

Flexing its strengths

“ Kuhn’s latest spraying technology comes in the form of its Auto Spray system, whereby operators can select rate and droplet size depending on the chemical being used. ”



be strong, be **KUHN**

Machinery Field day

Known for having one of the widest ranges of agricultural equipment under its belt, Kuhn has launched its new models and upgrades for the coming season. *CPM* travelled to Strasbourg, France to see the latest additions to its arsenal.

By *Melanie Jenkins*

The chances are that you’ve either owned or worked with some piece of Kuhn equipment in the past, and its range is continuing to expand. Whether you’re looking for the latest precision technology or some practical improvements to an old favourite bit of kit, this season’s offering has plenty to consider.

Cultivations

Smart Ploughing is here. *CPM* has taken a close look at the Vari-Master L before but now the model is available with fully integrated ISOBUS control. All plough settings are controlled with the ISOBUS terminal, including working width, offset, working depth and levelling, and operators can save settings to simplify subsequent start-ups.

Two elements of the Smart Ploughing

software include Lift and Line. Lift supplements the basic functions with automated raising of the individual sections of the plough, based on GPS data, and the plough automatically turns at the headland as soon as all sections are raised. Sections can be controlled manually from the cab and the plough can be operated in asymmetric mode — with four sections on one side and six on the other — to increase traction power, especially on slopes.

The Line element of Smart Ploughing adjusts the working width of the plough using GPS, and can take account of field irregularities. Integrated into the plough design and controlled using the ISOBUS terminal, this corrects the curves of the field to create straight furrows.

The Vari-Master L has also had a few updates itself and the in-furrow plough now has a traction bolt option for safety, as well as the non-stop hydraulic reset version.

Patented to Kuhn are the 3D skimmers which are new to the Vari-Master L ploughs. These require no tool adjustment of the skimmer, including the pitch or angle.

Widening its series of Optimiser stubble cultivators in every sense of the word, Kuhn has introduced the Optimiser L 9000 and 12000 to its range. These independent disc stubble cultivators now have respective widths of 9m and 12m and are targeted at larger farms, adding to the current range of 3-7.5m models already available.

Using Kuhn’s Steady Control ground tracking system, each chassis section operates independently to follow the ground.

The pressure on the extension cylinders is hydraulically controlled and working depth is kept constant over the entire width of the tool, according to the company. This system is designed to keep the pressure even across the machine, to follow the contours and achieve consistent cultivation.

These models are capable of covering up to 18ha/h, and can operate at speeds up to 15km/h. Kuhn claims it to have the highest under-chassis clearance on the market, at 55cm, so it can work in all types of residues without unwanted stoppages. The cultivators are equipped with 510mm discs which are 6mm thick with a large scallop and the option of a shallow scallop, depending on preference. Its double U roller offers uniform tamping.

The depth is set up on the front rams and works on a slave system, while the discs can be adjusted on the rams as well, to achieve the desired finish. The whole structure is on a parallel linkage to keep things level between the front and the back, and the rams have centralised greasing per ram, as well as sealed for life bearings on the disc system.

The machine turns on the rear rollers and front wheels, rather than on the transport wheels, to help minimise headland compaction. In transportation, it can fold up to a 3m width and 4m height.

Kuhn has also launched an update to its Prolander multi-purpose vibrating tine cultivator with a range of smaller options. The folding mounted Prolander 100 R range, with four rows of tines, is now available with

working widths of 4m, 5m and 6m and is suited to tractors from 100hp to 210hp.

According to Kuhn, the 70mm x 12mm S-shaped vibrating tooth is the key component of the Prolander, and the 100 R range has the advantage of having a forward centre of gravity, allowing for a low power requirement of 25-35hp/m.

On the new folding mounted version, the roller and levelling board are constantly adjusted by a hydraulic system.

It has the same specification of the Prolander 1000 in terms of its large clearance, front levelling board for secondary tillage, rear harrow and levelling tines and a choice of rollers, including the double tube/ bar roller.

Drills

The big newbie from Kuhn comes in the form of a pneumatic foldable seed drill combination: The BTFR 6030, which takes over from the CSC 6000 model. With a 6m working width it includes the Kuhn Seedflex coulters seeding unit, which is fitted on a parallelogram with hydraulically adjustable depth control from the tractor and press wheel. It has a 41mm offset and disc diameter of 35cm. According to the company this aids seeding quality in wet conditions or heavy soil, while the covering harrow has universal tines.

The new Optimer models are capable of covering up to 18ha/h, and can operate at speeds up to 15km/h.



The folding mounted Prolander 100 R range has a low power requirement of 25-35hp/m.



A new addition for growers to take a look at is the Vistaflow valve which is combined with the BTFR 6030. Kuhn states that this is an intelligent tramlining valve which monitors seed flow inside each tube, enabling any tramlining rhythm, even if seeding and spraying widths are incompatible. As standard, the BTFR 6030 is fitted with 2x2 Vistaflow valves, while a further 2x2 are optional, with half-width shut off on the left side, or alternatively the full Vistaflow divider head with half-width shut off on the left or right side is available. The Vistaflow system is also available in Espro and Aurock drills.

The BTFR 6030 is compatible with the new HR 6040 RCS power harrow and TF 1512 front-mounted seed hopper. The power harrow is a heavy-duty setup, suited to tractors up to 460hp. The working depth and levelling bar can be adjusted hydraulically



The Line element of Smart Ploughing adjusts the working width of the plough using GPS, and can take account of field irregularities.

and can also be removed to be used solo for seedbed preparation.

The front hopper has a volume of 1500 litres, with an option to extend this to ▶

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Profits from our knowledge



With a 6m working width the BTFR 6030 includes the Kuhn Seedflex coulters seeding unit.



Kuhn has expanded its range for the Deltis 2 mounted sprayer with smaller and larger tank capacity models.

► 2000 litres, and uses Kuhn's traditional Venta metering system which is ISOBUS and Quantron S2 compatible. It uses a hydraulic fan blowing seed up to the distribution head at the back. The Venta metering system allows for anything between 4kg/ha and 430kg/ha.

The machine also has two detachable transport wheels for road passage, which can be mounted without the use of any tools.

Expanding its drill range further, Kuhn has added to the mechanical seed drill range in the form its Sitera 3010, 3020 and 3030 models, with a 3m working width. The Sitera models include the standard features of Kuhn's mechanical seed drills, such as the Helica fluted metering system. They can also be equipped with either Suffolk coulters, double-discs or Kuhn's Seedflex double-discs on parallelogram — which is available with depth-control and press wheel as standard.

The drill has a VT30 terminal with a 3.5" colour touch screen that displays the main functions, including hopper level, metering rotation and automatic tramline management. The Sitera 3030 model is ISOBUS optimised and can be controlled with Kuhn's CCI terminal as well as other compatible tractor terminals.

Designed to work with the Sitera and Venta seed drill ranges, Kuhn's new HR 1020, 1030 and 1040 series of power harrows come in widths of 3m, 3.5m and

4m and are suited to tractors up to 33hp.

If growers are looking for high speed seeding, of up to 15km/h, on light soils or in plant residues, Kuhn has introduced its new CD 1020 series seedbed cultivator, in working widths of 3m and 3.5m, with 24 and 28 discs, respectively.

Kuhn's established Maxima 3 electrically-driven seed drill targets precision seeding and now Kuhn has introduced new software to improve performance. Using row-by-row application rate modulation the drill automatically adjusts the number of seeds sown according to the field recommendation map loaded to the ISOBUS terminal. The density changes automatically based on the modulation map and if the seed drill passes over two different zones at the same time, each row of the machine complies with the seeding instructions on the map. According to Kuhn, modulating the application rate can generate around 5-8% additional yield depending on soil characteristics.

Sprayers

Kuhn has expanded its range of attachments for the Deltis 2 mounted sprayer. Currently the sprayer is available with only a 1300-litre tank capacity, but two new models have a nominal capacity of 1000 litres and 1500 litres, with actual volumes of 1130 litres and 1620 litres respectively.

Available from October 2019, the Deltis 1002 and Deltis 1502 models retain the same characteristics of the Deltis 2. They both feature the Manuset and Diluset+ operating panel, which — according to Kuhn — requires 30-50% fewer actions than its competitors to operate.

Boom options range from a steel MTS2 unit to aluminium MTA2, MTA3 and MEA3 units, with widths from 15m to 24m. It also has Kuhn's patented Optifiller chemical induction bowl, with a capacity of 42 litres.

For high flow spraying or fast filling, Kuhn has also released a new pump model: The PM 200 piston diaphragm pump, which has a flow rate of 200 litres/min, and which will be available from June 2019.

In its trailed sprayer range, Kuhn has expanded its equipment and attachment offering by adding a nominal 2400-litre tank capacity to its Lexis range, meaning a total capacity of 2790 litres.

The Lexis trailed sprayer has a new self-steering drawbar which senses the angle between the tractor and the sprayer, so that the sprayer wheels follow the tractor tracks.

Kuhn's latest spraying technology comes

in the form of its Auto Spray system, whereby operators can select rate and droplet size depending on the chemical being used. The system can be used at working speeds of 7-23km/h, keeping the rate consistent whatever the speed, and is available on Kuhn's mounted and trailed sprayer ranges.

In the pipeline

Kuhn is currently researching and developing its new iSpray technology which uses cameras and sensors on the boom to pick and locate weeds within the crop — a version of automatic spot spraying. The cameras identify the crop to protect and the weed species to target, with the system able to select the correct nozzle size to administer specific droplet size and pressures at working speeds of up to 15km/h.

The company states that this system could provide chemical savings of 50-80%, depending on current farm usage. However, only one prototype with a 24m boom is in working operation at present, which has been trialled on grass and maize, with oilseed rape trials due to start in the autumn. Kuhn has declined to comment on when or whether this technology will become commercially available. ■



EasyMaps displays application maps in real time and can indicate the required application rate and variation percentage.

App for mapping ease

Kuhn has joined a number of other manufacturers in releasing an app. EasyMaps displays application maps in real time and can indicate the required application rate and variation percentage, meaning it's not necessary to have a GPS system in the cab.

EasyMaps works with all types of application maps, including SHAPE and ISO-XML, and is aligned with map-creation software for fertilising, spraying and row or precision seeding. It is compatible with both smartphones and tablets and is available on the App Store and Google Play.