

DRILL MANUFACTURERS IN FOCUS...



SKY DRILL EVOLUTION

With Sky's recent introduction of the latest generation EasyDrill, we chart the evolution of the minimal disturbance no-till seeder over the last four decades

The latest incarnation of the Sky EasyDrill gets individual row shut-off, blockage sensors, ISObus controls and four individual metering units. Placing the French-built no-till drill at the tip of the spear for technological sophistication, these latest developments follow a 40-year evolution of the concept.

So how did it all start?

In the mid 1970s Sulky's Jacques Burel returned from a visit to the Royal Show excited by the prospect of a multi-purpose minimal disturbance direct-drill he had seen at the event.

Little known in Europe at the time, the Moore Unidrill had found success across the UK and Ireland particularly in use as a grassland reseeding tool but also as a mainstream cereal drill.

Inspired by what he had seen of the Northern Irish-built multi-purpose seeder, Jacques did a deal with inventor Sam Moore to start importing the drills to France and other French speaking countries, complementing Sulky's existing range of fertiliser spreaders and conventional drills. In return the French firm started to supply the Northern Irish company with drill hoppers and metering units.



Around this time Sulky moved from its trademark turbine metering units to peg-wheels better able to cope with larger seeds such as beans and peas. These could handle rates as low as 3kg/ha for OSR right up to 300kg for late-drilled winter cereals.

As sales grew, a bigger proportion of Unidrills were going to arable operations rather than the traditional grassland reseed market. This prompted the introduction of a different row spacing option with rows widened from 13.3cm to 16.6cm to better suit cereals.

Over time working widths grew from 2.8m to 3m and 4m. A few 6m versions were even built – all box-drills.

In the 1990s tougher road regulations across Europe meant transport became an issue for box-drills. Consequently both firms set about developing folding versions with pneumatic metering and distribution.

Initially Moore used Accord hoppers but as demand grew the Northern Irish outfit switched over to the Sulky set-up with pairs of hoppers and metering units mounted in W-formation – these Unidrills were tagged as 'W-series' models.

From then on all R&D was done jointly – generally the bottom halves of the drills (frames and soil engaging metal) were designed in Northern Ireland while everything up top (hoppers and metering) was





developed by Sully.

In the early 2000s Sully shifted to rate controllers from Danish firm Linac. Employing electronic actuators on the metering units, these made variable seed rates possible. Operators could then alter rates from the cab as soil types varied.

By now the Unidrill concept had proved itself as simple and effective in the way in which it worked but it wasn't idiot-proof. Operators really needed to know what they were doing and be prepared to get out and adjust the machine as conditions and soil types altered.

This prompted both firms to look at ways in which the drill could be made more user-friendly - the 'W1000' series was born. With rubber gauge wheels up front and pairs of press-wheels mounted at the rear of each unit in a bogie arrangement, this massively improved contour-following and adjustability.

The key feature was a simple hydraulic adjuster that could alter the coulter carriage weight bias front-to-back to account for different ground conditions. Although a joint development, Sully held the patent for this concept.

In 2007 the two firms parted company and the joint venture came to an end. Sully developed the concept further with a number of tweaks and re-branded it as the EasyDrill. The disc bearings were switched from



imperial to more readily available metric versions.

Adjustment of coulter boot position against the disc was made easier - critical when working in damp, trashy conditions. The rear coulter press wheels were changed from ridge-profile rings to a simple angled profile for more reliable slot closure.

In 2013 the no-till Easy Drill and cultivator Maxi Drill 1000 series were rebranded under the Sky banner, a subsidiary of Sully. A revamp followed this with bigger bearings throughout the drills to better cope with the requirements for travelling faster in tough conditions. Split twin hoppers were introduced with separate metering units, distribution heads and coulter outlets to allow different types of seed and fertiliser to be drilled at different rates in the same pass.

Shortly after this a separate 'Pro Hopper' applicator was launched to enable operators to add a further seed variety into the mix or apply micronutrient fertilizers or granular products such as slug pellets.

At the same time Sky introduced a range of cover crop destruction rollers to aid growers wanting to plant directly into high biomass situations.

By 2019 the EasyDrill has come a long way from its humble beginnings. Mid way through the year new easier-to-adjust coulter carriages with heftier SKF disc and press-wheel bearings



are launched.

In November at Agritechnica there was a big announcement with the introduction of the 20 series. Amongst other things this saw a change of control boxes - having stuck with RDS rate controllers for 20+ years, Sky switched to in-house developed electronics to easier facilitate GPS-controlled variable seed rates and ultimately ISObus.

On top of this came blockage sensors and the ability to individually shut-off seed flow to each coulter, enabling operators to run with different row widths for different seeds. Alongside this came the facility for the drill controller to automatically shut off coulters for tramlining, without having to match drill width to sprayer booms.

The new control boxes have the facility to support even more metering units so Sky now offers the option of a second Pro-Hopper, enabling operators to apply up to four different seed types/granular products in one pass.

Sully Drill's UK product specialist, Joe Redman commented "The evolution from 'just an old Moore drill' to today's state of the art lean, mean drilling machine has been no accident. Each stage of development and design has been carefully considered and rigorously tested by the Sky team. The EasyDrill really is a progressive drill for forward thinking farmers."

