

Masters of the tith

“Faster workrates, reduced disturbance even among full or min-till drills and easy-to-roll seedbeds are key criteria for many buyers.”



Machinery Drills

For the majority of UK arable soils, full or at least minimum tillage is preferred for weed control, root crop or other reasons. CPM rounds up recent cultivator drill developments from the leading players.

By Martin Rickatson

With a trend towards later drilling to get maximum benefit from stale seedbeds, increased pressure to cover ground quickly means many are switching either to faster systems or wider machines, suggests Amazone. Faster workrates, reduced disturbance even among full or min-till drills and easy-to-roll seedbeds are key criteria for many buyers.

Its 12/15m Citan-C drills, which are also finding favour among those operating controlled traffic systems, now feature

RoTeC pro S single 400mm boron steel disc coulters from the Cirrus drills. A new 8000-litre pressurised seed hopper is split into three sections, allowing up to three different materials to be sown simultaneously, such as a cover crop mix plus a joint application of seed and fertiliser.

Meanwhile, machine access has also been improved and controls grouped into an 'operator station' towards the front of the drill for convenience, enabling ground-level remote calibration via the TwinTerminal 3.0 display. ISOBUS control is standard, and the three metering rollers are driven electrically. Half-side shut-off, which can be controlled either manually or via GPS SectionControl, is also standard.

Further Amazone drill developments include a new CombiDisc mounted compact disc harrow for mounting beneath either the gravity-fed Cataya or the pneumatic Centaya drills. The 3m implement features 24 serrated 410mm discs, designed for high-speed rotation to create a seedbed at 3-8cm. Mounting/demounting is said to be swift via a QuickLink quick-coupling system.

Mechanical depth adjustment is standard, and hydraulic optional. Individual disc arms can be adjusted up or down by 30mm for an even work profile in the wheel tracks and at the sides. Packer options include a toothed roller, wedge ring roller, with or without tyre profile, and trapezoid ring rollers.

Kuhn

Kuhn has expanded its Espro line-up of



Amazone's CombiDisc compact disc harrow can be mounted beneath either the gravity-fed Cataya or the pneumatic Centaya drills.



other grain-only drills in the Espro line, the 3m rigid 3000, the 4m folding 4000 R and 6m folding 6000 R.

Said to be designed along the same low power requirement and high output capacity principles of existing Espro models, the new drill incorporates the established Crossflex coulters bar, claimed to be key to the range's high working speeds. Kuhn suggests the design ensures accuracy of seed placement at forward speeds of up to 17km/h. Coulters are individually mounted on polyurethane blocks to enable close contour-following, while ground pressure and seeding depth adjustment are controlled hydraulically, for consistent placement depth across the full working width even at high speeds.

Like other Espro drills, the 4000 RC uses two rows of cultivating discs and a row of 900mm offset press wheels. An additional row of single-disc coulters behind the working discs can be used to deliver either fertiliser or a second seed type or variety directly in front of the press wheels and equidistant from each of the two main rows of seed.

The 4000-litre hopper is split 2400/1600 for fertiliser and seed, with two separate ▶

min-till drills with the addition of a 4mfolding combination model. The new Espro 4000 RC complements the other grain/fertiliser combination drill in the range, the 6m folding Espro 6000 RC, and joins the



Like other Kuhn Espro drills, the 4000 RC uses two rows of cultivating discs and a row of 900mm offset press wheels.



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Väderstad reports increasing interest in iPad-based E-Control system and its SeedEye sensor-based seed metering.

- metering and distribution systems providing several potential operation modes. Kuhn suggests these can include

the ability to sow one seed variety from both compartments, seed and fertiliser from the separate compartments, two main crop varieties or two seed varieties each sown to a different depth. For those looking for leading consolidation or levelling, options include front press wheels with in-cab pressure adjustment.

Väderstad

Väderstad continues to offer two primary alternatives for those seeking to sow combinable crops into conventionally-prepared or min-tilled seedbeds, the primary difference being the level of cultivation required. Spirit drills (3-9m) level the field surface, prepare the seedbed, reconsolidate, drill and press, and feature individual row depth control. Rapid machines (3-8m), on the other hand, remain the key option for those requiring wider versatility, preparing the seedbed,



Five different modules to suit different crop types and establishment methods can now be ordered for the McConnel Seedaerator.

levelling it, drilling and reconsolidating, with the consolidation wheels controlling the working depth of pairs of coulters.

The company reports increasing interest in two key pieces of technology it's introduced in recent seasons. In addition to being ISOBUS-compatible, the company's drills can be specified to be wirelessly controlled via its iPad-based Väderstad E-Control system. This involves placing the operator's iPad into a docking station in the tractor cab, from where it connects wirelessly to a 'gateway' unit on the machine headstock. The system creates its own wireless network, and so internet access is not required. Machine data is stored not in the iPad but in the gateway, which the firm says ensures that it is always secure. Claimed benefits include a relatively low display cost and a unit (iPad) that can be used for multiple other tasks, including control of other machines on the farm.

The other relatively recent introduction is SeedEye, the firm's sensor-based seed metering system. This allows the operator to set the desired number of seeds per square metre, with the machine, once in work, then recording the number of seeds



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Designed to hoe between strip-tilled rows, Claydon's TerraBlade comes in 10, 14, 16 and 20-row models.

passing through each individual seed tube by the way in which they break a light beam. By combining this information with driving speed data from the drill's ground speed radar, delivery rate is adjusted automatically on-the-move to maintain the selected seed rate, making calibration unnecessary. The system can be controlled via ISOBUS or E-Control operating systems.

McConnel

McConnel's Seedaerator can now be configured to suit specific crop types and drilling methods, says the Alamo Group firm, and in addition to ordering from the factory, its module designs can be retro-fitted, making possible quick interchanging of components to meet specific requirements, crops or conditions. Five different modules are currently available.

Attaching to the three-point linkage, the front disc module, which comprises nine discs, can be fitted where additional trash processing is required, or where it's planned to drill directly into cover crops. Disc design and layout are said to minimise soil disturbance and ensure an even trash-flow.



Lemken's Solitair 25 now features automated calibration, operated from the tractor cab using the drill operating terminal.

Mounting behind the seed hopper, the Twin Tank option is a lightweight dual-product module that can be added to place micro-fertiliser or slug pullets with seed, or to sow fine-seeded companion crops. The metering unit operates in conjunction with the standard drill ground-speed radar but has its own in-cab control, which is said to enable the unit to be easily retro-fitted to existing drills.

Coulter options remain the standard 150mm-wide band unit, a dual product

seed/fertiliser coulters and a narrow 60mm coulters for drilling peas, OSR or beans at depths down to 150mm. Also now available is a band-sowing module, which sows seed in nine 150mm-wide rows, and can be specified with standard, dual product or narrow coulters. Self-cleaning press wheels can be adjusted to deliver consolidation from 40-140kg. As an alternative, the Seedaerator can also be specified with an 18-row direct disc-drilling module, each disc placing seed in a ▶

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There is now a new 6m grain/fertiliser model in the range of Farnet cultivator drills imported by J Brock and Sons.

► narrow 25mm band followed by a 210mm press wheel, with consolidation adjustable from 40-160kg per coulters.

While the cultivating front section of the Seedaerator can be fitted with a choice of standard wing, low disturbance and wing seeder legs, a rear tool bar with one or two rows of tines or batter boards can now also be supplied. Raising the rear harrow out of work is said to leave a trash-free area above the seed bands with any crop residue remaining on the undisturbed strips of soil between rows.

Claydon

While its strip-till drill range remains unchanged, Claydon reports healthy early sales of its TerraStar shallow surface cultivator, and says its TerraBlade inter-row hoe, created for mechanical weeding between rows of band-sown crops, is now in full production. The front-mounted implement, available in 10, 14, 16 and

20-blade versions, is designed to work at no more than 30mm deep, and is said to be easily controlled via manual steering at forward speeds of around 6km/h.

Lemken

After a lengthy introduction period over multiple international shows, Lemken's entry into the precision drill market, the twin-row Azurit 9, is now in full production. While it will be targeted primarily at the maize-drilling market, Lemken says it is also well suited to burgeoning interest in the need to match moves towards lower sowing rates for oilseed rape with precision spacing along the row.

The machine uses pairs of residue wheels to clear a seed furrow path, a fertiliser coulters which places fertiliser between the twin rows, and a trailing trapeze packer roller to close the fertiliser groove for pre-consolidation. The firm's DeltaRow coulters then stagger



The most recent addition to the Alpego drill range is the Jet-M piggyback drill, available in 3.0m and 3.5m working widths.

the seed in the pre-consolidated furrows, with the 12.5cm-spaced twin rows then closed by a v-shaped pressure roller. The result is claimed to provide plants with 70% more growth area than conventional spacing. Available in four, six and eight-row versions spaced at 50cm or 75cm, hopper options include a front-mounted tank, while it's also possible to combine the row units with Lemken's Solitair 25 or Compact-Solitair drills.

The Solitair 25 now features automated calibration, operated from the tractor cab using the drill operating terminal after the driver has entered thousand-grain weight, drilling rate and maximum working speed. Seeds are air-distributed to a weighing unit in the machine's seed hopper, and when the calibration sample has been weighed the results are transmitted to the job computer. The weigher automatically discharges the seed sample into the hopper, and the operator then only needs to confirm the weighed result and the possible working speed before beginning drilling.

The metering units, individually driven by an integrated electric motor, allow modification of the drilling rate to be



.New 510mm Wave Disc cultivation elements for its Terrasem drills are targeted by Pöttinger at those seeking to work only narrow soil bands.

altered by adjusting the motor speed and the stepless cell wheel. Lemken claims the automated calibration process makes drilling preparation faster and is less likely to be subject to error. A more detailed calibration or check can be performed by calibrating individual width sections via their respective metering units.

Farmet

J Brock and Sons, which imports the Polish-made Farmet range of drills and cultivation equipment, is adding a new 6m

grain/fertiliser combination drill to its line for 2018-9, with a seed capacity of 4000 litres and a fertiliser capacity of 2000 litres. The Falcon 600 Pro, which has a claimed 9.0ha/hr output depending on field size and topography, is built using a modular design which allows various cultivation elements to be specified up front. These are sited ahead of the fertiliser coulters, after which tyre packer consolidation takes place before the seed coulters follow up. Options include an additional Micro Drill for small seed-sowing. ►

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Sulky's new 4-6m double-disc coulters toolbar, the Twindisc, is now available for its Xeos TF drill range.

► Sulky

Among the most recent introductions to French firm Sulky's drill range is its new Cultidisc 3 toolbar for the company's Xeos Pro combination drill. Designed to boost workrates in high trash conditions, the new 415mm-diameter notched Cultidisc design is more robust than its predecessor, claims the firm, using enhanced sprung protection, and the discs can be run with or without leading press wheels according to preference and conditions. A new steel treatment is said to aid disc passage, particularly where soils are especially trashy and/or stony. Trash handling is further enhanced by the discs' four-degree placement angle, while penetration pressure has been increased by 25%, to 100kg/disc.

Also new from Sulky is a 4-6m folding double-disc coulters toolbar, the Twindisc, for the Xeos TF, said to provide controlled drilling depth at high forward speeds. Row spacings of 12.5 or 15cm are available, and each sowing unit has its own press

wheel and independent parallelogram linkage.

Alpego

The most recent addition to the Alpego drill range is the Jet-M piggyback drill, available in 3.0m and 3.5m working widths. Its coulters bar is connected directly to the 1000-litre forward-mounted hopper via a parallelogram linkage which can also be specified to incorporate the rear roller. The Airon double distribution head is positioned directly onto the coulters-bar and is made entirely from stainless steel. At its centre is what Alpego calls its Turbo Rotal distributor, which uses a spinning impeller-based design to produce more uniform seed distribution, particularly on slopes.

Pöttinger

Apart from the relatively recent introduction of its Tegosem cover crop drill, for use with the firm's stubble cultivators or compact disc harrows, Pöttinger's drill offering stays

largely unchanged for 2018-19. A key new option for its primary Terrasem cultivator drill range is the new 510mm Wave Disc cultivation element, targeted at those seeking to work just narrow strips of soil. Available on models from the R3 3m rigid to the C9 9m folding Terrasem, and spaced at 12.5cm or 16.7cm, working depth is infinitely hydraulically adjusted. Pöttinger calculates that at the former spacing around 36% of the working width is cultivated, suiting high-yielding, homogenous soils. That figure falls to 27% with 16.7cm spacing, with related draft/power and fuel consumption benefits, particularly when working wetter, heavier or trashier land. Overload protection pressure is 100kg/disc.

The discs offer a number of potential benefits over alternative options, says the firm, including minimal surface movement to limit soil smearing and germination of weed seeds in more moist conditions, plus moisture evaporation and soil erosion in dry areas. On the other hand, says the firm, it also offers the ability to open up the land slightly for drying of wetter soils. The Wave Disc units cultivate the soil in strips, with only a 50mm band either side of the seed slot being disturbed. As these warm up faster than the undisturbed areas in between, the planted crop is reckoned to have a growth advantage over any weeds that manage to establish themselves in the undisturbed rows. Pöttinger also points to the reduced cultivation intensity and tractor power required, the land being loosened only in 45mm-wide strips.

Opico Maschio

Complementing the strip-/min-/no-till implements it sources from other makers, such as Sky's MaxiDrill and EasyDrill and the HeVa AccuDisc, Opico continues to offer a full range of Maschio drills for those whose systems move more soil.

Available in 4.0, 4.8, 5.0 and 6.0m working widths, the Primavera tine drill features four rows of tine coulters, and single central coulters pressure adjustment. Alitalia units come in 3.0 or 4.0m sizes and feature two or three rows of Suffolk coulters, two rows of Perfecta double-disc coulters or two rows of single disc coulters. Metering is electronic, with variable seed rate capability. Like the other drills, the Centauro uses Maschio's own Flexeed metering system, but in this case from a front-mounted hopper to a rear coulters bar with two or three rows of Suffolk coulters or two rows of single disc coulters. ■



Opico's Maschio Centauro transfers seed from a front-mounted hopper to a rear coulters bar with two or three rows of Suffolk or two rows of single disc coulters.

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