



“The plough is still a vital tool in the cultivation strategy for many farms.”

## Cultivators and ploughs

# Soil preparation

Soil preparation provides a multitude of benefits on farm, but having the right machine for the job can make all the difference. *CPM* explores some new machines that can help towards achieving the ideal seedbed.

By *Melanie Jenkins*

It's coming up to that time of year where cultivators and ploughs are often used more than any other, playing an essential role in getting soils prepped and ready for the coming season. Here's a look at some of the latest releases from manufacturers.

### Amazone

Ahead of Agritechnica 2023, Amazone launched a raft of new cultivation and plough products to suit a wide range of systems. One such machine is its new Cenio 4000-2 folding, universally adaptable mounted cultivator.

The three-point linkage mounted Cenio is a three-row mulch cultivator which can be used universally by interchanging of the various shares at depths from 5-30cm. As a result, the cultivator can be used for both shallow stubble cultivation as well as medium-deep and deep-loosening soil tillage. With a tine spacing of 30cm, the Cenio works without any blockages, even where large amounts of crop residues prevail, and evenly mixes the organic matter into the soil. A disc element with

fine-serrated, 410mm diameter concave discs is available for levelling the soil behind the tines and there's a choice of seven rollers for reconsolidating the soil.

Amazone also released the Catros+ 03 compact disc harrows in working widths from 4-7m with the Smart Frame System. In parallel, the trailed TS variant with bogey chassis is also available. The Catros is designed for shallow and intensive mixing soil tillage.

The intelligent Smart Frame System concept is user-friendly, and this new form of working depth adjustment means the machine has to be aligned parallel to the field surface only once.

Looking at ploughs, the new Terres 300 stepped adjustable plough has manual furrow width adjustment and an extension of the SpeedBlade plough body range.

These provide a solution for farms which don't wish to adjust the furrow width in the field. It comes with four, five or six furrows with variable furrow width adjustment or manual furrow width adjustment for tractors up to 300hp.

Amazone has also launched its Tyrok 400 semi-mounted reversible plough for on-land ploughing. The Tyrok Onland provides a high level of flexibility as a result of the quick and easy change between on-land or in-furrow operation. The new models are offered with a choice of seven, eight or nine furrows for tractors of up to 400hp.

### Horsch

Horsch has launched a wide range of updates and new models to its cultivators which were first shown at Agritechnica. "As always, our goal is to provide the machinery that enables farmers to work the way they want to – adapted and developed to meet the requirements of UK farmers," says Horsch UK's Stephen Burcham.

The firm's new Joker RT has been designed for stubble cultivation, mixing of harvest residues and efficient seedbed preparation. It produces a high amount of fine soil in the germination horizon and can handle large amounts of straw, organic fertilisers or catch crops with a disc harrow at 12.25m working width.

The new 9m Cruiser XL is aimed at shallow tillage, stubble cultivation and straw distribution after the combine. It includes new FlexGrip tines which are pre-stressed with a 180kg release force to help maintain a precise working depth even in difficult conditions.

The six-bar design provides mixing and levelling at a maximum working depth up to 15cm. The 17cm tine spacing optimises mixing and crumbling on the surface and the packer options can suit working in wet and dry conditions.

Horsch's Fortis AS is a completely new generation of cultivators from the firm, designed to meet the demands of larger tractors and offer more variety for working depths. It has a maximum working depth of 30cm, suited to deep loosening and primary soil cultivation. The working width of 8.75m from tine centre to tine centre permits high work rates in combination



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Joker RT



Terrano MT



Terrano FX

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▶ with the largest standard tractors.

The four-bar design of the machine allows for 27cm tine spacing, with the fourth bar extended to the rear so there's always enough loose earth in front of the levelling tines to achieve better results.

## Kuhn

Kuhn has expanded its range of folding power harrows with two new 6m models and a 5m unit aimed at operators looking to increase outputs and make transitioning between fields quicker.

For the first time, the HR 1030 R range features folding machines, with the HR 5030 R and HR 6030 R becoming the new flagship models in the range and suitable for tractors up to 350hp. They join the existing rigid models from 3-4.5m. A 6m HR 6042 R model suitable for tractors up to 460hp



*For the first time, Kuhn's HR 1030 R range features folding machines, with the HR 5030 R and HR 6030 R (pictured) becoming the new flagship models in the range and suitable for tractors up to 350hp.*

joins the larger 7m and 8m models in the high output folding power harrow range.

The firm has also introduced a 12.5m version of its Optimer disc cultivator that's

been designed to work with controlled traffic farming systems (CTF).

The new 12500 L joins the existing range of Optimer cultivators, which start with the 3m mounted model. It features 100, 510mm discs arranged across two rows for working depths of 3-10cm and a Double U 550mm diameter rear roller for flexibility to cope with a wide range of soil types.

Kuhn's Edd Fanshawe says the new models will help large scale farmers reduce compaction. "The Optimer range combines intensive mixing at high speed with easy adjustment to suit conditions. The new machine offers CTF users a stubble cultivator that can slot easily into existing systems and contribute to significantly lowering the number of wheelings during a season."

A tilt correction system that aligns the working angle of the plough to maximise the available tractor power and increase work rates is part of several updated features on Kuhn's Multi-Leader XT plough range.

According to Edd, the tilt correction system will increase working efficiency. "Tilt correction allows ploughs up to nine furrows to align with the tractor's pull line. The system will help users achieve the most efficient ploughing operation, especially when combined with GPS. The plough is still a vital tool in the cultivation strategy for many farms and even growers who previously turned away from ploughing are now using one in a targeted way."

## Lemken

Lemken has introduced the 10m wide Rubin 10 to round off the top end of its range of the Rubin compact disc harrows with a large disc diameter of 645mm. Like the smaller Rubin 10 models with up to 7m width, the Rubin 10/1000 has a symmetrical disc arrangement for fuel-efficient operation without side draft.

This new compact disc harrow can be hitched via a ball coupling or drawbar eye, and hydraulic support is available to make attachment and detachment easier. The two rows of serrated concave discs are designed to allow thorough incorporation across the full surface width from a soil depth of 7cm. The 14cm line spacing should ensure blockage-free work even with large volumes of organic matter. Each concave disc of the Rubin 10/1000 is equipped with an overload protection with damped kickback, to reduce loads on the frame.

Its working sections feature a pendulum-type suspension to ensure optimal following of the field contour. On very uneven terrain or when working on slopes, the optional iQ-

## Karat 10 intensive cultivator

# Low-draught **All-rounder**

The **Karat 10** is designed even more efficiently, ensuring that it requires extremely low tractive forces. It mixes soil intensively, can be equipped with **DeltaCut** coulters for ultra-shallow tillage and therefore always delivers optimal work results in a wide range of conditions.





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Developed as an option for minimum disturbance seedbed preparation, the Ecomat shallow plough offers mechanical control of pests and weeds through soil inversion.

Contour pendulum compensation should provide optimum surface adaptation. In addition, the hydraulic depth adjustment makes it possible to respond to changing conditions and the working depth can be changed while driving. During the turning process, the implement is supported by the roller, which has been fitted with strong bearings. Its wide contact area should help to minimise soil compaction.

For transport, the machine is folded from the cab with the roller's patented folding system ensuring the width is

reduced to 3m and the height to 4m to meet the requirements for road transport throughout the EU, and is approved for speeds of 40km/h.

### Kverneland

Kverneland UK has extended its Ecomat shallow plough range with smaller models suitable for in-furrow use. The new versions are available in six-, seven- and eight-furrow builds, and join the existing eight- and 10-furrow on-land models.

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disturbance seedbed preparation, the Ecomat shallow plough offers mechanical control of pests and weeds through soil inversion, reducing the reliance on chemical methods.

"Ecomat is a half-way house between a plough and a cultivator," explains Kverneland's Adam Burt. "As a shallow plough, it still turns soil over but without the requirement to work as deep as a traditional plough.

"We're achieving 95% inversion at a depth of 9cm with an implement that's easier to pull than a traditional plough, while doing a far better job of inversion than a cultivator," he adds.

The arrival of in-furrow models aims to bring high-efficiency shallow ploughing to lower powered tractors. Working depths are from 6-18cm, and auto-rest leg protection is fitted as part of the standard specification. An HD spring pack is available for tougher ground conditions.

Available with plastic or steel bodies, furrow widths can be from 25-45cm thanks to hydraulic variable width. This gives the in-furrow models a range of working widths from 1.5m up to 2.7m, from 1.75m up to 3.15m and from 2m up to 3.6m. ■

# Here's a 'Smart' idea

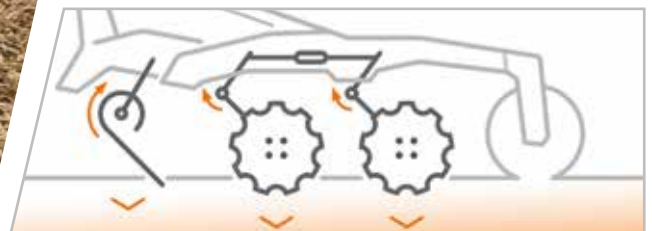
## A disc harrow that's so simple - you just set it and forget it



The Catros compact disc harrow comes in range of working widths from 2.5 - 7 m mounted and up to 12 m trailed. The new third generation models now integrate the **Smart Frame System** for even easier working depth adjustment. This new form of adjustment means that the machine needs to be aligned to the field surface only once.

The low pulling power requirement combined with high speeds provides high work rates with low fuel consumption. With a disc diameter of 510 mm, the Catros<sup>+</sup> permits working depths from 5 -14 cm and with the X-Cutter disc, an even shallow working depth of 2 - 8 cm is possible.

Option front tools such as the knife roller also make the Catros ideal for shredding large amounts of organic matter such as rape, sunflowers, maize stubbles or catch crops.



Simple, uncomplicated hydraulic adjustment of the working depth with Smart Frame.



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