

# A drill for all seasons

“ Direct drilling has changed how we operate. ”



## Drills

Autumn drilling season has come back around with many hoping for a kinder term ahead. But whatever the weather decides to do, having the right drill for the job is as important as ever. CPM examines some of the latest products on offer.

By *Melanie Jenkins and Rob Jones*

As the demands on modern seed drills increase, manufacturers are constantly evolving to meet these requirements whether growers opt to direct drill or use power-harrow combination drills, plus everything in between. Here's a selection of the latest machines to hit the market as well as some hands-on experiences from across the UK.

### Amazone

As of spring 2024, Amazone celebrated 75 years of seed drill production. The latest additions to its stables include a new Precea trailed precision air seeder in

6m working width and a Cataya Special EcoLine harrow-mounted seed drill.

The new Precea 6000-TCC 6m complements the high-performance capabilities of the 9m and 12m models shown at last year's Agritechnica. A key feature of the Precea 6000-TCC is the option of either the Central Seed Supply delivery system or with individual seed hoppers on each sowing unit.

In addition, the firm offers both variants with a large single-chamber fertiliser hopper with a capacity of 3000 litres together with a central fertiliser metering system. The eight rows can be set to row widths of 70cm, 75cm and 80cm; row widths of 45cm and 50cm based on 12 rows will also be available in the future.

The new Cataya Special EcoLine rounds off the lower end of the Cataya harrow-mounted seed drill product range from Amazone.

The Cataya 3000 comes in a predetermined specification but still aims to offer high performance and reliability in this segment. The harrow-mounted seed drill has a working width of 3m and features a 650-litre seed hopper with a large opening for quick and loss-free filling.

The 24 maintenance-free, RoTeC single disc coulters, with a row spacing of 12.5cm, are designed for precise seed placement.

The Control 10 depth guidance disc or the Control 25 depth guidance roller prevent the soil from sticking to the sowing disc to maintain the pre-selected sowing depth.

The Exact harrow is supplied as standard and provides even seed coverage and blockage-free operation when mulch sowing with large amounts of straw.

The AmaLog+ in-cab terminal aids the driver in changing the tramline rhythm. Other functions include field and total area hectare meters, fill level control and speed monitoring of the mechanical drive. ▶



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## ► Dale Drills

Dale Drills' Mounted Tine Drill (MTD) now offers a split tank feature enabling the simultaneous sowing of two different seeds or products. Equipped with narrow coulters, the tines blend the two products as they penetrate the soil. The 1500-litre hopper, divided evenly, integrates two Accord seed metering units, managed through an RDS Isocan control system.

Available in working widths ranging from 3-8m with row spacing options of 12.5cm, 16.6cm, 18.75cm, 20cm, or 25cm, the MTD aims to address the growing demand among farmers to diversify their seeding methods.

"We've observed an uptick in farmers seeking to incorporate multiple seeds or products with the drill. This split hopper feature, a novelty for mounted tine drills, provides farmers with considerable versatility at a competitive price point," says the firm's James Dale.

Additionally, the firm's Eco Drill range has undergone enhancements. Among the upgrades is a rubber semi-pneumatic press wheel, specially designed for customers utilising the 25cm row spacing configuration. This press wheel compacts soil around the seed utilising its flexible rubber material and scraper to prevent soil adherence.

Moreover, farmers can now optimise soil coverage with the incorporation of a pair of Guttler rings affixed to a tandem axle. These redistribute soil over the seeded row, compacting it around the seed to help improve growth conditions.



*Dale Drills' Mounted Tine Drill (MTD) now offers a split tank feature enabling simultaneous sowing of two different seeds or products.*

## Grange

This year's Cereals Event saw Grange Machinery enter the drill market for the first time with its Tine-Drill Toolbar (TDT).

"The changes in weather patterns during the past five years have affected the traditional end of harvest and drilling seasons drastically. So in our opinion, the requirement for a flexible and lightweight setup to ensure crops can be established in tricky conditions but sown with precision and a light ground footprint, has never been more important," explains the firm's Rhun Jones.

"We took the forward step of design and manufacturing our first 6m unit three years

ago to meet an order from PX Farms in Cambridgeshire who specifically wanted a light but strong framed tine drill for drilling cereals and beans," he explains.

Available in working widths of 3m, 4m, 4.5m, 4.8m, 5m and 6m, 250hp upwards is required for the 6m TDT. The drill is supplied with a Cat 3 and 4 linkage headstock and uses 20mm Grange tines across four rows on the toolbar frame at a tine spacing of 250mm.

An interesting feature of the design is the use of contouring wings which have a pivot pitch of up to 5° side to side integrated into the carrying frame above each wing to allow for undulations and varying terrain, maintaining seed depth



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*Grange Machinery's Rhun Jones believes it's never been more important for a flexible and lightweight setup to ensure crops can be established in tricky conditions but sown with precision and a light ground footprint.*





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# Drills

▶ across the full width of the drill. High chromium tips with a strategically placed 2cm carbide nose tile, does most of the work of the coulter, but also creates a drainage channel below where the seed is placed. Tines are followed by double rear harrow frames which are height and pitch adjustable and fitted with a Z-tine harrow system.

Hydraulic seed depth adjustment allows for easy change on the move with each of the land wheels having a pair of tines positioned equally behind them in the frame to remove all wheelings.

The drill can be specified with either one or two distribution heads for seed-only or a grain and fertiliser combination.

An LED road lighting kit come as standard along with depth adjustable track eradicator tine brackets to accept various manufacturer eradicator tines.

The front tank can be set for the customer's preference and can be specified according to the type of metering system preferred, or other features that they'd like to have incorporated into the system. Grange Machinery is working with all mainstream manufacturers' front tanks to use in combination with the rear mounted Grange TDT.

Further options include a rear access platform and seeder mounting bracket, Stocks Turbo Jet 8 i-Con seed applicator and rear bar fitted with seed pipes and outlets brackets for Avadex or slug pellet application.

## Lemken

The new mounted Lemken Solitair with a working width of 3m and 4m is equipped for both conventional and conservation tillage.

The MR series features a 1500-litre tank which is suitable for fertiliser even

## Wet weather wonder

Power harrow combinations may not be the most fashionable drilling outfit, but for Guy Hitchcock and his son Will, their new Kuhn 6m HR 6040RCS power harrow with BTFR 6030 seeding unit and TF 1512 front tank, has more than proved its worth in a testing year.

The Suffolk arable farm has kept to its original cropping plans this season thanks to the drill's arrival in January, which has allowed all crops to be established successfully even when drilling on wet soils, as Will explains.

"We've always run a power harrow combination drill as it's integral to getting land prepared and a crop established following sugar beet harvest," says Will. "It's one of the wettest years we've known and getting every seed in the ground that we'd originally planned at the start of the drilling season is nothing short of a miracle. We've only re-drilled 3ha of field corners, which was originally sown with our previous machine."

Chapel Farm in Ringshall, is an 800ha arable farm growing first wheat, oilseed rape, spring barley, winter rye, and winter beans. However, the crop that governs the rotation is sugar beet, which has been a mainstay on the farm for several decades.

The Kuhn combination arrived from local dealer Ben Burgess, replacing a 6m Horsch trailed power harrow combination. Part of the reason for changing from a trailed to a mounted setup was to maximise the John Deere 8RX 410's weight distribution, with the TF seed hopper counteracting the power harrow and seeding unit at the rear.

"We liked the Horsch drill but the weight of the whole implement on a trailed unit was becoming an issue for us and we could regularly see wheelings. We're planting a crop in 10 months of the year, so having the machinery that allows us to get across the ground in all conditions is paramount."

The Kuhn combination is the only cereal drill on the

*The Kuhn 6m HR 6040RCS power harrow combination is the only cereal drill at Chapel Farm and sows upwards of 600ha per year.*



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farm and sows upwards of 600ha per year. It's carried out more than 300ha of spring drilling and there hasn't been one blocked coulters, says Will, who admits they've drilled in some testing conditions.

"If we haven't blocked a coulters this year, I'm really not sure how you can block one," says Will. "When the drill arrived, we set it up on a 3.5ha field I had ploughed the night before after an inch of rain.

"I was convinced we'd have issues as the conditions were rotten and we wouldn't have taken the Horsch in there. However, the Kuhn setup managed it with no blockages or misses and the crop looks great now."

Will confesses to being quite amazed at some of the land he's been able to drill, and says the farm hasn't regretted getting crops established, even in the poor conditions, as the optimum seed-to-soil contact at drilling gives crops the best chance. Output in good conditions is up to 30ha/day, while less-than-ideal soil requires a slower speed and 20ha/day output.

Part of the drill's ability to cope in wet conditions is down to the offset disc arrangement on Kuhn's Seedflex coulters, which allows mud and debris to escape easily rather than being sandwiched between two parallel discs. Once the seed has been placed in the slot, the following press wheel and thicker covering tines with angled ends provide good soil coverage over the seed slot.

"We used to experience mud compacting between the discs on our old drill which would eventually cause blocked coulters as it has no way of clearing itself. This meant downtime to clean them out when it happened. Another benefit of the mounted machine is we can lift it up over wet spots, rather than having to drag it through and risk getting stuck."

The flexibility of the Kuhn TF 1512 front tank has also been praised. "It's a single calibration barrel which takes less than three minutes to complete and settings can be saved in the ISOBUS screen for future fields. We're also safer loading seed in the TF hopper as the operator can stand on the ground with the tank lowered to split the bags – it's like loading a fertiliser spreader rather than a drill.

"The drill's versatility means we could never rely on a conventional drill for everything. This was proved when we helped neighbours this year who couldn't get spring crops established," concludes Will.



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## Claydon

In 2012 Mark Robinson and his father, Philip, direct drilled the crops on their Lincolnshire farm for the first time. The benefits over conventional establishment have been so significant that the pair have just replaced their original Claydon drill with the latest version as an important step forward.

“Direct drilling has changed how we operate,” states Mark. “Without Claydon Opti-Till it’d be impossible to manage the area that we do.”

The switch to direct drilling on the 400ha of variable land at Westby, near Grantham, was one of a series of alterations which the father and son team made to their operation during 2012 in response to changing market conditions.

Originally they farmed 180ha, with 120ha of winter wheat, winter barley and OSR

which was established using a traditional approach, as well as farming cows and sheep. The land was ploughed, a McConnell Shakaerator used to remove compaction, then crops went in with a 4m Kuhn power harrow / Accord drill combination.

Having been impressed by the performance of a crop of OSR drilled by a contractor with the Claydon SR, they ordered a 3m version of the company’s then-new Hybrid drill and a 7.5m Claydon Straw Harrow.

“Changing how we established crops was a big step into the unknown but we’ve never regretted that decision. The crops are much better than we achieved with our previous approach. There’s been a marked improvement in soil structure so we can travel on the land much more easily with far less damage,” says Mark.



The Lemken MR series features a 1500-litre tank which is suitable for fertiliser even in its basic configuration.

► in its basic configuration. The tank is optionally available with a 2000-litre capacity which can be split 60:40 on request for simultaneous application of several components. A further 200-litre MultiHub can be added to the tank so multiple crop systems can be cultivated in a single pass.

Seed from the MultiHub is placed via the existing

seed lines or via a baffle plate in front of or behind the harrows. To make it user-friendly, the MultiHub control is fully integrated into the user interface of the ISOBUS terminal as an additional seed line.

The drill is equipped with the maintenance-free OptiDisc coulters with row spacings of 12.5cm or 15cm and

“The first year was wet and conditions were challenging, especially when drilling into grassland which hadn’t been ploughed for years, but we were pleased with the results and saw no drop in yields, nor have we since.”

Having direct drilled for many years, Mark adds that yields are consistently higher than before while organic matter levels have increased to 5% or 6%. “Whatever the season or conditions, the soils seem to right themselves without any requirement for remedial action and the more we use the Claydon system the better they become. There are far more worms to take down harvest residues and create capillaries that move water down into the profile.

“By the time our 3m Hybrid was 11 years old it was covering around 400ha in the autumn. On this land you can’t risk being late when establishing crops, so we wanted a drill with more capacity to get the work done faster and the option to apply fertiliser at the same time.”

Recently, the Robinsons took delivery of a new Claydon Evolution, the model which replaced the Hybrid. “After seeing the latest Evolution at Cereals 2023 we decided to upgrade to a 4m rigid chassis seed and fertiliser model. It incorporates all the traditional Claydon features that we like – a

simple design, easy maintenance, lots of clearance and the leading tine/A share configuration, but it can apply fertiliser at drilling, has a third hopper, front discs, auto-reset tines and is easier to calibrate – making it even more versatile.”

The dual metering mounted M4RF drill has a 2500-litre hopper with a 50:50 seed to fertiliser split, delivering fertiliser below the seed (front leading tine), beside the seed (seeding share or ‘LD’ low disturbance twin tine) or split between the two.

With a recommended minimum power requirement of 200hp and daily output of around 30ha, this model has a self-levelling chassis which grades the soil and follows contours. It has wheels which run on undisturbed ground for exact seed placement, includes a full range of rear toolbar and seeding options, GPS speed sensing, electronic metering, a four-channel drill computer, tungsten carbide facings on the leading tines, 13 seeding tines, and hydraulic/shim seed depth adjustment. The optional 90-litre hopper enables venturi, toolbar or inter-row seed distribution.

Although Mark initially questioned whether the 4m M4RF was the right choice, experience has shown that it’s well-suited for their situation. “The Evolution provides the capacity to drill what we



*In 2012 Philip and Mark Robinson direct drilled the crops on their Lincolnshire farm for the first time and have recently purchased a Claydon Evolution to continue their journey.*

want, how we want and when we want, then simply rake and roll. This spring was so wet that in some of the most difficult areas we went over them with the drill tines in the ground but not seeding just to loosen, aerate and dry the soil, before then drilling the crop and applying urea.

“The Claydon Evolution suits us perfectly – we like the fact it’s heavier and more stable, has automatic depth control and places seed onto a bank of soil, not in the slot as disc-type drills do, so it never becomes waterlogged even in very wet conditions.”

## Here’s an idea

### A maize drill that’s so advanced it uses less seed and fertiliser

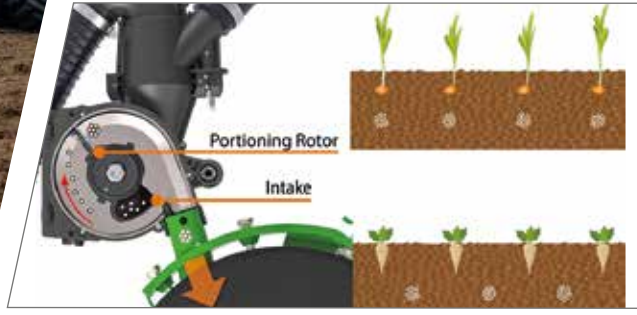


Precea precision seeders come in a range of working widths from 3 – 6 m mounted and now the all-new, trailed Precea TCC, in 9 m and 12 m.

The drill utilises the exceptional PreTeC seeding unit which offers second to none seed placement and optimum seed/soil contact for maximum germination. Automatic singling adjustment on the move and individual row shut-off for pin-point seed accuracy for the ‘ins and outs’ means zero seed wastage.

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*Placing a fertiliser portion under the seed can save 25% on fertiliser costs.*





# Drills

► features parallelogram-guided double disc coulters and trailing depth control rollers for uniform field emergence. To achieve this, the coulters system is available in a hydraulic version (up to 70kg coulters pressure) and a mechanical version (up to 45kg coulters pressure).

Both coulters pressure and seed depth can be adjusted independently and don't affect one another.

According to the firm, this is particularly useful in the increasingly popular cultivation of mixed crops.

The correct placement depth for the different crops can be set by applying a separate drilling depth setting to each second row. Seed should always be placed at the same depth, even at high forward speeds and in changing soils. The depth control roller then presses seed down to aid quick and even emergence.

The distributor heads, which are positioned directly above the coulters bar and don't require a seed return function, should ensure transverse distribution.

The new drill is equipped with two metering systems which each supplies one distributor with seed so that even



The new mounted Lemken Solitair with a working width of 3m and 4m is equipped for both conventional and conservation tillage.

the basic configuration offers width section or half-width control. A hydraulic tramline mechanism can be added as an option. The iQblue Drill software supports the work in the field for example, by checking if tramline control is possible.

For those opting for the single or

double shot version, the MR comes with four metering units for two width sections each. This means each of the two distributors can be supplied with both components (single shot) or each of the four distributors can be supplied with one component each (double shot). ■

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