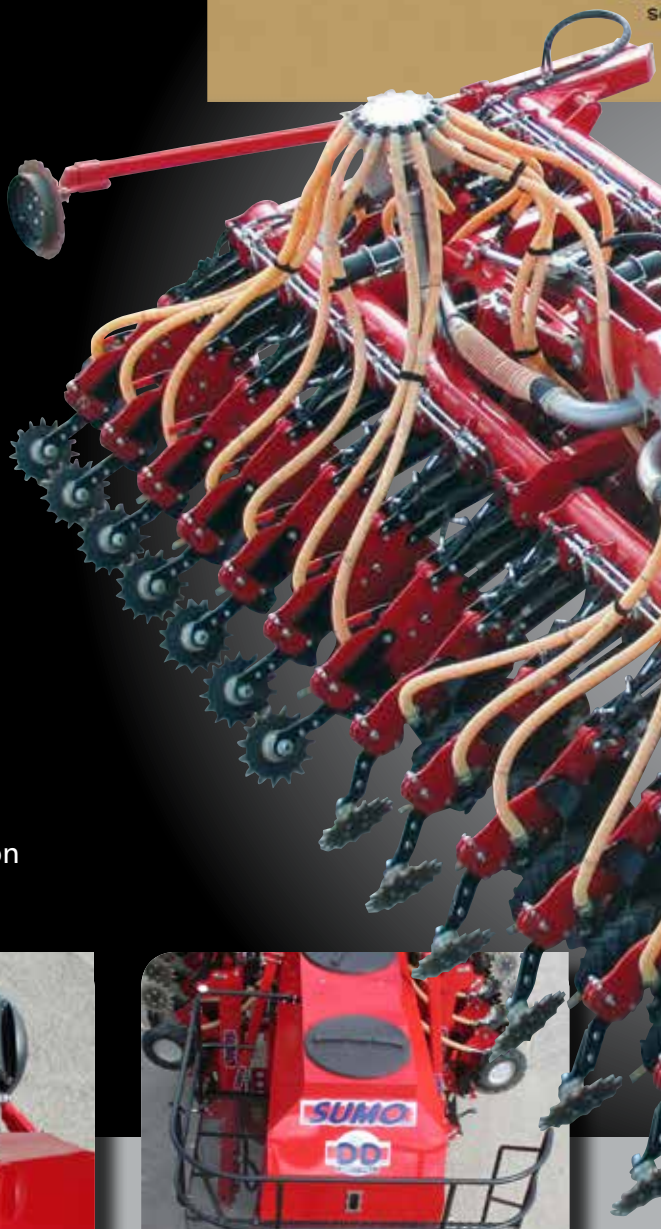
*all figures based on averages taken from across the UK

DIRECT DRILL

Features







- Adjustable constant pressure hydraulic system (up to 200kg/disc) with 335mm of travel for contour following ability

- 200mm row spacing
- Seed and fertiliser application
- Available in 3,4,6,8 and 9m working widths
- Split 50:50 hopper for two products
- Bout markers standard on 3, 4 and 6m drills

- Unique lift and fold system for road transport mounted on a simple heavy duty pivoting mid-section head stock with full road transport kit as standard

- Cameras and LED work and hopper lights as standard

- Sturdy access platform and steps

SUMO ORGA™ METERING

- 1kg – 350kg/ha output for a varying range of products and seeds
- Simple robust design ensures constant even metering
- Variable rate metering for both seed and fertiliser.

- Tramliner kit

DIRECT DRILL

Seed and Fertiliser

The DD also has the capability to apply granular fertiliser as well as seed.

The targeted application of fertiliser into the rooting zone means a potential reduction in product applied as nutrients are more readily available to the plant roots reducing the potential for nutrient leaching and wastage. Dual products drilled and applied in one pass greatly reduces input costs and time especially in a tight drilling season.

Localising the fertiliser to the correct area dramatically improves germination and establishment and also gives the growing crop a strong and healthy start especially in difficult wetter conditions later in Autumn or in the Spring time.

The option of seed and fertiliser is available on all trailed drills.

The fertiliser kit includes a 50/50 split seed hopper (totaling 3000ltrs for 4m models, 3600ltrs for 6m – 9m models), separate stainless steel ORGA metering unit, transfer pipes, upstack, metering head and application nozzles.

The hopper consists of a removable baffle to utilize both hoppers when only applying one product. Emptying slides for quick emptying of product, low level sensors, lights and a remote camera in both front and back hoppers as standard.

Metering for both seed and fertiliser is taken care of by the Sumo ORGA (patent applied for) metering units that are simple to adjust, calibrate, maintain and clean, and provides a uniform even feed over a wide range of application rates and volumes, all controlled by the RDS Artemis variable rate system controller.

Direct Drill System Benefits

Agronomic

- Soil structure improvement by not moving the soil mechanically and 'aggregating' the soil profile.
- Cover crops can be integrated into the cropping rotation to help improve soil structure, raise OM levels, replace nutrients and alleviate compaction.

- Problem grass-weeds can be controlled easier because of the minimal disturbance element of the DD. Soil movement is kept to an absolute minimum between the rows, not allowing the germination of problem weeds.
- Moisture retention in the rooting zone means less drought stress for young plants especially in spring.
- Soil erosion is reduced drastically with the use of the DD, which will score highly on your soil protection review.
- Improvements in soil/water infiltration (drainage).

Mechanical

- Improved soil structure means more load bearing capacity in the soil and therefore less compaction issues.
- Power requirement of just 30hp/m.
- Average fuel usage of just 5-6ltrs/ha
- Increased productivity
- Better timeliness of drilling
- Targeted fertiliser application
- Reduction of fixed costs

Specifications

Model	DD 3	DD 4	DD 6	DD8	DD9
Working width (m)	3	4	6	8	9
Transport width (m)	3	2.8	2.9	2.9	2.9
Hopper capacity (ltrs)	1600	3000	3600	3600	3600
Row spacing (mm)	200	200	200	200	200
No of rows	15	20	30	40	45
Half width shut-off	NO	NO	YES	YES	YES
HP requirement from	120	120	150	200	225
Format	Mounted	Trailed	Trailed	Trailed	Trailed

SUMO

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