GGThe push for more performance is relentless ララ

LAMMA preview Tractors, combines and tyres

From SmartGlass display screens to Europe's first combine without a steering wheel, next month's LAMMA event looks set to be a hotspot for innovation. *CPM* takes a look at some of the new launches scheduled to be on display.

By Charlotte Cunningham

Whether you're a loyal fan to life-long brand, or are looking to shy away from the norm in a bid to find something else to boost productivity, there's no denying that there's an abundance of options when it comes to purchasing a new tractor or combine.

To help growers compare and contrast, the NEC is opening its doors once again next month to host one of the UK's biggest shop windows for agri-machinery.

But if you can't wait until the New Year to see what's on show at next month's LAMMA event (7-8 Jan), here's a look at some of the latest tractors, combines and tyres on the market.

Hold your horses

McCormick

A new range of more powerful stepless transmission tractors from McCormick will be represented by the top model in a new-look line-up making its UK debut — on the Argo Tractors stand — at the LAMMA show in January.

Adrian Winnett, managing director of Argo Tractors operations in the UK and Ireland, said: "The push for more performance is relentless so Argo Tractors has taken the opportunity when switching to Stage V emissions-compliant engines to introduce more powerful VT-Drive models to the McCormick range.

"Our previous CVT models in the X7 Series peaked at 195hp but with the X7.624 VT-Drive they go to 240hp, giving farmers and contractors a very powerful but versatile package with all the performance and driver-comfort attributes of a stepless transmission."

The McCormick X7.624 VT-Drive boasts a pony count of up to 230hp for draft work and 240hp for pto-driven implements and road transport and is the most powerful model in the latest X7 Series.

In an attempt to slimline running costs, engine service intervals have been doubled to 1200 hours as a result of optimised fuel filters, a more comprehensive oil filtration system, and a new engine oil specification.

Power and torque from the new range's higher output engines are channelled through the ZF Terramatic TMT20 transmission.

According to McCormick, this uses four planetary gear sets, wet clutches and hydraulic speed variation to provide seamless ground speed adjustment, with high levels of mechanical efficiency across the 0-50km/h envelope.

Claas

While Claas has remained tight lipped about potential launches in recent months, the firm unveiled its latest additions at last month's Agritechnica, which *CPM* got an exclusive preview of in September.

Among the new launches, was the news >



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► that the Axion 900 Terra Trac has now entered full production, following the announcement of its development in 2017. Two models will be available — the 445hp Axion 960TT and the 355hp Axion 930. According to Claas, the Axion TT is the first half-track tractor on the market to feature a fully suspended track system. This, combined with the front axle and 4-point cab suspension, is claimed to improve ground contact and reduce wheelslip, as well as boosting driver comfort.

Drive to the Terra Trac unit is via a standard Cmatic transmission, but in place of the trumpet housings there are 'saxophones', which bridge the differences in height and length, says Claas.

The actual drive is through a cardan shaft between the PTO shaft and the Terra Trac intake shaft. "Unlike other track units, the Axion Terra Trac unit is able to pivot over a range from $+8^{\circ}$ to -15° . Compared to full track or rigidly mounted half-track systems, this ensures that optimum ground contact is maintained at all times," says the firm.

Fendt

Fendt's planned tractor line-up for the NEC includes the latest models of proven favourites, including the new 942 tractor that produces well over 400hp from its MAN six-cylinder, 9-litre engine. It's fitted with TA300 vario transmission. Other models on display include 828, 718, 516, 312 and 200 models and the MT 943 tracked tractor,.

Visitors will also be able to sample the new Fendt 700 Series cab, or "driving workstation", using Virtual Reality headsets, which is set to be available from July 2020. ►

Tyre technology

Amongst shiny new kit, it's arguably fairly difficult to make tyre developments look glamorous. However, the innovation behind some of the latest launches and tyre technology really do have the potential to make a huge difference to your operations.

CEAT

Designed for use on high power tractors and combines, CEAT have launched two new ranges of tyres: The Torquemax and the YieldMax.

According to the firm the Torquemax range has been engineered to ensure constant and smooth transfer of torque from the tractor to the ground — particularly during fieldwork.

As well as this, it also boasts low rolling resistance and longevity, helping drivers to boost productivity while also keeping a lid on costs, adds the firm.

When it comes to the design, the Torquemax features new casing with stepped lug design and lower lug angle at the shoulder and an extra-wide footprint along with a rounded shoulder, in a bid to keep soil compaction to a minimum.

Incorporated within the range is the IF (Increased Flexion) models which have been designed to give 20% higher load carrying capacity at the same pressure, compared with conventional radial tyres.

For those looking for some new shoes for your combine, the YieldMax range from CEAT boasts a flexible radial carcass and deep tractive lugs that help provide high traction, designed to work as part of modern sustainable and precision farming by minimising harvesting's impact on the soil.

Available in 650/75 R 32 and 620/75 R 26, the firm believes this offers the potential to

increase load capacity without the need to move to a wide tyre.

Key design features include interlug terracing at the base of the lugs, which helps to maximise the tyre's self-cleaning capability, while durability is enhanced by a rounded lug base, designed to make the tyre more robust and resistant to stubble and sharp stones, says CEAT.

These features also contribute to optimal lateral stability, even on difficult and very uneven terrain, plus low vibration levels and high comfort in all working conditions, it adds.

BKT

With a focus on soil protection, visitors to next month's LAMMA event will be able to find out more about BKT's V-Flex and Ridemax FL 699 tyres which have been designed for trailers and agricultural implements.

The V-Flexa uses VF (very high flexion) technology, combined with tread equipped with steel belts to create a tyre that enables the transport of heavy loads with an inflation pressure that's 30% less than that of a standard tyre of the same size. As well as this, the tyre has three additional steel-belted layers of heavy duty steel and features a 'super-resistant' sidewall to further improve performance.

According to BKT, the extra-large contact area allows an even load distribution, meaning soil compaction is minimised.

Suited for use on trailers and trucks, the Ridemax FL 699 features a reinforced bead, to ensure stability, even at high speeds.

Though it's predominantly designed for road use, the Ridemax FL has also proven itself in the field, according to BKT, and also boasts high mileage and long durability.



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Not at LAMMA, but worth a mention...

John Deere

Though John Deere won't be present at next month's LAMMA event, Team Green did launch a vast amount of kit at Agritechinca, which will no doubt be influential in the tractor and combine market (see Agritechnica - Innovation roundup on p49).

Among these included the latest generation 7R series, as well as the launch of the brand new 8R series.

When it comes to the 8R series, John Deere claims to be the first farm equipment manufacturer to produce a range of standard tractors offering three different drive concepts, with the launch of the new 8R Series wheeled tractors, 8RT models with two tracks and the 8RX versions with four tracks.

Developed to balance soil preservation with high performance, the 8RX series is said to provide the lowest contact surface compression in this class, along with a transport width of less than 3m and 40km/h unrestricted road speed, according to John Deere.

Under the hood, the 8R series retains John Deere's existing 9-litre engine, with an increase of 40hp for the 8RT 410.

Established transmission options include the 16/5 PowerShift, which is now available up to the 8R 340 model, the modern e23 with Efficiency Manager and the stepless AutoPowr. The rear brakes have been massively reinforced, so front brakes are no longer necessary even at 50km/h, although additional front brakes can still be ordered, says the firm.

Deere also chose Agritechnica 2019 as a platform to preview an addition to the top end of its combine harvester range with the all-new X9 model and matching draper header, specifically designed and developed for tough European harvesting conditions, according to the firm.

Compared to the S790, (the largest model in the current line-up), the firm believes the the X9 will deliver increased performance and productivity while also offering a boost in efficiency.

This is set to be achieved through a combination of the wide body, improved crop flow, an increase in active threshing and separation areas and a larger cleaning shoe, all while maintaining a transport width below 3.5m on both wheels and tracks, says the firm. "Taken together, these features allow very high throughput and very low losses with improved grain and

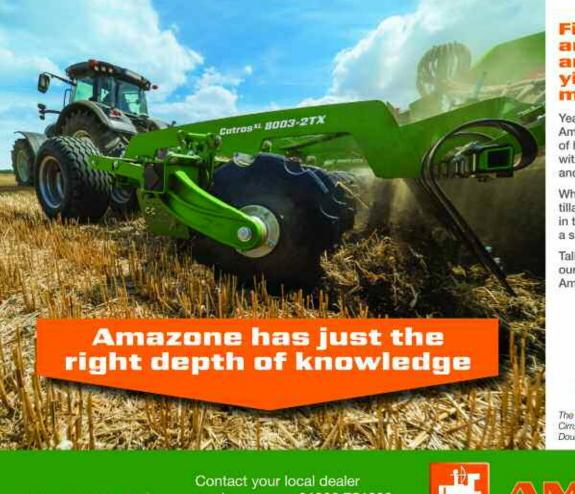


John Deere launched the new 8R Series wheeled tractor at last month's Agritechnica.



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straw quality, and address the needs of large farmers looking to maximise their productivity and profits."



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Valtra

For those looking to impress with the glitziest new technology — or just something that really does look pretty cool — Valtra will be showcasing its new heads up display (HUD) SmartGlass.

According to Valtra, this allows the operator to see vital tractor information in the centre of the windscreen and despite

presumptions that glass is perhaps not the most suitable of materials to have on board a workhorse, Valtra says the SmartGlass is based on transparent display technology laminated between two glass surfaces, making it very robust.

As well as this Valtra is set to launch the latest addition to its tractor series which will be on sale in the UK in early 2020.

The F Series — a new vineyard and orchard tractor — comprises four models from 75 to 105hp. Models range from 1.3 to 1.5m wide with standard equipment such as heated and air-conditioned cab.

The F Series comes with a 24-speed transmission, available with either a mechanical or hydraulic forward-reverse shuttle and Powershift, while the hydraulics produce from 68 to almost 100 l/min of output depending on the model.

The four-cylinder 3.4-litre common rail engine complies with Stage III B emissions regulations for narrow tractors.

The updated Valtra Guide automated steering system will also be on show. Settings now appear in the map screen and can be changed or checked without having to exit the screen while selecting fields and creating waylines has also been made simpler.



Valtra will be showcasing its new heads up display (HUD) SmartGlass.

JCB

JCB has been hot in the headlines lately, after breaking its own world record to reclaim the title of the world's fastest tractor with its vamped-up Fastrac Two design.

While such engineering is probably not suited to day-to-day activity, growers will be able to get up close and personal to a slightly more practical development from the firm at LAMMA next month as well as getting a glimpse of the world's fastest tractor.

The Fastrac 4000 series has had some



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heavy-duty upgrades and now boasts axles with 33% higher load ratings, larger hubs, bearings and external disc brakes, and a larger front axle differential with positive locking rather than limited slip for maximum traction.

New 'VF' category tyre options also offer enhanced traction by operating at a lower inflation pressure for a given load to create a larger footprint on the soil, adds the firm. Conversely, they can carry a heavier load than less sophisticated tyres of the same size without resorting to higher tyre inflation pressures and therefore preserving soil structure by avoiding excessive compaction.

The new tyres complement the inherent 50:50 unladen weight distribution of the Fastrac 4000 Series tractors and the consistent ride height and operating weight distribution provided by the active front and rear suspension systems, according to the firm.

Extending engine service intervals for oil and filters from 500 hours to 600 hours helps drive down cost of ownership, as does the new Auto-Stop feature, which eliminates unnecessary fuel use by shutting down the engine after a period at idling speed — a feature that can be disengaged in situations when this is inappropriate, says JCB.

Combines

With its striking matte black livery making the Fendt Ideal combine look like something from a sci-fi film, the firm is no doubt set to impress further with its top-of-the-range Ideal 10, which will make its debut at LAMMA next month.

In the guts of the combine is a new MAN 16.2-litre, Stage V emissions-compliant engine which boasts a pony count of up to 790hp.

Other features include a new cleaning system, together with the Dual Helix separator, a combination said to deliver the highest grain quality and the least grain losses.

What's perhaps the most headline-grabbing feature is that the 10 claims to be the first standard combine in Europe to be operated entirely without a steering wheel.

With Fendt IdealDrive steering, the machine is controlled proportionately to the movement of a joystick on the left, with all the same functions on the joystick on the right armrest. For easy access to the driver's seat, the left armrest can be folded up.

Available to order from July 2020, Fendt say the new Ideal 10 will be ready for the 2021 harvest. ■



Fendt's top-of-the-range Ideal 10 will make its debut at LAMMA next month.



JCB's Fastrac 4000 series has had some heavy-duty upgrades.

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