

“ We aim to develop a commercially viable tractor that can operate on sustainable locally sourced biomethane. ”

Machinery Tractor roundup

Tractors have come a long way since the days of cabless design and low horsepower. *CPM* takes a look at the latest innovations on the market.

By Charlotte Cunningham

For many in the arable sector, a tractor cab is their office, and much like office workers have a bias on the type of chair they spend the day in, personal preference weighs heavily on decision-making when it comes to investing in a new tractor.

However, for those thinking about upgrading, navigating through exactly what is new — or what has just been given a fresh lick of paint — can seem like somewhat of a minefield. *CPM* takes a look at some of the newcomers to the scene.

John Deere

Hot off the press is the latest announcement from John Deere that it's set to launch a brand new 6M Series tractor range.

According to the firm the new launch will replace the previous 6M, 6MC and 6RC Series and include four new four-cylinder models from 90 to 120hp.

Boasting a low bonnet design and a

Horses for courses

slimmer steering wheel cowl, this looks to be one of the most compact series that John Deere has ever offered, says the firm.

In the guts of the four-cylinder models is a 4.5 litre John Deere PowerTech EWL engine, while the 6130M, 6140M and 6145M have a 4.5 litre John Deere PowerTech PSS engine.

Larger models are powered by six-cylinder PVS engines with a displacement of 6.8 litres, while the smaller 6090M to 6140M tractors will feature Intelligent Power Management (IPM) for the first time, which is said to increase performance by 20hp for pto work and transport.

Three different gearbox options are also offered on the new 6M Series. PowrQuad and AutoQuad are four-step powershift transmissions, while CommandQuad Plus offers fully automatic gear and range shifting without using the clutch.

New Holland

The new T8 Genesis Series tractor is the latest addition to New Holland's fleet and comes as standard with Precision Land Management (PLM) Intelligence — the firm's precision farming platform.

In the heart of the new launch is a 8.7-litre Cursor 9 engine developed by FPT Industrial. It meets Stage V emissions standards also boasts the ECOBlue HI-eSCR2 after-treatment system.

While the Cursor 9's long 600-hour engine service intervals will no doubt please growers that are looking to maximise uptime in the field, perhaps the most interesting

feature of the T8 Genesis is its focus on precision farming and connectivity.

"PLM Intelligence takes farmers to a new level, utilising MyPLM Connect and data sharing partners to keep the farmer completely connected with their agronomy software packages," says Sean Lennon, head of tractor product management."

Machine management and utilisation has been enhanced through the New Holland IntelliView Connect — a remote display access — and New Holland Remote Assistance, a remote service tool.

"New Holland IntelliView Connect allows either the farm manager or dealer to remotely view the IntelliView 12 display and monitor T8 performance in real-time, ensuring productivity and uptime," notes ▶



John Deere's new 6M Series is set to replace the previous 6M, 6MC and 6RC Series.

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In the heart of New Holland's launch is a 8.7-litre Cursor 9 engine developed by FPT Industrial.



Adding to the 300 Vario series from Fendt is the new top-end 314 Vario model.



Case IH's four new Vestrum models — ranging from 100-140hp — is claimed to combine big tractor features within a compact machine.



Equipped with a six-cylinder, 24-valve 6.7-litre engine, the McCormick X7.624 delivers a maximum torque of 983 Nm at 1400 rpm.

Low carbon at the forefront of design

With a lot of traction gathering around carbon usage and lower emissions in agriculture, New Holland have aptly unveiled the first pre-development of its Low Carbon Tractor (LoCT) which is a result of the LoCT project.

The project aims to design a commercially viable tractor capable of operation on biomethane while complying with the latest European and US emissions standards. "The LoCT project fits within New Holland's pioneering

work in the use of alternative fuels in agriculture," explains the firm's Sean Lennon. "In collaboration with our partners, we aim to develop a commercially viable tractor that can operate on sustainable locally sourced biomethane. This is the vital link that closes the virtuous cycle of the Energy Independent Farm, which sees farmers producing fuel from waste products, taking sustainability all the way to possible carbon neutrality."

► Sean. "Dealers can proactively manage their customer's fleet with New Holland Remote Assistance, identifying maintenance requirements closer to the service interval and reducing travel time."

Case IH

Launched earlier this year at Sima, Case IH's four new Vestrum models — ranging from 100-140hp — is claimed to combine big tractor features within a compact machine.

According to Case IH, the latest additions have not only impressed customers, but also judges after picking up the Machine of the Year 2019 award in the mid-size tractor category at this the Sima event in January.

The Vestrum CVXDrive range includes the first Case IH tractor in the 100hp class to incorporate the company's popular continuously-variable CVXDrive transmission and Automatic Productivity Management (APM), which is said to contribute to greater operational efficiency and fuel economy. "It is great to see the success of this new tractor," says David, Schimpelsberger, product marketing manager at Case IH.

Every Vestrum CVXDrive model is powered by a 4.5 litre, four-cylinder FPT engine which incorporates a common rail injection system, highly advanced wastegate turbocharger and intercooler to develop a strong torque increase at low engine speeds.

Maximum torque outputs of 520 Nm, 551 Nm, 610 Nm and 630 Nm for the four models are developed at just 1300 rpm, while the engine's 600-hour service interval minimises downtime and operating costs, says Case IH.

Also from Case IH is the Magnum AFS Connect, which has just launched in Europe. The Magnum range has been around for just over three decades, however, the new 7th generation version promises increased power and connectivity. The range for the European market comprises the following models — Magnum 280, Magnum 310,

Magnum 340, Magnum 380 and Magnum 400 — with respective maximum power outputs of 351, 382, 409, and 435hp.

The Magnum 400 is available with 21/5 PowerDrive transmission only, offering 40 and 50kph at reduced engine speed. All models feature 8.7-litre FPT Industrial Cursor 9 six-cylinder turbocharged and intercooled engines which use the latest FPT Hi-eSCR2 technology to meet EU Stage V emissions.

Fendt

Adding to the 300 Vario series from Fendt is the new top-end 314 Vario model, which is set to be available for order from next month's Agritechnica.

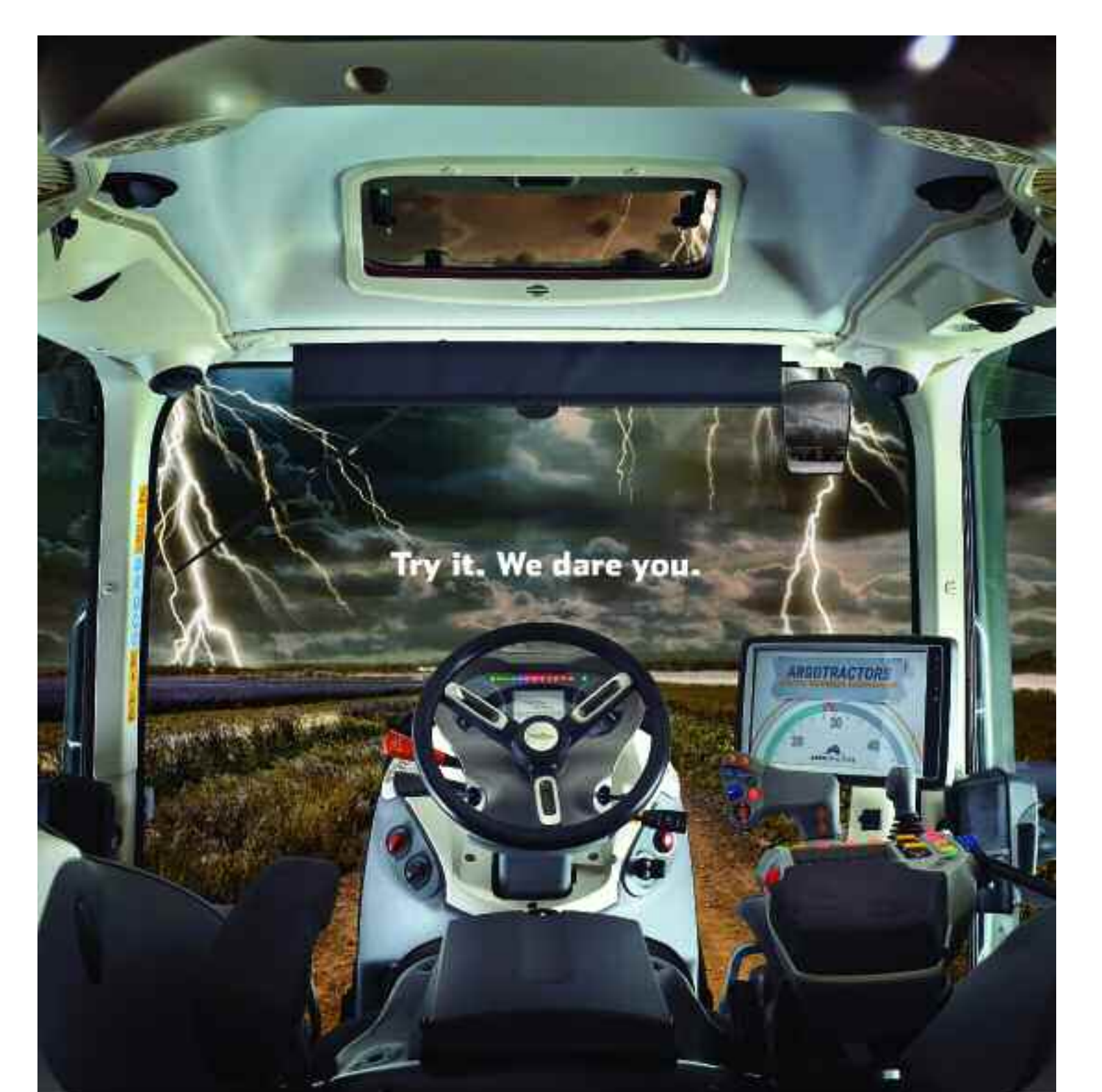
Due to the power-boost concept — DynamicPerformance (DP) —, the tractor is able to release 10hp more power on-demand, just when needed. According to Fendt, this feature is not tied to driving speeds or special operational tasks, and instead works purely dynamically.

"Typically, the engine power of tractors is distributed across numerous power consumers — such as the PTO, hydraulics, engine fans and air conditioning. The system detects when certain components need more power and then provides more power through smart control," says the firm.

The Fendt 314 Vario is also the first compact tractor to connect the on-board to off-board, using the FendtONE system.

Also from Fendt is the new 900 Vario large tractor series. According to the firm, the new models are tailored to the individual requirements of large farms and contractors — making it a good choice for those with many hectares to cover.

With its five models (930 Vario, 933 Vario, 936 Vario, 939 Vario and 942 Vario), the new Fendt 900 Vario sits in the power range of 296 to 415 hp (according to ECE R120), in the compact high-power tractor class, slotting neatly into the power range between the Fendt 800 Vario and the 1000 Vario. ►



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Tractor roundup



For maximum safety, all 5D Keyline models are equipped with wet disc brakes on the front axle.



New Holland have unveiled the first pre-development of its Low Carbon Tractor.

► The new top model Fendt 942 Vario sees the 900-series venture beyond 400-hp for the first time.

With more and more farmers looking to ensure new kit purchases are as adaptable as possible, Fendt says that the new 900-series generation is extremely versatile in its use. Made for heavy tractive or PTO work, the 900-series is also suitable for transport at up to 60 km/h.

“The low unladen weight of just 11.7 tonnes and the integrated VarioGrip tyre pressure regulation system makes this series ideal for work with low ground pressure and high tractive power.”

In the new of the new 900-series is a MAN 6-cylinder engine designed for Fendt, with a cubic capacity of 9 litres and VTG turbocharger with variable turbine geometry and an increased engine oil service of 1000hrs.

McCormick

Set for its debut at next month's Agritechnica, is the latest addition to McCormick's fleet, the McCormick X7.624 VT-Drive Stage V, which will also be competing for Tractor of the Year at the show.

Equipped with a six-cylinder, 24-valve



The M8 tractor is said to be the first from Kubota to feature a six-cylinder engine.

6.7-litre engine, the McCormick X7.624 delivers a maximum torque of 983 Nm at 1400 rpm with the Power Plus system that is said to guarantee power and performance combined with fuel savings, lower tractor wear and a generous 36% torque reserve, according to the firm.

The Selective Catalyst Reduction system — with a 52-litre AdBlue tank — is claimed to reduce engine emissions and is combined with the Diesel Oxidation Catalyser, a passive oxidising catalyst capable of reducing pollutants and meeting anti-pollution regulations.

The four-speed PTO and rear axle with reinforced final drives allow full power to be expressed, with a modular drive and ►



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Tractor roundup



JCB's Fastrac model broke the British speed record for tractors earlier this year at 103.6mph.

► automatically adjustable setup. Compared to Stage IV emission levels, the VT-Drive transmission maintains the

Record-breaking speed

Though perhaps not suited to everyday practice, it's worth giving a mention to JCB's Fastrac model which broke the British speed record for tractors earlier this year.

The tractor notched up 103.6mph, with TV presenter and engineering guru Guy Martin behind the wheel — completely surpassing the previous 87.27mph record set in March

2018 by Top Gear's Track-Tor.

Based on the Fastrac farm tractor, the record-breaking tractor is powered by JCB's 7.2 litre, six-cylinder DieselMax engine. Capable of delivering 1000hp and 2,500Nm of torque, the Fastrac had been put on a diet and had its aerodynamics enhanced with the help of Williams Advanced Engineering.

supporting frame with its characteristic cast iron structure and independent front suspension that boasts lower vibration levels, greater power and improved front wheel traction with maximum manoeuvrability for greater safety and driving comfort, says McCormick.

SDF

Deutz-Fahr added its 5D series earlier this year with its Keyline range, designed for daily work and lightweight loads.

The pony count is at the lower end of the spectrum — with the four models ranging from 65hp to 91hp — but they offer a low cost, compact option to growers.

At the heart of the 5D Keyline-series is a three-cylinder FARMotion engine with 2000 bar, common rail fuel injection and it also features a mechanical reverse shuttle. Available in two versions — 15+15 or 13+15 gears — both are available as an eco version with reduced engine speed, with the maximum speed of 40km/h being reached at just 1870rpm. According to the firm, this not only saves fuel, but also further decreases noise level.

For maximum safety, all 5D Keyline models are equipped with wet disc brakes on the front axle. Specially developed by Deutz-Fahr, the front axles — which feature a 55° steering lock angle — have been designed for the lower hp class and have a permissible axle load of 2300kg.

Kubota

New from Kubota is the M8, which was recently launched in North America. The M8 tractor is said to be the first from Kubota to feature a six-cylinder engine and boasts power capabilities of over 200hp.

Available in 190hp or 200hp versions, the new series uses a Cummins 6.7 litre, Stage V engine which Kubota believes is one of the most dependable on the market. As well as this, it features an EGR-free design which enables greater fuel efficiency and lower emissions, says the firm.

A neat feature inside the cab is the Kubota Headland Control which allows drivers to create and customise fully automated operations of the tractor and ISOBUS implements. According to the firm, this frees the operator to concentrate on driving and helps to ensure more precise turns. ■



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