



## Machinery Drills

# Licence to drill

Drill technology has increased rapidly over recent years as growers look to be as efficient as possible within their operations. *CPM* takes a look at some of the latest launches.

*By Charlotte Cunningham*

**There's something of an awkwardness in broaching the subject of investing in a new drill after a pretty much non-existent autumn sowing window.**

But doing so could provide a hefty return on investment — as well as providing benefits to soils and subsequent crops.

*CPM* rounds up some of the most recent developments to make their way onto the market.

### Horsch

Horsch's Maestro drill has recently received an update with the introduction of the new CV and RV models.

Available in 8-row, 12-row and a new 9-row version, the Maestro CV now uses a central hopper for seed and fertiliser —

known as Main Tank Supply — or a large fertiliser hopper and individual seed tanks as with the previous Maestro CC.

This new central hopper has a capacity of 3000 litres for fertiliser and 800 litres for seed. If the fertiliser-only central tank is used, the capacity is 3000 litres with 70 litres of seed per row hopper, says the firm.

The Maestro RV model is an 8-row mounted unit with one seed tank per row. Fertiliser supply is carried out via a front-mounted pressurised hopper, such as the Horsch Partner 2000 FT.

Both the CV and RV are equipped with a completely new vacuum metering device, aptly named AirVac, which works with a scraper that doesn't need to be adjusted — requiring only the correct metering disc and in turn reducing seed handling considerably, claims the firm.

According to Horsch, this increases the range of the standard single grains that can be handled (maize, sugar beet, sunflower, soya and rape) with further varieties, such as beans and peas, possible in the future. The metering unit is still driven electrically to use technologies like Horsch's SectionControl and VariableRate for every individual row.

The seed body has also been revised for higher stability and a high hydraulic coulter pressure. It's connected to the main frame

with a new clamping profile that makes it easy to alter the number of rows from 12 to eight — a key requirement for customers, notes the manufacturer.

### Kongskilde

Despite Kongskilde's merger with New Holland, the firm's Vibro Seeder is still sporting its original colours, having yet to be updated to a blue livery.

The Kongskilde Vibro Seeder combines a spring-tine cultivator with a pneumatic seed drill and is ideally suited for minimum tillage seeding in unploughed conditions and even works on wet ground, says the firm.

Key advantages of the drill include strong

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penetration of the soil as a result of heavy duty spring tines (which allows deep seeding of peas and other crops demanding higher seeding depths); a reduced number of passes; an equal seeding and working depth and better field residue incorporation.

So how does it work?

Seeding tubes are fitted behind Kongskilde heavy duty cultivator tines and the seeder itself can be specified with a front or rear seed hopper.

Seed is distributed pneumatically to seed coulters mounted at the rear while metering is done with a proven Kongskilde Vario K gearbox.

In terms of working widths, the Vibro Seeder is available in 4m, 5m and 6m models and each has a row spacing of 150mm.

### Kuhn

Row-by-row seed rate variation is now possible in electrically driven models within Kuhn’s Maxima 3 precision drill range — which the firm claims will give growers new levels of seeding capability.

Available on machines from 6 to 12 rows — and with row spacings from 37.5cm up to 80cm — electric drive



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technology allows variation of seed rate row by row. This can be carried out manually from the tractor cab or as determined by ▶



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## Reach for the Sky

Recently introduced at LAMMA, Sky Agriculture has added a host of updates to its EasyDrill and MaxiDrill ranges.

At the top-end of options, the 'E Drive Premium' feature has been added which is set to provide electronic shut off for each individual outlet — as well as offering left and right control.

The thinking behind this is that, as a result, the drill can be set to seed with any number of row configurations by simply hitting a button.

According to Sky, this ability to shut off individual rows means that whatever the width of the sprayer or spreader it no longer needs to be a multiple of the drill width — simply enter the sprayer/spreader width into the control box and the tramlines will be calculated and set automatically. "From now on the customer can change sprayer/spreader width without having to renew the drill — an extremely valuable function for contractors providing drilling services for customers with a range of different tramline regimes," says Opico's Sky Drill specialist, Joe Redman.

More modest additions include a brand new electronics package with blockage sensing, ISOBUS control as well as a second "Pro-Hopper" allowing four products to be individually metered and distributed at once, says the firm.

With grain and fertiliser main tanks as standard

and the possibility of adding one or two smaller Pro-Hoppers, the range of possible applications the machine can be employed for is dramatically extended, says Opico.

In practical terms, this means the operator can now place seed, fertiliser, companion crops and plant protection products accurately in one pass. For example, oilseed rape can be sown with fertiliser, alongside a companion crop of beans and phacelia to reduce insect predation and insecticide usage.

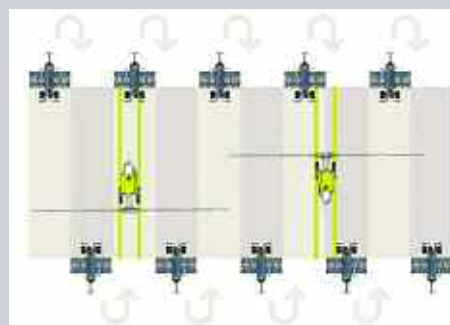
As with the previous generations of Sky drills, 20 Series machines have two outlets, the first being the disc coulters and the second a placement tube with 3 different positions to allow depth to be varied.

One Pro-Hopper places its product into the air flow for the disc coulters whilst the second delivers its metered product into the second airflow for the tube outlet. The double air circuit means the user can manage the air flow of each distribution circuit to suit the type and quantity of product that's metered.

"Sky has delivered what our customers have been asking for," adds Joe. "With sustainability and the environmental agenda at the forefront of most farming minds the control update and option of a fourth hopper and metering unit delivers a multitude of options for farmers to reduce their



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input costs and more accurately target where products are placed."

## Share the love

The tail end of last year saw UK manufacturer, Claydon, launch its new 'Love Your Soil' campaign, as well as the new Hybrid T6c trailed direct strip seeding drill.

The campaign aims to highlight the need for farmers to take better care of their soils, as well as touching on how the long-standing Claydon Opti-Till system can help achieve this.

"The Claydon family's 400ha arable farm in the East of England is one of very few in the UK to achieve a five-star rating for the condition and health of its soils," says the firm's export manager, Simon Revell. "We know about soils and how to get the best from them in the most eco-friendly, sustainable way, and will be highlighting that to visitors.

"Soils are any farmer's greatest asset and yet many are unwittingly destroying their structure and productivity through the incorrect use of conventional full cultivations and min-till techniques."

To complement its existing tools, Claydon's new 6m Hybrid T6c compact trailed drill is claimed to tick the box for those farmers who require a highly

versatile and manoeuvrable 6m trailed drill.

Weighing in at over 20% lighter than Claydon's Hybrid T6 model, the T6c combines the high output of a 6m seeding platform with the nimble handling characteristics and manoeuvrability of the 4m T4 trailed design on which it is based.

In terms of workload, the T6c is capable of drilling typically 45ha per day behind a 300hp (223kW) tractor, and is targeted at farmers who prioritise lower cost and greater manoeuvrability over ultimate hopper capacity and output, says Claydon.

Carried on the lower link arms, the T6c features a fully floating seeding chassis which follows field contours to ensure accurate seeding depth under all conditions. According to the manufacturer, it does this regardless of the weight in the hopper, which is carried on a separate frame supported on centrally mounted depth wheels that run on clean, dry, uncultivated ground to avoid capping and compaction.

Providing a hopper capacity of 3500 litres — double that of Claydon's 6m mounted drill — the T6c weighs approximately 7900kg unladen,



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compared with 9000kg for the T6.

The hopper can be used for seed only or divided 60:40 between seed and fertiliser for combination drilling — a technique which gets crops off to a fast start and is popular with farmers and contractors throughout Europe and Scandinavia.

Versatility appears to be at the core of Claydon's latest launch, with the T6c able to sow directly into stubble, in min-till situations or on ploughed/cultivated land. "This enables one drill to handle any crop establishment situation and minimises capital investment," notes Simon.

► a variable rate map.

Work carried out by Kuhn in the development of the technology has shown that varying the seed rate in response to soil conditions can lead to seed savings of 2-3% when used in conjunction with section control (automated row shut-off).

In addition to seed savings, variable seed rate can also optimise plant populations according to available water and soil nutrients, with this resulting in an overall potential yield gain of 5-8%, says the firm.

Looking to crop suitability, Maxima 3 precision drills can be used for drilling maize, sunflower, beetroot, sugar beet, peas, beans, onions and other crops where row spacings from 37.5cm to 80cm are used.

Both mechanical and electric versions of the Maxima 3 range also benefit from an improved seed selection and ejection system which enables accurate seed placement at working speeds of up to 10km/h.

Accuracy has also been enhanced by a new seeding unit parallelogram which is reinforced in key areas, including at critical hinges and linkages, for added stability, robustness and longevity, says Kuhn.

## John Deere

Seen for the first time in public at the 2018 Tillage-Live event, John Deere's ProSeries opener for the 750A All-Till drill is the main focus for the firm at the moment on the drilling front.

Available for retrofitting to existing machines, this replaces the 90 Series opener that's been a feature of the drill since its introduction in the mid-1990s.

The new opener is designed to provide even less soil disturbance, more consistent seeding depth, better seed to soil contact and improved slot closure, and features only one grease point for minimal annual maintenance, says the firm.

According to the manufacturer, a key benefit of the 750A is the extremely low soil

disturbance created at the point of drilling, which fits well with cultural methods for controlling grass weeds, particularly blackgrass.

The ProSeries opener further reduces soil movement by utilising a narrower seed boot that fits tighter to the disc, creating less soil throw and providing 40% more consistent seeding depth, according to the firm. Wear life is increased, as the seed boot is hidden more behind the opener disc and subjected to less soil contact.

The flexible press wheel is both narrower and larger in diameter, so it fits in the seed trench better, and now features a double-row bearing for twice the service life.

This redesign helps to improve seed to soil contact and keeps each seed at a consistent depth, for more even crop emergence and potentially higher yields,



*A key benefit of John Deere's 750A is the extremely low soil disturbance created at the point of drilling.*

says Deere. Better emergence is also provided by a more aggressive serrated closing wheel, which has improved the closing function by 50%. ■

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