

A case for drill versatility



“We wanted a drill we could use later into the autumn without the risk of being held up by weather conditions.”

KRIS GRZELAK

What can the latest launches from the world of drilling technology provide growers who operate flexible management systems? *CPM* takes a look at some of the recent market introductions.

By *Melanie Jenkins*

Manufacturers are constantly looking to innovate drilling technology to help growers achieve the best establishment possible. But with drilling windows shrinking, versatility and flexibility are some of the key traits among the latest launches.

BEDNAR

Bednar has released two new products to its portfolio: the Katara KN_S and Corsa CN 6000. The Katara is the firm's first venture into a power harrow drill combination. Currently, the machine is available in a folding format with a front tank, but later in the year there'll be rigid 3m and 4m options.

The dual-front tank has two hoppers and metering units, tailored to customers looking to include cover cropping in their system, as well as those wanting to

drill seed and fertiliser simultaneously, explains the firm's Adrian Winnett.

The firm's also released its new 6m Corsa mounted seed bar. Providing

high coulter pressure, it has the capacity to travel in more challenging conditions. The machine has twin-disc seed coulters and two inter-row spacing options of 12.5cm or 16.7cm.

“Although the machine isn't sold as a direct drill, it can provide up to 140kg of coulter pressure making it versatile and suited to variable weather conditions,” explains Adrian.

Both drills now come with Bednar's Farm Link software – which Adrian



Cover cropping in mind

The dual-front tank of Bednar's Katara KN_S has two hoppers and metering units, tailored to customers looking to include cover cropping in their systems.

MACHINERY Drills



Wider drilling window

The seed wagon layout of the Horsch Avatar 12.25 LC increases the drilling window whereas the large tyre widths reduce compaction even in wet soil conditions.

KRM

Klinea



The Klinea is the latest innovation in cereals hoeing. It features central tine angle adjustment (without tools) to improve penetration in hard conditions and utilises the new Kipline camera system for automatic guidance. The shares are followed by harrow tines to remove soil from weed roots and prevent re-growth. Optional section control lifts each element independently at the headland for the ultimate in accuracy and efficiency.

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► says is the simplest calibration system available. “The drills are Wi-Fi compatible and can be paired with your phone where you can use the Farm Link app to calibrate the drill. The drill can also be emptied this way and rather than emptying onto the floor, seed and fertiliser can be blown back into bags in minutes.”

HORSCH

Horsch has announced a new model in the Avatar drill family, offering increased capacity and the ability to deliver up to four separate components.

The Avatar 12.25 LC comes as standard with a 9400-litre triple tank that’s split 50:15:35. In addition, a Horsch MiniDrill with a 400-litre capacity can also be mounted to the machine. Available as a 12m model only, the Avatar LC offers a 3000-litre increase over the 12m Avatar SD.

The seed wagon layout increases the drilling window whereas the large tyre widths reduce compaction even in wet soil conditions. The double support wheels at the wings ensure low tracks and optimum adaption to the soil.

With its one-row design of SingleDisc coulters and a row spacing of 25cm, the Avatar 12.25 LC is best suited for mechanical population control and for different sowing methods such as direct seeding, mulch seeding and into standing catch crops.

Due to its folding design, the transport dimensions are compact with an outside width of 3m for road transport.

It can be used universally from direct drilling to cultivated soils; the high coulters pressure of up to 350kg per individual row and maintenance-

free bearings ensure a reliable and effective performance. Depth control at the individual coulter and adjustable closing wheels result in precision drilling in a wide range of conditions.

The Avatar SD is available from 3-8m working widths with a 16cm row spacing, and 8-18m with a 25cm row spacing. The Avatar SL is a 6m mounted model with 25cm or 30cm row spacing that operates in combination with the Horsch Partner FT front tank.

KUHN

Kuhn has launched a dual seed and fertiliser front tank to its existing range, offering growers greater flexibility for establishment using different toolbars and the option to apply nutrition in the same pass.

The new pressurised TF 2300C features a 2360-litre tank with a 60/40 split for seed and fertiliser and joins the current TF 1512 front tank in the Kuhn range.

Kuhn's Edd Fanshawe explains that changing farming practices and shorter weather windows highlight the benefits of a front tank. "Our TF range can be used with a wide variety of implements from dedicated drills to cultivators with seeding kits. Growers require versatility to adapt to changing conditions and front tanks allow this while retaining output capacity."

The TF 2300C features Kuhn's Optiseed metering unit with interchangeable cassettes and a pressurised hopper, allowing distribution rates up to 500kg/ha at 15km/h. The two hoppers are individually dosed and can be mixed into the same delivery tube, or kept separate, depending on the machine and crop. Agitators are standard to help fertiliser flow and the cassettes are simple to change via a handle locking mechanism with an

external calibration button to simplify the process.

Users can choose a carrying frame or optional front packer featuring four 822mm diameter tyres to reduce the weight carried on the front linkage and improve consolidation. Machine control is via ISOBUS terminals VTI 60, CCI 800 or 1200, or using the tractor's compatible display. The hopper features automatic switching at the start and end of runs via GPS, variable rate application based on prescription maps, and data transfer using agrirouter.

"Applying seed and fertiliser in one pass not only reduces passes, but places nutrition in the right place to provide the crop with its best start. This new TF 2300C offers users greater possibilities and flexibility to achieve establishment in the best conditions," says Edd.

The firm has also updated its popular Espro trailed drills featuring a redesigned operator platform, a new straight disc option, and a lighter version of the 6m model.

The updates focus on the 3-6m models with the 3002 (3m), 4002 (4m) fixed, and 4002 R and 6002 R (6m) folding units, introduced as upgrades to the existing 3000, 4000 and 6000 drills. The new models will begin production in spring 2025, and Edd says the upgrades will be welcomed by new and existing users.

"The Espro is growing in popularity and has many features to improve seed placement and consistency in tricky conditions. Wheel design and layout, headland turn customisation, and Vistaflow valves, are all qualities which highlight how versatile and accurate the drill is."

Hopper access and operator safety has been improved with a new mid-height platform that

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► spans the full length of the hopper and automatically folds when the drill returns to transport mode. This prevents overreaching to split bags and allows full visibility into the hopper. A half open mode – one side of the drill folded while the other remaining in work position – improves loader access to the hopper for filling. A new hopper cover has an automatic winding and locking system.

A straight disc option, suited to users reducing soil disturbance across each pass, can replace the standard 460mm concave notched discs. The straight disc ensures soil is only moved in the narrow band where the disc runs, helping to reduce power requirements of the drill along with preserving soil moisture. Furthermore, the Espro 6m 6002 R is 700kg lighter than the outgoing Espro 6000 model it replaces. This will help to reduce soil compaction and fuel consumption, making a high-output drill easier to pull, concludes Ed.

LEMKEN

The new Lemken Solitair ST is ideally suited for farmers who want to drill with maximum flexibility, efficiency and power. Designed for large



Wider drilling window

The seed wagon layout of the Horsch Avatar 12.25 LC increases the drilling window whereas the large tyre widths reduce compaction even in wet soil conditions.

farms, this 12m seed drill is capable of working in anything from plough tillage to mulch tillage, combines several operations in a single pass and can apply different components.

It can be fitted with a range of leading implements to provide optimum conditions for the double disc coulters.

When a defined row pre-consolidation is required to improve seed contact with the soil, there's the option to use the plastic trapezoidal roller.

If the seedbed has to be levelled and further crumbled, a levelling tine section is fitted. For targeted soil loosening, corrugated discs can be used as a

Here's an idea - drills so advanced



Cirrus Grand trailed cultivator drill

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leading tool in front of the OptiDisc seeding coulters. This produces fine soil in the seed furrow area for optimum seed placement. At the same time, targeted loosening of the soil solely in front of the seed coulters ensures water-saving seedbed preparation.

The pressure-resistant double hopper is available in two versions: a 6000-litre version divided equally into two, or a 7000-litre version divided into 3000 and 4000-litre sections. The combination of plastic hopper and modular metering system has the advantage that the whole system is fertiliser resistant.

The basic version of the Solitaire ST comes with four metering units per hopper section, each supplying one distributor with seed. This means manual width section control can be implemented with the standard version. At the same time, the four modular metering units provide the basis for the single-shot process with two different components.

The four distributor heads are positioned directly above the OptiDisc coulters to ensure optimum transverse seed distribution. The coulters feature parallelogram-



The flexible option

The new Lemken Solitaire ST is ideally suited for farmers who want to drill with maximum flexibility, efficiency and power, and can be fitted with a range of leading implements.

guided double disc coulters and trailing depth control rollers, which place seed or fertiliser at a row spacing of 12.5cm or optionally 16.7cm.

The coulters system is available in the hydraulic OptiDisc H version (up to 70kg coulters pressure) or the mechanical OptiDisc M version (up to 45kg coulters pressure). Both coulters pressure and seed depth can be adjusted independently of each other to ensure seed is always

placed at exactly the same depth, even at high forward speeds and in changing soils. The trailing depth control roller presses the seed into the soil for fast, even emergence.

To achieve ground contour following across the working width of the machine, the coulters bar is divided into two sections supported by a central section. At the headlands, the coulters bar is raised and runs on side support wheels, allowing quick and gentle turning. ●

they use less **seed and fertiliser**

When it comes to Amazone seed drills - less definitely means more. Available in 8 & 9 metres, the new Amazone Cirrus Grand features a newly developed distributor head with its unique combination of individual row shut-off and instant seed delivery.

Newly-developed V-Compensation gives uniform seed delivery at every coulters regardless of differing pipe lengths – giving you inch-perfect seed cut-off at every headland angle to reduce seed use and restrict any overlapping to below 1%.

For narrower working widths the Cirrus ticks all the boxes with twin tanks available with double shoot seed delivery as well as the option of a 500 l additional catch crop seeder box named the 'GreenDrill' - allowing you to meter up to 3 different combinations of seeds, fertilisers and microgranules simultaneously.

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Seizing opportunities

How the search for the perfect drill led one farmer to design it himself



High clearance capacity

Grange's Tine-Drill Toolbar has a four-row staggered set up to provide plenty of clearance in high straw or trash conditions.

The desire to increase the versatility of drilling operations led Kris Grzelak to work with Grange Machinery to design, build and test a drill on his farm. The culmination of this partnership – the Tine-Drill Toolbar – has worked successfully on farm and is now a commercial product.

Kris operates a joint venture with Ben Larter at Plantwell Farms near Framlingham in Suffolk. The business consists of LE Tuckwell and Plant Larter Farms and covers a combined area of 2023ha, growing wheat, oilseed rape, beans, spring and winter barley, plus sugar beet, parsley and environmental stewardship.

The land predominantly consists of clay loams with lighter areas of soil and places that require irrigation.

Although the business has a 6m Väderstad Rapid and a back-up 6m mounted Weaving, Kris knew another drill was required to overcome more challenging conditions. "We wanted a drill we could use later into the autumn without the risk of being held up by weather conditions. Despite looking at a number of options, we felt many had particular aspects we liked but didn't offer

precisely what we wanted."

This resulted in Kris working with Grange's Rhun Jones to build the exact drill he was after. "We aimed to develop a machine that could work in most conditions, had the option of being used as a direct drill, but could also be used on fully tilled land. We also wanted it to tie in with the SFI option to companion crop, so decided it had to have the ability to plant a second crop in a single pass."

The chassis of the drill is based on a low disturbance subsoiler while the wings can move independently of this up to 7°. "The result is a heavier and more robust drill, but it means we don't have lots of machine bounce as can be the case with the equivalent lighter drills," explains Kris.

The drill has a four-row staggered set up to provide plenty of clearance in high straw or trash conditions. It has Bourgault tips for twin seeding, or single with fertiliser, at 250mm row spacings.

Trash clearance was something Kris was particularly conscious of, based on a neighbour's experience with other drills. "When we were originally designing it, we looked at having a following harrow on

the back but decided what we actually required was a rear levelling board and a single harrow,” explains Kris. “It now has a (has a levelling board) which runs in a shallow rake angle so it doesn’t drag too much soil with it, and the soil and trash will go through but it still levels the soil in front of the ‘Z’ harrow. This is important for a direct drilling situation, because it provides more levelling than a double harrow would.

“We tested this in October when there was a particularly wet period and managed to keep the drill going without any issues.”

Kris and Rhun looked at several different front hoppers, knowing they wanted a split tank to allow for either two types of seed or for seed and fertiliser. The front tank can now be either single or double metered and for those who already have a front tank on farm it’s capable of working with other brands.

The drill also has the capacity for variable rate seeding with section control across the full 6m as opposed to two 3m sections.

“We wanted to run the drill on our John Deere 6250 and it works absolutely great behind it, allowing us to drill all of

our crops,” says Kris. “We it throughout the summer for planting cover crops and wheat, and were able to fine-tune it to create the ideal all-round drill. The only thing we did alter was to switch to single 19mm Bourgault coulters to drill beans.”

Kris notes the drill works best in more consolidated soils rather than loose, fluffy conditions. “This makes it more suited to direct drilling, but if you were to use it in a tilled scenario, just be aware that it prefers a consolidated seedbed.”

With Kris aiming to remain flexible in management approach, he wants to cultivate where necessary or have the option to direct drill where he can. “Having options is important to us and is something I feel we’ve achieved with the drill through its ability to work in all conditions at the depths we require. We have to keep the wheels turning and don’t want to be limited by the capabilities of our drill.”

During the coming summer and autumn he adds he’d like to plant cover crops with the machine. “The nature of the 10cm Bourgault coulters is they provide more soil disturbance, and although it’s not enough to be a cultivation tool, this gives us enough



Do it yourself

The desire to increase the versatility of drilling operations has led Kris Grzelak to work with Grange Machinery to design, build and test a drill on his farm.

to encourage grassweeds to chit and remove surface soil compaction.”

Kris’ attention has now turned to whether there’s potential to operate a 12m version of the Tine-Drill Toolbar. “This might be possible but it could also limit the scenarios in which we could use it. Overall, the aim across both farms is to work them as one large business with the tools which allow us to continue to do that.”



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