

2023 | EDITION 12

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**50 YEARS IN THE  
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*The transformation in  
harvesting machinery*

**POWER AND  
PERFORMANCE**

*New 6R line up  
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*Start a John Deere  
apprenticeship*

*Factory clocks up  
two million tractors*



**JOHN DEERE**

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# FIELD OF DEERE

Nearly 40 John Deere tractors and ploughs took part in a speed ploughing challenge in Scotland to raise £7,000 for children's charities.

Field of Deere was organised by local farmer Willie Lean in memory of his nephew, Brodie Walker, who passed away in 2018.

The 37 ploughmen covered a 20-acre field in just 14 minutes, before tackling 40-acre and finally 26-acre fields in John Deere machines lined up in order of age, from a 955 compact tractor to a John Deere 7310R.

"There was a great sense of community, with participants ranging from 16-years-old to farmers who came out of retirement for it," Willie says.

"I would encourage anyone to have a go at it because there must be other parts of the world where they could probably do this with more tractors in a smaller area. I like to think we started it though!"

**"So many people who have farmed all their life told me they've never witnessed anything like it."**

Videos from the event have since gone viral, with more than 1.5m views across the globe on TikTok.



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# NEW TRACTORS IN 6R RANGE ANNOUNCED



Since their launch in 2011, John Deere's 6R Series tractors have set standards in both field and transport performance as well as precision ag technology. And, with 14 new generation models from 110 to 250hp announced, these tractors have become even smarter to help operators achieve even more.

Four brand new models include the four-cylinder 6R 150, aimed particularly at mixed farms, and the six-cylinder 6R 185, a specialist transport tractor for farmers and contractors who spend more time on the road.

A key new 6R Series feature is the integrated 1-Click-Go AutoSetup system, which makes tractor and implement settings much quicker and easier. The operator can save up to 90% of display clicks in the field and the tractor is always perfectly adjusted.

All the required settings can be pre-planned and managed in the Cloud, including agronomic data such as field boundaries, guidance lines and prescriptions. Once the tractor crosses the field boundary, the stored profile is automatically available and even temporary drivers can be consistently accurate and avoid mistakes.

While AutoSetup makes the driver's life easier, John Deere has also increased operator comfort. Among other features, the dashboard behind the steering wheel has disappeared – this not only improves forward visibility, but also operator control using the armrest and right-hand console. All settings and indicators are provided on the corner post display.

Another new feature is the E-joystick, which is particularly useful for front loader work. The operator can freely configure the layout of the buttons and can easily change the direction of travel using the reverser button, while a special hand detection system replaces the former safety flap.

For front loaders, there is a dynamic weighing system that allows weighing on the move, without having to stop. In addition, the Return to Position feature enables the loader to be placed into the correct position with one click, while Level to Horizon avoids spilling the bucket load.

IPM (Intelligent Power Management) has been made smarter on the new 6R Series. This means that in addition to IPM functioning in transport and PTO applications, it also delivers additional horsepower in hydraulic applications as required. The four-cylinder models can now deliver up to 20hp and the six-cylinder models up to 40hp when using hydraulic fans, pumps and the most power-hungry hydraulic implements – wrapping balers, slurry tankers and drills.

The StarFire satellite receiver offers even more precision ag performance. No matter which level of correction signal accuracy farmers choose, the StarFire receiver will provide superior signal stability when operating in shaded areas.

Another highlight of the latest 6R Series tractors is their new design. The bonnet and mirrors are well known from John Deere's larger tractor series, while the name and numbering system has also been adopted from the 7R, 8R and 9R Series models. The 6R range name is now followed by a separate indication of the rated engine horsepower.

To meet individual customer requirements, the 6R Series has been extended by four new tractor models. Chief among these is the compact and efficient 6R 185 that delivers up to 234hp with IPM and is specially designed for transport work, plus the 6R 150 with a four-cylinder engine and high payload, which is the perfect all-rounder for mixed farms.

*There are also more transmission options available in this new range. In addition to AutoQuad Plus and the AutoPowr infinitely variable transmission, customers can now choose the CommandQuad option for four-cylinder models.*



## **6R 185: King of the road**

The new 6R 185 is aimed at farmers and contractors looking for a compact, versatile and powerful six-cylinder tractor mainly required for transport, but also capable of handling demanding hydraulic power requirements. It delivers up to 234hp maximum power with Intelligent Power Management (IPM) in transport, PTO and hydraulic applications.

The 6R 185 is also an agile tractor, due to its short wheelbase of just 2.76m, which makes it more compact than the larger 6R Series models, with a 2.8 or 2.9m wheelbase. This feature, combined with the proven 6.8-litre John Deere PowerTech PSS engine and highly efficient AutoPowr transmission, makes this tractor particularly fuel efficient on the road.

## **6R 150: The all-rounder**

Mixed farms prefer four-cylinder tractors, but without sacrificing power. With a maximum power rating of 165hp or 177hp with IPM, the 6R 150 is now the largest four-cylinder model in the series and covers this tractor segment perfectly. Tyre size has also been increased, with rear wheel options available up to 650/65 R38. Its short wheelbase of only 2.58m makes this machine particularly manoeuvrable.

With a low empty weight of 6.5 tonnes and a total permissible weight of 10.45 tonnes, the 6R 150 tractor provides a very high payload of four tonnes. It therefore offers the performance of a six-cylinder tractor with the advantages of a four-cylinder machine; lightweight, with compact dimensions, it delivers an agile and versatile performance.

*For lifting heavier equipment, rear hydraulic lift capacity has been **increased by 12%**. The 6R 150 also offers a larger 155-litre hydraulic pump which, combined with the dynamic weighing system, **provides considerable front loader performance advantages.***



# MAZZOTTI RECEIVES JOHN DEERE BRAND ENDORSEMENT

**Mazzotti is now an officially endorsed brand by John Deere in recognition of its high levels of product quality, parts availability and service support.**

While the company's sprayer models will continue to be separately branded, the logo will now include 'by John Deere' underneath the Mazzotti name. The new Mazzotti by John Deere logo was publicly seen for the first time at the 2021 EIMA show in Bologna, Italy.

This new brand endorsement is supported by the continual development of the Mazzotti product range, which already features John Deere engines, cabs, the M-Spray dual-circuit solution system and precision ag systems. Parts will now be available through the European Parts Distribution Centre (EPDC) in Germany and all machines are supported by the John Deere Dealer Technical Assistance Centre (DTAC) system.

The company produces compact, light sprayers with a front cab configuration. Special features include variable ground clearance, independent suspension and the Air Assist spray system.

Last year the small 3180, 3580HP and 4080HP (high-performance) models, with respective tank capacities of 3000, 3500 and 4000 litres, received new updated styling, with stronger one-piece side shields and lower profile shielding to allow better 'over the shoulder' visibility to the rear and boom from the cab.

These machines also feature improved access to the solution tank and engine, and a new rear axle flow divider option for hydrostatic models that provides increased traction in extreme conditions or for side-hill operations.

*Mazzotti's MAF self-propelled sprayers, which are sold through selected dealers in the UK & Ireland, complement the John Deere model range, which now offers the widest choice of machines in the EU and CIS markets.*



A fully-owned subsidiary of John Deere operating from its base in Ravenna, Italy, Mazzotti produces self-propelled sprayers that offer high customer value.

Acquired by John Deere in 2017, Mazzotti has been steadily growing its sales in Europe and entering key markets such as the US, Australia and China.

Following the integration of its technology, processes, components and parts within the worldwide John Deere sprayer business, Mazzotti has now become an officially endorsed brand. This signifies that customers will receive the same levels of quality and value throughout the life cycle of the sprayers as they would expect to receive from any other John Deere dealer supplied machine.

# JOHN DEERE LAUNCHES BIGGEST EVER TRAILED SPRAYER



**John Deere's new R975i sprayer is the biggest trailed model ever produced by the company.**

The 7500-litre machine will join the rest of the R900i Series line-up, with tank capacities of 4400, 5200 and 6200 litres and spray boom widths from 24 to 40m.

As with other sprayers in the range, this new model benefits from John Deere precision ag technologies, enabling customers to profit from state-of-the-art smart solutions. The R975i is designed to meet customer requirements for larger tank volumes and wider booms, as well as higher accuracy, reduced chemical use and more comfort when filling and operating the sprayer.

The machine's new larger volume will mean farmers and contractors can spend more time in the field spraying, and so increase productivity by covering larger areas with

one tank. The proven PowrSpray dual-circuit solution system also helps speed up filling times, improves spray application and increases accuracy.

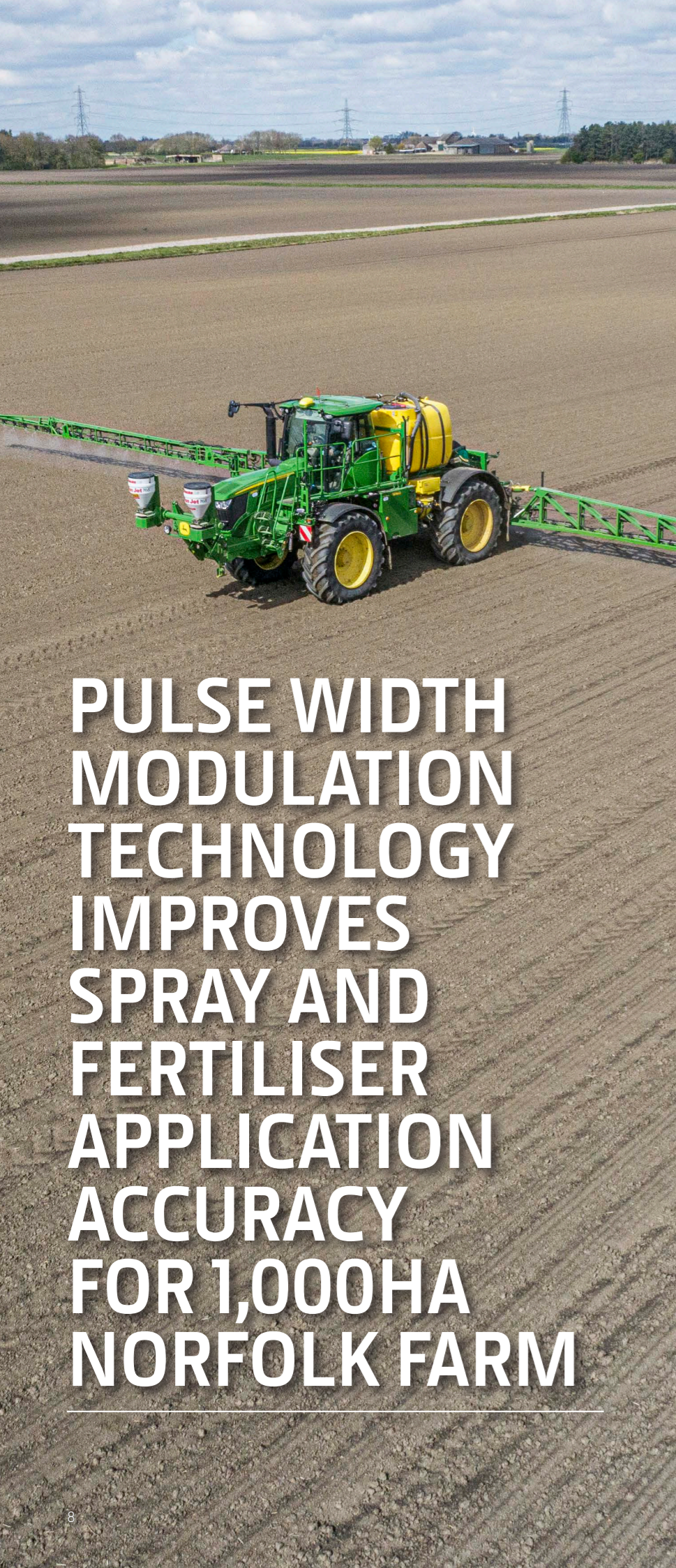
For the first time on John Deere sprayers, the M900(i) and R900i Series models will offer 25cm nozzle spacing as an option. This is an 'On Centre' solution that means an additional nozzle is placed between each 50cm nozzle body on the spray boom. John Deere has also added a nozzle body at each end of the boom to offer full coverage and eliminate underdosing at the boom ends.

All trailed sprayer ranges will also benefit from the options launched on the R700i Series for 2021. These include Individual Nozzle Control, which limits over or underdosing to help preserve yields while saving input costs. Individual Nozzle Control offers savings in crop protection products worth up to in excess of £5/ha on top of Section Control.

Another feature is the new ISO approved Closed Transfer connection. This allows coupling of a Closed Transfer System which prevents contact with crop protection products, avoiding contamination or spillage to ensure filling the sprayer is safe for then environment and the operator. This prevents contact with crop protection products and any spillages to ensure filling the sprayer is safe for the environment as well as the operator.

All trailed sprayer models can now also benefit from AirPurge technology carried over from the John Deere self-propelled sprayers. AirPurge uses air pressure to automatically empty the sprayer plumbing back to the solution tank, reducing the residual liquid left in the system. The result is less product wasted and more efficient rinsing for a cleaner sprayer.

*The R975i is designed to meet customer requirements for larger tank volumes and wider booms.*



# PULSE WIDTH MODULATION TECHNOLOGY IMPROVES SPRAY AND FERTILISER APPLICATION ACCURACY FOR 1,000HA NORFOLK FARM



Robert Melton, Farm Manager

## Richard Means is no stranger to precision farming technology.

Just over 12 years ago, he was involved in an on-farm trial to assess the financial viability of investing in automated steering and guidance.

“Savings in fuel consumption reached 10%, while working time was reduced by 11% which comfortably outweighed the investment cost,” he recalls. “Cutting any form of overlap will bring savings, and it’s a mindset that I am keen to replicate in everything we do at home.”

This experience justifies his decision to invest in pulse width modulation (PWM) technology, helping to future-proof spray application technology for the family farming business, Smith Means Ltd.

The addition of PWM has added around £20,000 to the cost of the farm’s John Deere R4150i self-propelled sprayer.

“It’s relatively early days for us, having only used PWM since April 2020, but we’ve certainly trimmed back on overlaps, which is bringing incremental savings to the business,” he says.

“We’ll certainly be no worse off from using the technology to apply all our liquids, as I’m confident that we’re now doing an even better job than we were.”

“My feeling is we’re seeing improvements to crop canopies, it’s easier to fine-tune and adjust water rates and there’s definite improvement on any curved headlands and around in-field obstructions.”

Richard runs the 1,000ha business at Oaks Farm, Outwell, West Norfolk, in addition to being a partner in farm consultancy firm Ceres Rural. Day-to-day practical activities are carried out by farm manager and sprayer operator Robert Melton.

Oaks Farm comprises a mix of owned and contract farming agreements, with land located within a five-mile radius between Outwell and Downham Market. The total area farmed is cropped as one operation, with a rotation that includes winter wheat, spring barley, sugar beet, peas, oilseed rape, potatoes and spring beans.

Supplied by local dealer Doubleday (recently acquired by Ben Burgess), the R4150i brought an extra 1,000 litres of tank capacity to the operation, along with PowrSpray and hydraulic track width adjustment compared to the outgoing 5430i.

The boom started as a 36m unit, but has been extended by 0.5m each side.

“We put tramlines in potatoes, so we have a requirement to adjust track widths quickly and easily, to switch between potato beds and cereal tramlines. It is why we operate with a 37m boom, so the sprayer can fully cover 40 rows of potatoes,” explains Robert.

“When I’m back on conventional 36m tramlines, the outer nozzle automatically switches off to avoid overlapping. I keep the R4150i on its 650/65 R42 tyres on a year-round basis, to suit bed work.”

Signal through SF3 provides 3cm accuracy, and the sprayer’s ability to hit its target has revealed differences in working widths for the farm’s two 4m drills.

“Our 4m Vaderstad Rapid measures up, but our Amazone combination falls short of a 4m working width,” he says. “Fortunately, the individual nozzle switching easily takes care of the discrepancy.”

ExactApply is John Deere’s intelligent nozzle control system, which operates with a duty cycle of 30Hz (30 times/second) to deliver a consistent pressure and droplet size, regardless of the sprayer’s forward speed and application rate.

With A-B nozzle switching, ExactApply can switch automatically between two pre-selected nozzles, or combine both. For Robert Melton, that choice for pesticides includes 05 and 06 Defy 3D nozzles. The second pair of nozzles are used for liquid fertiliser and create operational flexibility with rates.

“Using both spray nozzles together produces the equivalent of an 011, which is handy when treating blight. The capability of both nozzles gives me a working envelope that spans 80-250 litres/ha – it’s a very flexible system,” he says.



“It is a pretty straightforward system to set-up and use. I just choose an appropriate droplet size for a three-bar working pressure, to suit a duty cycle percentage, and let the system take over to maintain the application rate. The pulsing frequency then manages any variation in speed to achieve the target rate.”

Robert says there is far more control with droplet size, which makes increases in sprayer speeds much easier without impacting on deposition or creating spray drift.

Compared to his previous sprayer, Robert Melton says the combination of larger tank capacity and PWM has seen spraying speeds increase, boosting output while continuing to manage drift.

“My best day has seen 700 acres sprayed,” he says. “I’m confident that there’s more output available, in optimum conditions and with well-planned logistics.”

**“We’re far better placed to get timings spot-on, or even take on more land, as we do have some impressive capacity available with this sprayer.”**

Perhaps more impressive is the PWM system’s turn compensation. This affords a variable application rate across the width of the boom, in response to changes in boom tip speed.

“Turn compensation is fantastic when spraying around poles or other in-field obstacles, and also on curved headlands,” he adds. “When the one boom tip slows down on the inside of a corner for example, PWM progressively decreases the flow rate by changing pulses, to ensure we don’t over-dose. And if the boom travels backwards, or sits stationary, then the corresponding nozzles switch off.”

He says that the opposite result is delivered when the end of the boom speeds up.

“The pulsing then increases to ensure the correct dose is still applied, rather than leaving a section of crop with a low application rate. This does show up quite clearly, with better weed control on the outside of curves.”

Robert says John Deere’s boom control has been improved on this latest model, with quicker reactions and faster self-levelling.

“There are five sensors across the R4150i’s boom, and it just seems to respond much quicker than the old sprayer,” he adds. “And that’s a benefit when travelling a bit faster.”



Justifying the increased cost of new technology can be a difficult task. But for farm owner Richard, his past experience assessing the financial viability of automated steering and guidance suggests operators shouldn’t simply dismiss new technology as a gimmick.

“With tightening margins and increased costs, there’s never been a more pressing need for attention to detail. And with the help of advanced technology such as PWM, we can also combine that philosophy with best practice,” he says.

# AUTOTRAC ON MIXED FLEETS NOW EASIER TO USE

Farmers and contractors running multi-brand tractor fleets can now use John Deere's AutoTrac TIM (Tractor Implement Management) activation for the Gen4 Universal Displays.



This development means that the proven guidance system AutoTrac can be used on all tractors with AEF (Agricultural Electronics Foundation) certified TIM guidance capability.

The new AutoTrac TIM is a complementary offering that is fully integrated. The key benefit is that no further steering wheel or controller components are needed.

This is a simple solution for farmers and contractors with mixed fleets who want to use a universal guidance system. To run AutoTrac TIM, they need the AEF-certified Gen4 Universal Display (4240 or 4640) with AutoTrac activation and a StarFire 6000 or 7000 receiver.

If the machine (regardless of brand) is equipped with a JDLink™ modem, data can be exchanged wirelessly and free of charge with the John Deere Operations Center™. It enables workflows

to be set up, planned, monitored and analysed in a single online portal. This also allows customers to use functions for precision farming, such as creating application maps. These can then be sent directly to tractors in the field using John Deere AutoSetup.

*By enabling AutoTrac TIM activation for use by other brands, John Deere ensures customers with mixed fleets won't miss out on the company's unique solutions for agriculture.*

# FACELIFT FOR KRAMER TELEHANDLERS

Kramer has unveiled a new design for its telehandlers designed to boost visibility and maximise safety.



The facelift for the Kramer telehandler series in the 3-5.5 tonne payload range was displayed for the first time at the autumn fairs SIMA, EIMA and EuroTier in 2022.

Prioritising visibility from within the working area, the new engine bonnet design for the KT356, KT307, KT357, KT3610, KT407 and KT457 machines provides the best possible view from the right.

Other innovations include optimised ecospeedPRO drive for the large models from KT457-KT559, enabling them to achieve higher tractive forces and travel speeds while retaining compactness, energy efficiency and operator comfort.

Together with a mechanical 100% differential lock in the front axle and an updated differential lock and load stabiliser, the updates all offer

customers significant added value. The optimised functionality of the machines ensures it is optimal for agricultural applications, particularly suiting sites such as biogas plants and stables.

The KT457, the biggest telehandler to benefit from the improvements, is specifically designed for the agriculture market.

The KT457's payload of 4.5 tonnes and the stacking height of seven metres guarantees top performance. The powerful drive system facilitates trailer loads of up to 20 metric tonnes and a maximum speed of 40 km/h.

Large glass panels, narrow cab pillars and a panoramic front windshield provide 360° visibility and safety is prioritised, with the Smart Handling driver assistance system ensuring loads do not enter the overload range.

# MORE COMFORT AND POWER FOR SPECIALITY TRACTORS

*John Deere's 5G Series tractors now offer more model diversity and comfort for the varied tasks involved in high-value crop farming.*



The series has undergone a complete update for all tractors above 75hp, including five new, more powerful models in the GV, GN, GF and GL configuration.

## New features for cab versions

A key new 5G feature is the five-speed Hi-Lo PowrReverser Eco-transmission. This enables travel at 40kph with reduced engine revolutions, making the tractors more fuel efficient and more comfortable to drive.

To meet individual customer requirements, new models have been added to the 5G Series. Chief of these are the new 5115 tractors for the GF, GN and GV model series that deliver up to 120hp power from a 3.6l four-cylinder engine.



*Furthermore, John Deere offers more power versatility for operation in even the tightest rows in a vineyard as the GV model range gets two new power ranges – the 5105GV, and 5115GV with a maximum power of 105 and 120hp respectively.*

## Tailored to the operator

The redesigned cab is now better adapted to the driver's needs. The new design offers improved ergonomics as well as more legroom, which increases driving comfort and makes working with the new 5G tractors an even more enjoyable task. A significantly reduced bonnet height provides an unrivalled view to the front. More visibility, especially during the night, is also provided by the optionally available LED lighting.

While the new cab makes working more comfortable, the driver's health will also benefit. The Category IV filter system integrated into the roof of the driver's cab is optionally available and provides protection against dust, aerosols that are hazardous to health and vapours.

Another highlight of the latest 5G Series tractors is the new five-inch digital display, which presents important vehicle information centrally in front of the driver and even allows various tractor and machine settings to be changed conveniently.

## Tailored to efficiency

The new tractors are not only easier to operate, they are also smarter. Owners have the option to equip them with ISOBUS and retrofit the JDLink™ telematics module. This allows the tractors to be connected to the free of charge John Deere Operations Center™, which saves time and money. Operations can be digitised and planned more easily as state-of-the-art fleet management tools come with the tractor for free.

To manage work on steep slopes and narrow rows even more efficiently, the tractors can be equipped with comprehensive features such as Dynamic Steering and AutoClutch.

With Dynamic Steering, steering wheel resistance automatically changes with ground speed. At slower speeds, the steering effort required is significantly reduced, especially during tight turning manoeuvres, while higher steering wheel torque is made possible when driving on roads at transport speed. The AutoClutch function makes it easier to manoeuvre on slopes, as the clutch is engaged with the brake pedal.

# Award-winning sprayer operator explains how JOHN DEERE TECHNOLOGY HAS IMPROVED ACCURACY AND EFFICIENCY

The 2022 Farm Sprayer Operator of the Year says the technology packed into his John Deere R962i has simplified applications without compromising on the size of the tank.

Steve May, arable foreman at Fromant and Sanders in Kissingbury, Northamptonshire, has a 6,200-litre tank and 36m boom on his trailed machine, pulled by a 6215R AutoPowr.

The biggest trailed John Deere sprayer available at the time of purchase in 2019, Steve opted to stay loyal to the brand after being impressed with his previous model, the M740.

"The R-series sprayers are already high spec, so a lot of the features I needed came as standard," he says. "This is our third John Deere sprayer, but this one was a big step up in terms of technology, size and width."

Twin Select nozzles, one fixed and one quad rotating, means that Steve can alternate between them from the cab, cutting down on the manual changes.

He has been particularly impressed with the PowrSpray system, which boasts separate pumps for filling and spraying. "The filling system on this sprayer is just fantastic," he says.

"The filling pump has a 1,200-litre/min capacity, so I can fill the tank in around five minutes," he explains.

Setting how much water he wants on the screen, Steve can depend on the system to fill the sprayer on its own, and he has the option to use the 'active pause' function to slow the speed of filling while the chemicals are added.

Altogether Steve sprays 810ha, which is split between the home farm and contracted work. Crops grown include wheat, barley, oats, oilseed rape and beans.

"The tractor and sprayer both being John Deere means everything is integrated really nicely, which makes my life easier," he says.

"I use the tractor's Greenstar RTK guidance to put the tramlines in, which means I can spray everything with autosteer," Steve says.

Previously, Steve worked on SF1, meaning he had to correct the guidance lines as he worked. "Now they are perfect throughout the season," he says.

The 6215R is fitted with 710/70 R42 tyres for the winter and 480/80 R46 rubber in the summer. The sprayer has 710/70 R38 spec for the winter and runs of 420/80 R46s in the summer.



*Overall, Steve has been impressed with the R962i's performance.*

"The technology is very clever but on a simpler level it's easily manoeuvrable for such a large implement, and the axle suspension smooths out the ride."

Steve was so impressed that the farm placed an order for John Deere's new R975i which has a 7,500-litre tank and arrived on farm in time for spring spraying this year.

"It's pretty much the same machine, it just has a bigger tank which will give us a bit more capacity, particularly in the autumn when we're doing pre-emergence," Steve says.

"We're putting 200 litres per hectare on when we're spraying pre-emergence herbicides so obviously the more liquid I can get in the tank, the further I can get around in a day."

Tank size is key because he needs the capacity to avoid having to make journeys back to base to refill.

Although there are a couple of satellite water tanks at his disposal, not having to rely on them so much will provide significant time savings.

Steve fought off stiff competition to be named Farm Sprayer Operator of the Year, securing his win after impressing the judges in all three rounds.

"It's not really about driving a tractor or sprayer – it's about having the knowledge and ability to do the best job you can with what you've got," he explains.

The judges focus on how you set up your equipment, processes and paperwork to be as precise as possible, because this leads to efficiency, which in turn leads to environmental gains.

"Finding out I had won was fantastic."

Steve is BASIS and FACTS qualified, and made the final six of the Syngenta-organised competition in 2018 but 2022 was the first time he has taken the top prize which includes a trophy and a trip to Agritechnica 2023.

**"I think the new sprayer comes in somewhere around 90 acres per tank load, whereas our current model does 75 acres per tank load."**





# MACHINERY'S ROLE IN ACHIEVING SUSTAINABLE FOOD PRODUCTION

The technology and innovation that will help farmers to become climate savers.

Producing more food with fewer inputs is one of the core principles at the heart of sustainable farming.

It is a simple concept on paper, but much harder to achieve in practice, requiring input from a wide range of key stakeholders from governments to economists, consumers to tech disruptors.

Feeding a growing population is one thing – doing it in a manner which is affordable to consumers, profitable for farmers, and leaves no environmental trace is where the greatest challenges lie.

John Deere believes agricultural machinery has a significant role to play.

Digital solutions can reduce environmental impacts and help farmers to achieve the same – or even higher – yields with less use of mineral fertilisers, agrochemicals and fuel.

## Saving soil

Applying these inputs with better-designed machines is also part of the solution.

Soil protection is mainly about using larger machinery footprints, reducing compaction.

While modern tractors are undoubtedly heavier, soil compaction has steadily decreased due to the use of larger tyres and the ability to work with low inflation pressures, or tracks.

The new John Deere four-track 8RX has a huge footprint of 4.6m<sup>2</sup>, so the contact surface

pressure is very low at only 0.4kg/cm<sup>2</sup>. A larger footprint also means less track depth, which reduces compaction in the deeper soil layers and reduces roll resistance.

Less roll resistance also means lower fuel consumption – test show up to 10% – therefore fewer CO<sub>2</sub> emissions.

## Accurate fertiliser applications

How precise these machines are when they are on the ground is just as important, and John Deere has made huge strides in introducing digital nutrient measurement to upgrade manure and slurry to a valuable organic fertiliser. With a John Deere HarvestLab sensor, the precise nutrient content of the manure can be accurately measured, identifying the exact amounts of nitrogen, phosphorus and potassium in a sample. These active measurements and an application map recommendation allow the tractor and slurry tanker to adjust the application rate automatically. This ensures the exact amount of organic fertiliser is applied according to the specific needs of the crop.

## More targeted crop protection

Without technology such as Harvestlab, over-application of slurry and manures can be problematic, and the same is true with overlaps and overdoses of agrochemicals.

GPS-steered sprayers with John Deere's SectionControl and ExactApply nozzles can have a huge impact on the accuracy of herbicides, fungicides and insecticides.

But coming down the road fast is technology which will facilitate site-specific – or even plant-specific – applications.

Site-specific applications divide fields into zones that can be treated differently. With application maps, sections of the field are only treated where necessary. This approach can provide massive cost savings, depending on crop and field variations.

John Deere's new See & Spray technology is even more precise. High-speed cameras and artificial intelligence help to capture crop populations, and See & Spray Select can identify weeds and apply a herbicide at specific locations across the field.

The next step up is the advanced See & Spray system, which can distinguish between weeds and the growing crop. Again, only the individual weeds are treated, while the crop is not affected. See & Spray technology is currently developed for row crop applications, and herbicide savings of up to 90% are possible.



# THE ENGINES OF TOMORROW

*By 2030, John Deere has committed to reducing CO<sub>2</sub> emissions from its vehicles by 30%.*

*This lower-carbon goal requires innovation across the board when it comes to engine design.*

*Efficiency, hybridisation, electrification and alternative fuels are all being explored.*

## Efficiency

The company sees the combustion engine as being critical to its machines for many years to come, so is focusing on efficiency, a recent example being the new 13.6-litre engine found in X9 combines. The update has demonstrated up to 30% improvement over previous models in overall performance and reduced fuel consumption.

## Hybridisation

Hybridisation is used to drive vehicle efficiency two ways; utilising the engine's power to generate electrical energy to more effectively power various loads, and off-loading some of the engine's energy demands with a second power source, a battery. Progress in this area is already demonstrated in Deere's eAutoPowr technology – the world's first infinitely variable gearbox with the ability to offboard power to an implement.

## Electrification

Such huge machines and power requirements on most agricultural machines mean combustion engines will remain the most logical and efficient way of driving the engine. But in 2022 Deere acquired a majority ownership interest in Kreisell Electric – an Austrian-based battery technology provider – in an essential step to achieving many of Deere's goals. Kreisell develops battery modules packed with high performance and durability.

## Alternative fuels

Ethanol, biofuels, methane, biomethane and hydrogen all provide possible alternative fuel sources for the internal combustion engine. In many cases, switching to these fuels from diesel would generate significant CO<sub>2</sub> savings, and the technology exists to enable Deere machines to run on these sources. The company is actively researching these areas to explore the possibilities further – indeed, it is helping lead innovation in hydrogen by participating in a project that includes the French government and the University of Orléans.

# SUSTAINABILITY IN PRACTICE

There are many pillars to sustainable agriculture. Farmers are, generally, most interested in its practical application through innovation and technology, brought to life in John Deere's machinery.

In September 2022 John Deere held its second Sustainability Day to show European media how its innovation pipeline had created tools to deploy in the field.

Focusing on connected machines and data, the company was able to showcase a seed-to-shed example of how fields of the future could be managed with fewer inputs, more accuracy, better efficiency and, ultimately, more profit.



## Planting

Optimal fertilisation of the plant starts with seed placement, and John Deere was able to demonstrate how RTK guidance plus AutoPath allowed a slurry tanker to inject manure at 10-12cm depth before a precision drill placed about 7cm above. With AutoPath, even if the seed drill is following an irregular line, the seed is always placed exactly above the slurry belt, and the placement of each seed is recorded in the John Deere Operations Center™.

## Crop protection

Once established, crops need protecting, and John Deere was able to demonstrate two strategies for weed control – mechanical hoeing and spot spraying.

Again using AutoPath, a hoe can pass through a growing crop to remove competitive weeds. With the tractor and implement fitted with a StarFire receiver, the hoe can be guided through

the rows using data gathered during drilling to avoid disturbing the emerging crop. A hydraulic steering ram on the rear linkage can manoeuvre the implement at speed of up to 10mph.

In addition to mechanical control, spot spraying allows growers to hit a pest, disease or weed while ignoring non-target areas.

A drone-mapped field provides an accurate plan of where boom sections or nozzles need to be activated – in this case on a 36m R952i sprayer – enabling farmers to reduce chemical use, save money and protect the environment.

## Harvesting

John Deere was able to show how an on-board HarvestLab 3000 can provide real-time analysis of crop quality and nutrient content, creating GPS records which help optimise the use of fertiliser, seed, pesticides and fuel for the following year's crop.

Using yield monitoring and protein mapping as an indication of where protein is faltering in the field allows farmers to plan where fertilisers should be best targeted in future years. Matching applications to demand can ensure soils are not deficient in key nutrients or fertiliser, while also ensuring valuable inputs are not applied where they are not required.



# MORE POWER AND HIGH THROUGHPUT

John Deere is revising its 8000 and 9000 series forage harvester portfolio for 2023. Although the focus is primarily on the smaller models of the 8000 Series, the 9000 Series also receives important updates to further increase performance. A new top-of-the-range machine is also being added to the pick-up model range – the 30R – which increases output, especially in the upper horsepower segment.



## The new 8000 Series forage harvesters

In addition to a facelift, the 8100, 8200 and 8300 models receive additional horsepower. The 8100 harvester with the nine-litre engine now delivers a maximum power of 431hp and replaces the current 8200. For 2023, the 8200 forage harvester receives the larger 13.5-litre engine and therefore increases its output by 34hp to 465hp. The power increase of the smaller 8000 models is rounded off by the new 8300, which now has a maximum output of 505hp instead of the previous 490hp.

To further enhance performance and reduce operating costs, the DuraLine™ Kernel Processor has a new coating, the BusaCLAD.

*This coating has been specially developed for highly stressed machine components and is available for all 8000 and 9000 Series models. In addition to a longer service life, it enables lower wear costs per tonne to be achieved.*

## The 9000 Series: what's new?

Like the 9500 and 9600 forage harvesters before, the 9700 model now also gets the JD18X engine, which does not require DEF (Diesel Exhaust Fluid). This 18-litre John Deere engine increases the performance of the forage harvester. It also introduces HarvestMotion Plus, which provides an exceptional torque increase and even more power at low engine speeds. As a result, the 9700 forage harvester now delivers up to 825hp.

Furthermore, all self-propelled forage harvesters in the 9000 Series are now equipped with the newly designed discharge chute, which is 20cm longer than the previous version. Thanks to its optimised contours and design, it enables a higher throughput and provides a better overview during chopping. Additional openings facilitate maintenance.

## The new 30R

Kemper has developed the new 30R Grass Pick-up with a working width of 2.7 metres. Equipped with a large 80cm diameter auger, deep 20cm auger flights and six tine bars with 6.5mm tines pick up, the new R Series pick-ups are designed for high throughput. To ensure the full John Deere power is used during the upcoming chopping season, the 30R features a chainless drive and heavy-duty wear parts that reduce maintenance costs.



## AutoSetup: fast and easy work planning

John Deere offers a range of solutions to increase operator comfort during the tightly timed chopping season. One of them is AutoSetup. If the machine is equipped with a JDLink™ modem, data can be exchanged wirelessly and free of charge with the John Deere Operations Center™. This allows workflows to be set up, planned and monitored in a single online portal. Using John Deere AutoSetup, it is then possible to send this information to forage harvesters directly in the field. The pre-planned work schedules automatically appear on the Gen 4 display when the machine crosses the boundary of the designated field. This gives the driver direct access to the correct lanes, work settings and field boundaries.



# SUFFOLK FARMER GOES GREEN



**After 32 years of operating Massey Fergusons, a Suffolk farmer made the decision to 'go green' after having his head turned by one key advantage.**

James Hay, Farm Manager at Barton Place Farms in Bury St Edmunds, switched after local dealer Ben Burgess explained how it valued tractors.

"They were able to give us a buyback value after 3,000 hours," James says. "This means we can work out exactly what our tractors are costing us on the field with 100% accuracy.

"Before, when we were doing our accounts, we'd have to assume that everything would be depreciating at 18%, for want of a more accurate figure. But now I know that every time the 6R155 is in the field it is costing me £11.20 per hour.

"With that figure, I know exactly what I need to charge to make a margin. That is so important, especially at a time when prices are moving as much as they are right now."

The machines impressed James so much that he placed an order for a range of 6Rs – three 6R155s, a 6R185 and the largest horsepower machine, a 6R250.

"The bigger tractors will be for our arable operations and the smaller model for our veg," he says.

James farms in a family partnership alongside his father and sister. Together the three handle the day-to-day management of the farm, with his mum and other sister helping out too.

Altogether they farm 750ha of owned and contracted land, predominately growing wheat, barley, sugar beet and potatoes.

One of the biggest advantages of switching to John Deere for James was access to the John Deere Operations Center™, which he describes as a 'gamechanger'.

"Our aim is to know what every metre of the farm is making," he says. "Being able to access the information the John Deere Operations Center™ provides is a huge benefit for us as we're able to communicate with our operators and see what everyone is doing, to help each other on the farm and in the field.

**"The technology and analytics are gamechangers for us."**

James has also been impressed with the usability and comfort he's enjoyed over the past eight months since the five John Deere tractors arrived.

"All the tractors have the same cabs, which is the first time we've had that," he says.

"Before, if you jumped between different horsepower tractors, they would always have slightly different cabs, whereas once you've learnt your way round one John Deere it's pretty much the same as all the others.

"It makes training staff so much easier because they know that once they get the hang of one machine, they pretty much know everything."

James has also appreciated the small details that add up to create a market-leading user experience.

"It's the first-ever tractor I've driven that my phone connects to automatically," he says.

"When you drive a John Deere tractor you can tell that the people who design them actually drive tractors – there are little touches, such as two drinks holders, one for your morning cup and one for your evening cup.

"Lights come on all around the tractor at night so you can see where the stairs are. Little things like that, where the tractor is being kind to you, make such a difference."

James says that it has taken his workforce some time to get used to the new tractors but the team has had fantastic support from the dealer.

"There were some concerns from the team about the time it would take to learn the new operating systems, but I think having the added benefit of the comfort cab made it a nicer outdoor office to learn in," James says.

**"We had a lot of training from John Deere in the off-season but we're farmers, we like to learn things as we do them, so inevitably there were going to be some problems in the first year. It's not a major concern, it's just part of the training."**



New John Deere

# STARFIRE 7000 EASES RTK ENTRY

**John Deere's new StarFire 7000 receiver facilitates an easy entry into precision farming. Without extra hardware, the receiver offers RTK accuracy of +/- 2.5cm and customers will benefit from better satellite network coverage.**

More farmers want to use the precision of RTK, but shy away from the greater initial investment. Now, John Deere offers the new StarFire 7000 with a completely new correction signal – StarFire RTK. The new signal can be activated easily by purchasing a renewable licence, with no investments in additional hardware or activations necessary.

With a pull-in time of less than 10 minutes, field work can start up to three times faster than before. Recorded field boundaries have a repeatability of at least five years, offering the possibility to create guidance lines and tramlines in the same place for subsequent crops.

Field boundaries can be used beyond the season for highly precise and automatic switching on and off sprayer boom sections. This means John Deere is providing a better solution for the increasing use of precision farming.

Just like the previous models, the new receiver offers the free SFI correction signal as standard and can be upgraded to Radio and Mobile RTK. The StarFire 7000 receiver receives Galileo and BeiDou-Staellite signals in addition to GPS and GLONASS. This ensures a stronger signal strength which is more independent from interference at no additional cost.

The receiver is available in both universal/transportable and integrated versions. The integrated version is built directly into the roof of the machine from the factory, while the universal receiver is suitable for flexible use. With the new practical handles on the sides, it can be moved from machine to machine or to an implement more easily.

The receiver is compatible with new and existing machines and can therefore be used for the entire fleet.



To ensure that the universal receiver is less attractive for thieves, John Deere allows users to set up a PIN code. The PIN code can be defined for two access levels, for example an administrator and an operator. Additional protection with a mechanical lockable kit is available, and the receiver can be removed after the job is done and stored safely until the next use.

*The new StarFire 7000 receiver is available to order with new model year 23 X Series combines as an integrated version.*

# 50 YEARS OF DEERE



Over the past 50 years, there isn't much farming the Robson family hasn't turned its hand to.

And they're yet to find a piece of John Deere kit that isn't up to the job.

From their very first forager in 1973 – a 5400 – to the latest 8400i delivered in March, Pip Robson and his family farming business has relied on John Deere to meet the demands of farm life.

Based near Alnwick in Northumberland, Pip inherited the 800ha Chathill Farm from his father, Adam Robson. The Robsons have farmed in the area for more than 200 years, and Pip is passionate about staying true to his roots.

"We try to run a very traditional farming system, which is backed up by a lot of periphery jobs!" he says.

However, despite this respect for traditional farming, Pip's approach to technology and machinery on his farm is anything but old-fashioned.

## Northumberland farmer Pip Robson marks five decades of green and yellow kit with new 6R 185 and 8400i forager.

### The challenge

The farm has always been home to livestock and today is no exception, with 260 suckler beef cattle, 180 of which are pedigree Aberdeen Angus, and 250 ewes.

Pip's 480ha arable rotation includes wheat, winter barley, oilseed rape, peas, beans and potatoes. He also contracts for other local farms, further expanding the variety of methods and terrain his kit needs to be able to cope with.

"Soil profiles are very changeable in this part of the world, so we have a range of soil types, from reclaimed moorland to heavy clay," he says.

"We're on glacial till, which was formed by sediment being pushed along by glaciers. This means there are lots of different soil types, very close to each other."

As well as contending with a variety of crops, on different types of ground, the kit on Pip's farm also needs to be able to manoeuvre around small fields.

"We don't have big areas where we can leave the headers on the combines," says Pip. "And you don't want machines that take a lot of time to flip from field to field as we have lots of small fields and lots of little narrow roads."

All these challenges have proved small work for John Deere. Tractors, foragers, sprayers and drills have proven unbeatable.

"The 2130 was the very first John Deere piece of kit we bought for the farm," Pip says.

"My first 6900 was my favourite – that was a brilliant tractor. We ordered it before it was even launched."

Pip has witnessed first-hand the evolution of John Deere kit's capacity and proficiency.

"John Deere tractors have changed hugely over the past 20 years," he says. "In the very early days, the tractors I was driving were very basic compare to what we've got now."

"I'm not sure another generation will see as much change as ours has. Especially with autonomy on the horizon."



### Technology

Pip doesn't see himself as someone who is particularly tech-savvy, but his fleet boasts state-of-the-art precision farming equipment thanks to a gradual adoption, over time, of tools that help him to be more precise and efficient.

With product support from the experts at Thomas Sheriff, three tractors are now running RTK and the fleet includes seven StarFire receivers.

A Yara N-Sensor facilitates variable rate fertiliser applications, and conductivity scanning will start shortly to further improve site-specific farming. "I wouldn't say we set out to use every precision farming tool out there but we see what it can do and just keep adding it on year and year when we like what we see," Pip says.

With the new 8400i forager now on farm, the next step will be utilising the HarvestLab 3000. The technology is equipped inside the machine and uses near-infrared spectroscopy to analyse various constituents within harvested crops, silage or slurry.

Length of cut can also be automated based on dry matter content.

The added information and analysis will give Pip the option to add value to his contracting business, and will all be fed back to be stored centrally for reference in future years.

**"We use the John Deere Operations Center™ wherever possible."**

"It's so simple and back in the office we can see what the team has been doing," says Pip. "We bill what the computer says – in the past a contracting customer might have told us how big the field is, but we use our own accurate data now."

"We will be able to invoice off it soon too which is going to be far more efficient, but the best thing about it is the record keeping for legislation – it makes it so much easier. If we have an inspection, all the information is already there."

"Legislation isn't going to go away. You can't fight it so you may as well make it as easy as possible."

The key to embracing technology has been his long-standing and close relationship with his local John Deere dealership.

The team at Thomas Sheriff helped him and his team to embed all the technology and are on hand, should they ever run into any difficulties.

"We've got a longstanding relationship with Thomas Sheriff and they've been fantastic," says Pip. "We had one instance when an engine went one morning, and a replacement had arrived from Langar by 8am the next morning."

Even though he has 10 members of staff on hand, Pip is still happiest behind the wheel.

"I should do more managing, but I can't help myself!" he says. "I've always been happiest behind the wheel."



Kit list  
Chathill Farm

8400i forager with  
639 Premium pick-up

6R 215

6R 185

Two 6R 155

8530

7230

6R 250 (on order)

865M Gator

750A 6m drill

R952i sprayer (5,200l)

Kramer 429 loader



# MANNHEIM PLANT CELEBRATES MILESTONE

John Deere's Mannheim plant is celebrating after the two millionth tractor rolled off its production line.

The largest John Deere production site outside North America, around 3,300 employees build 40,000 tractors a year before they are exported all over the world.



## Mannheim

The birthplace of the car, the bicycle and the tractor, Mannheim is a centre for invention and progress. Although no cars or bikes are constructed in the city anymore, John Deere has produced tractors at its factory in the Lindenhof district since 1956.

Prior to John Deere taking over the site, it was home to the Heinrich Lanz company who first began producing Bulldog tractors there 102 years ago, laying the foundations for what would eventually become one of the most productive and successful tractor factories in the world.

Two-thirds of all tractors manufactured in Germany are produced in Mannheim which is conveniently located on the Rhine. Around 250 tractors are shipped twice a week to Rotterdam or Antwerp, and then onto locations further away, including the UK and Ireland.

However, the plant is much more than just a production site. It is also a development site for John Deere's medium-sized tractors.

With a focus on performance, comfort and efficiency, engineers have modernised tractor cabs to include luxuries such as automatic air conditioning, Apple CarPlay, comfortable seats and GPS steering.

Developers have also dedicated a lot of time and resources to clean fuel combustion, as the same strict exhaust emission standards now apply to tractors as they do to other vehicles.

More than 250 engineers are based at Mannheim to create the tractors of tomorrow, exploring alternative concepts such as the use of biofuels.

Electric drives are also being developed, albeit only for smaller tractors, as the battery capacity for larger machines is not yet sufficient. In 2026, the first fully autonomous and battery-driven tractor delivering approximately 100hp will be presented to the world.



*The training workshop at the Mannheim plant will celebrate its 100<sup>th</sup> anniversary this summer.*

## John Deere 6R and 6M tractors

The Mannheim development department is responsible for the introduction of the frame design for John Deere tractors.

The sturdy steel frame gives the tractors enormous stability when using heavy implements. This also means that other components of the tractor can be lighter. For example, the gearbox housings are made of aluminium.

After the frame design was introduced in the 1990s, production figures steadily climbed upwards. For more than 20 years, John Deere has been the market leader for tractors in all major Western European countries.

This current success is down to, among other things, the star of the Mannheim production line; the 6R 250.

With a maximum output of 300hp, the 6R 250 is the largest tractor ever built at the site.

Overall, Mannheim tractors cover the range from 90 to 250hp rated power in the 'luxury' class.

## The two millionth tractor

The two millionth tractor was a 6R 250 and, as a thank you to the production team, it was wrapped in photos of more than 300 Mannheim employees.

Unveiled at the Mannheim plant on 22 March, key figures were in attendance including John Deere CEO John C. May.

The ceremony took place in the building housing the site's new paint shop. More than \$80 million USD is currently being invested in the future of the plant and in securing the location.

Thanks to state-of-the-art environmental technology, energy consumption at the site will be significantly lowered and emissions will be reduced to a minimum. Waste water and waste in general will be significantly reduced and noise levels will be much lower than those found in other plants.

The two millionth tractor will be given a place of honour in the factory museum, next to its little brother, the one millionth tractor, a John Deere 6400.

It took 70 years for the Mannheim plant to reach the first million milestone, but just 30 for the following million.

## Looking to the future

The two millionth tractor is just one important milestone the factory is celebrating this year.

The training workshop at the Mannheim plant will celebrate its 100th anniversary this summer.

At a time when there is a shortage of skilled workers, it is more important than ever for John Deere to train qualified young people.

The training workshop currently offers young people qualifications as mechatronics technicians, automotive mechatronics technicians, industrial mechanics, electronics technicians for industrial engineering and construction mechanics with a focus on welding technology.

The Mannheim plant is well equipped for the future. Reaching the milestone of two million tractors and making further investments in assembly sends an important signal to the site's 3,300 employees, and the wider Rhine-Neckar metropolitan region, that the John Deere factory has its gaze fixed firmly on the future and is moving forwards.

**1962/63:**

The 100, 700 and 3010 models are launched.

**1974:**

The 30 Series is introduced, with the models 830 to 1130.

**1986:**

The 50 Series is introduced with models from 38 to 114hp.

**1992:**

John Deere introduces the innovative 6000 Series tractors.

**1993:**

One millionth tractor rolls off the production line at the Mannheim plant.

**1997/98:**

The Mannheim plant introduces the 6010 Series.

**2001/2002:**

The 6020 Series is introduced to the market and covers the range from 80 to 160hp.

**2004:**

300,000<sup>th</sup> frame-built tractor rolls off the final assembly line and new training workshop is opened.

**2005/2006:**

The 6030 Series is launched with models from 115 to 203hp.

**2011:**

John Deere launches 6R Series premium tractors including the large 6170R, 6190R and 6210R models.

**2017:**

The Mannheim factory pushes into the 300hp maximum power range with the 6250R - the most powerful model in the series from Mannheim.

**2023:**

The two millionth tractor, a 6R 250, rolls off the production line.

## DATACONNECT NOW AVAILABLE GLOBALLY ACROSS SIX MAJOR DIGITAL PLATFORMS

DataConnect, the global initiative to enable viewing mixed-brand fleets in a single web portal, is now fully live.

Available to farm operations around the world, DataConnect is the first direct, manufacturer independent solution that enables a seamless exchange of important machine data between the various brand platforms.

Case IH, STEYR and New Holland now join John Deere, CLAAS, and the European farm management platform 365FarmNet, which launched the feature late last autumn.

Any farm operation using self-propelled forage harvesters, combines or tractors from any of the participating brands now can view all its data in one participating platform. Previously, viewing such information required managing an additional portal for each brand involved. With this new approach, customers can view five different machinery data parameters from their machinery fleet:

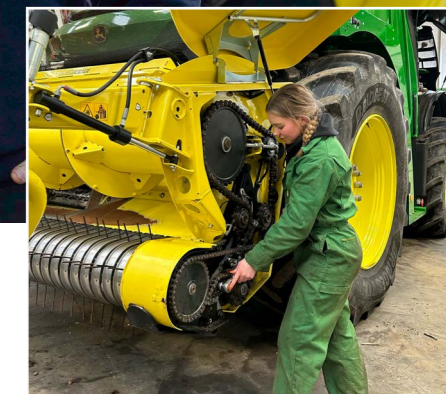
- Current machine location
- Historical machine position
- Fuel tank level
- Status of the machine in the field
- Machine speed

Any farm operator/owner who wants to use this option simply needs to provide themselves with permission to view all equipment in the platform that is most convenient for them.

Once connected, other manufacturers' machines appear automatically in that portal. The vehicles are even displayed with icons in the respective brand colours.

DataConnect works without any additional hardware or software components and ensures secure data handling. The solution will apply to hundreds of thousands of already connected machines.

The addition of CNH Industrial companies means that users of AFS Connect, the telematics platform of Case IH, MyPLM Connect for New Holland and S-Tech for STEYR will now have the option for cloud-to-cloud data exchange with the John Deere Operations Centre, CLAAS TELEMATICS and 365FarmNet portals.



## TIME-SAVING DATASYNC UPGRADE IMPROVES ACCURACY AND EFFICIENCY



John Deere Operations Center™ users can now update field data across their entire machinery fleet in real time.

DataSync has been introduced to eradicate the time taken to manually change records on each in-cab display – usually done via a USB stick – and ensure that stored field data is accurate.

Field names, boundary changes, guidance tracks and flags can now be manually changed in the cab or in the office at the press of a button and shared across the fleet instantly.

Will Downie, John Deere's Precision Farming Specialist, said: "The John Deere Operations Center™ is the starting point for precision applications, mapping out the fundamental data operators need to carry out tasks in the field.

"DataSync consistently provides the right setup information where it's needed, and at the right time."

Peter Richardson is the Arable Manager at East Coast Viners in Forfar, which grows 10,000 acres of vining peas and broad beans.

His team has been using the new functionality since March 2023 across a fleet of six John Deere 6R Series tractors.

He said: "With peas we are going into new, rented fields every year with two cultivators and two drills working together. With DataSync the first tractor maps the field and within seconds the other machines are all working off the same boundaries and A-B lines.

"It's been very impressive. DataSync has reduced downtime, soil compaction and overlaps, making everything so much more simple and straightforward for us."

DataSync is free to activate and can be enabled or disabled for selected machines within the Operations Center™, allowing team members differing levels of access.

Operators need a Generation 4 display and a JD Link™ modem.

## JOHN DEERE EXTENDS THE LIFE OF AGEING MACHINES

John Deere has expanded its machinery inspection programme by introducing Expert Check 7+, designed to keep older machines performing well.



Many farms rely on older machines but to ensure performance is high and running costs are low, regular maintenance is important.

Expert Check 7+ guarantees a comprehensive, 140-point inspection specifically for machines that are seven years or older. With the help of this checklist, sales partners can carry out a detailed technical diagnosis for a wide range of models.

As well as being suitable for older John Deere 6, 7 and 8 Series tractors, Expert Check 7+ covers self-propelled sprayers, round balers and C, W, and T Series combine harvesters.

In addition to launching Expert Check 7+, John Deere has also added a new brand to its parts portfolio called 'Alternatives by John Deere'. This brand expands the existing range of John Deere Original and Reman parts and has been specifically developed for older machines which are used less and therefore experience less wear and tear.

All parts go through a certification process by John Deere, guaranteeing quality and ensuring all parts fit the machine perfectly.

## Since 1992 the John Deere apprenticeship programme has helped over 1,000 people begin their careers in the John Deere dealership network.

Trained at John Deere's Apprentice Training Centre in Upper Saxondale, Nottinghamshire, while also holding permanent jobs at dealerships, participants of the course are taught the knowledge and skills needed to deliver a fantastic service to agricultural customers.

Delivered by ProVQ, John Deere's Ag Tech course features a mix of classroom and workshop learning on subjects including engineering, electronics, hydraulics, diagnostics, communication skills, computing, sales and marketing.

The programme includes on-the-job training and assessment, as well as up to eight weeks classroom-based learning.

"Our aim with the apprenticeship programme is to help young people make their first step on the career ladder, and to nurture and mould those with the skills and desire to work in our industry," says John Deere Branch Training Manager Allan Cochran.

"For three decades we have produced many cohorts of talented individuals who have gone on to have exciting careers across the John Deere dealership network."

Working for the Hunt Forest Group in Chilbolton, Merlin Mulberry is in the third and final year of his Ag Tech apprenticeship and is just months away from becoming a fully-qualified technician.

Despite not coming from an agricultural background, 19-year-old Merlin had an interest in farm machinery that grew from working with local farm contractors near his home in Whiteparish, Wiltshire. From here, he wanted to expand and progress his knowledge and saw that John Deere had the best opportunities to do this.

"One of the most important things that I've learnt during the programme is customer relations, and how to deal with various scenarios," Merlin says. "The relationships you build with the customers and the impact that has on them is incredibly important to the job."

"You don't have to come from an agricultural background to become an apprentice. If you have the right mindset and passion, crack on and give it a go. I haven't got any complaints about becoming a John Deere apprentice, it's a brilliant choice for anyone with a passion for farming."

No two days are the same for Rebecca Weston, as she works towards her goal of becoming a fully-qualified John Deere technician.

Originally from Harrogate, 16-year-old Rebecca has worked on a variety of machines since she started the course six months ago, including 8000 Series forage harvesters and 6R tractors at her local dealership, Ripon Farm Services.

"One thing I've particularly enjoyed on my course is going out on jobs to different farms," Rebecca says. "Getting to see the machines in action is fantastic, and being able to repair or service a machine and seeing it work gives me a great sense of accomplishment knowing that I've helped a working farmer."

**"To anyone thinking of joining the John Deere apprenticeship programme, just go for it. It's great fun and everything about it is amazing. It opens you up to a wide variety of work and experiences - no two days are the same when you're a John Deere apprentice."**

While undertaking a prestigious John Deere Ag Tech course, an apprentice will develop the skills and knowledge they need to work their way into a career anywhere across John Deere's worldwide dealership network.



For more information go to [www.dealerjobs.deere.com](http://www.dealerjobs.deere.com)

# ALAN ROSE CELEBRATES 50 HARVESTS ON A JOHN DEERE COMBINE



**In 1973, Alan Rose fired up his John Deere 970 combine for the very first time on the Lockerley Estate in Hampshire. He didn't know it at the time, but it was the start of an extraordinary partnership which would see him drive John Deere combines for the next 50 years.**

In 2022 Alan made the tough decision to retire, handing over the keys to the estate's S785 in the September once harvest was complete.

The model may have changed, yields may have improved and farming may have become vastly different, but one thing never wavered: Alan's loyalty to the John Deere brand.



**"Ever since I was 16 years old, I would hang around the combine drivers and pester them," he admits. "Finally, someone left and I got the job. I took over driving the combine in 1973 and I've been doing it ever since."**

## Working on a cab-less combine

Lockerley Estate is made up of three farms: Manor, Queenwood and Bentley. Comprising about 800 ha in total, 650 ha is out to combinable crops with the remaining land in grass and woodland.

"I moved to Hampshire when I was two-and-a-half and I've lived here ever since, in one of three farmhouses," Alan says. "I would help on the farm whenever I could growing up, as it's where my dad worked as a dairyman."

After taking evening classes at Sparsholt College on electrics and hydraulics, Alan went to Lackham College to complete a new three-year sandwich course on farm mechanisation.

"I spent a year on the farm as part of my course and chose to come back here," he says. "I'd been allowed to do everything here, including driving the combine and I didn't want to risk being put on another farm where I might only be allowed to sweep the barn." When his course finished Alan returned to Manor Farm and there he would stay.

"My first job title was 'agricultural engineer' – before, they'd always brought in external people to do those jobs but now I was trained I could do all the maintenance and repairs," he explains. "With three dairies on site, there was always something that needed mending!"

But it was a slightly bigger machine that Alan had his eyes (and heart) set on.

## Embracing precision technology over time

In the world of farming, 50 years is not a long time. But where mechanisation and technology on farms are concerned, it's monumental. Alan has had a front row seat for this fast-paced production. Witness to every subtle tweak in design and giant leap forward in development, some things have changed beyond recognition, while others have reassuringly stayed the same.

"The biggest change I've seen?" he muses. "Well, obviously, combines have cabs now." Today, combines boast cabs from which pretty much everything about the machine can be controlled. But Alan's first experiences with the 970 required a mask and the day's work would be determined by which way the wind was blowing. "We didn't have tramlines, so we used to try and cut the fields with the wind blowing across us so that it took the dust away," Alan says.

"Apart from changing the speed of the chopper, I can control everything from my cab now. Before, you had to get out and do everything."

Alan adds that visibility has improved greatly, and cabs are much more comfortable now than they were when they were first added to combines.

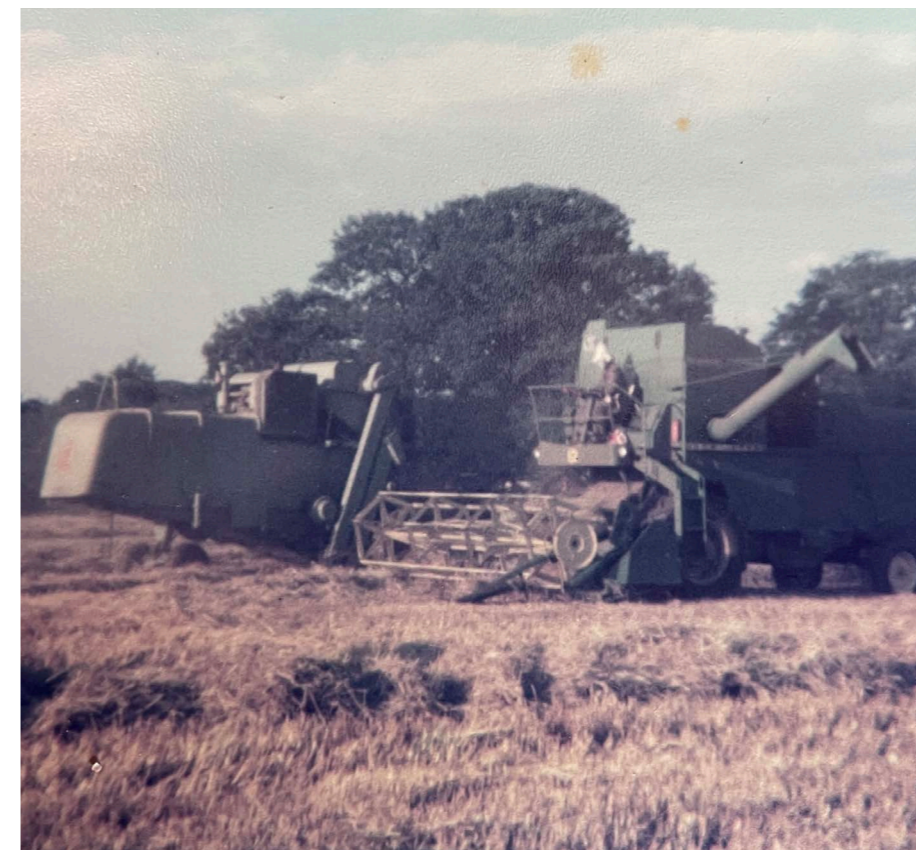
After the 970, the farm bought a 975 in 1983 before upgrading to a 1085 in 1985. Alan was then given an 1188 to drive until John Deere launched the CTS in 1997. This was followed by two STS HillMasters and finally the S785i (on tracks) in 2018.

GPS was another massive leap forwards which Alan remembers making a huge difference on the farm. "The CTS was our first foray into GPS," he recalls. "It was sent to us as a demonstrator and we only had it for one day. Myself and my trailer driver carried on until 2.30am – we were

determined to keep going until we ran out of fuel, as it would be collected in the morning.

**"It has gotten better and better though, and it really is an amazing tool that means you don't waste any ground whatsoever."**

Alan adds that another key change was the move to hydrostatic gearboxes, which was a significant improvement in making the combine easier to operate, especially in flat crops. "I feel that any change to John Deere's combines has always been about improvement for the operator."



## The end of an era for an expert John Deere combine operator

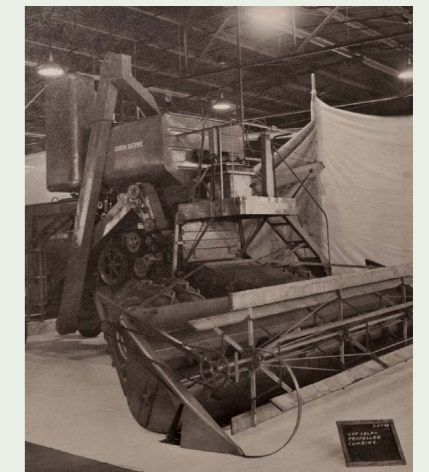
Carrying out 50 harvests at the same location gives you a unique and valuable perspective on how farming and the wider world has changed. Like most farmers in the UK, Alan's job hasn't been made any easier by the weather, which can include anything from blistering heat to torrential downpours.

Alan's favourite-ever John Deere combines are probably his first and his last, both of which occupy a special place in his heart. "I think the best one I've ever had is the one I drive now – it's so much easier to operate than any of the other models," he says. "It's the first one we've had on tracks too, as our farm manager wanted to go in that direction to see if it could make a difference to soil compaction."

Alan and his wife, Julia – who also retired last summer – plan to travel the world with their new-found free time.

So, the final big question: will Alan miss it? Once harvest arrives, will the temptation to reclaim his seat be too great to resist? "No. I feel I've done my bit," he laughs. "Saying that, who knows how I will feel at harvest..."

## JOHN DEERE CELEBRATES 75 YEARS OF SELF-PROPELLED COMBINE HARVESTERS



**The invention of the self-propelled combine was a fundamental turning point in the evolution of agriculture.**

In 1947, John Deere launched the Model 55, the first self-propelled combine harvester and the forerunner for today's combines.

In the years that followed, John Deere concentrated primarily on self-levelling machines such as the 55H hillside combinations, which were able to achieve the best threshing results even in demanding terrain. Over time, combines evolved to help farmers harvest faster and more efficiently.

This commitment to progress led to the development of today's T, S and X Series models, which enabled farmers and contractors to use real-time data on machine performance and positioning for remote monitoring and harvest analysis.

**Today, John Deere combines are used to harvest more than half the world's grain.**

# RECORD MAKER IN TRANSPORT<sup>1</sup>

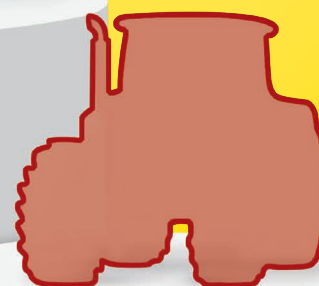
SAVE MORE FUEL



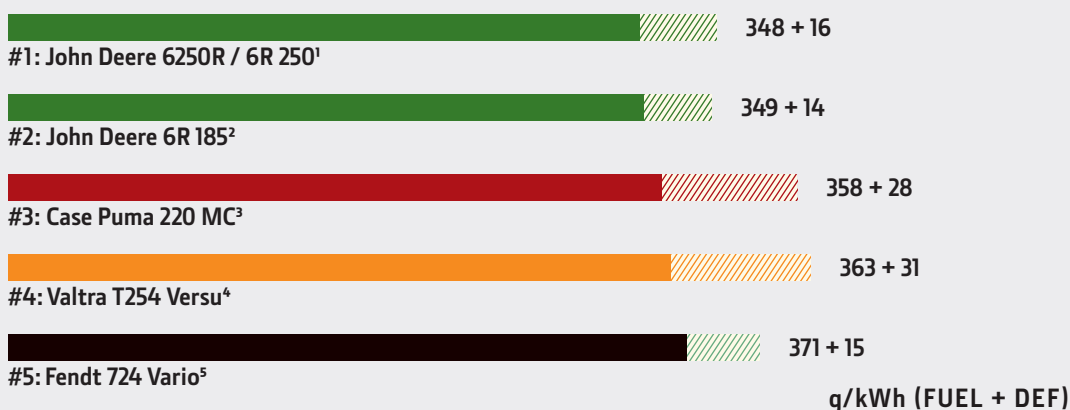
**6R 185**

**6R 250**

**PUMA 220 MC**



## DLG-POWERMIX-TRANSPORT TEST 2.0 TOP 5 RANKING.



Since 2018, the John Deere 6R 250 is leading in the DLG-PowerMix-Transport Test 2.0 (Transport application)<sup>1</sup> – at 348 g/kWh Diesel and 16 g/kWh DEF, the 6R 250 delivered the lowest fuel consumption compared to all competitors tested so far<sup>1</sup>. 6R 250 saves you more fuel on transport.



**JOHN DEERE**

<sup>1</sup> Profi Test Results, Tractor-Test "John Deere 6250R: More Vario", 06/2018; [www.profi.de](http://www.profi.de) DLG-PowerMix-Transport Test 2.0 (Transport application): page 10 to 16; [https://pruefberichte.dlg.org/filestorage/0618\\_John\\_Deere\\_6250R.pdf](https://pruefberichte.dlg.org/filestorage/0618_John_Deere_6250R.pdf)

<sup>2</sup> DLG-PowerMix Test Nr.7369; ([www.dlg.org](http://www.dlg.org))

<sup>3</sup> Profi 09-2019 page 10 to 16 ([www.profi.de](http://www.profi.de))

<sup>4</sup> Profi 08-2018 page 10 to 16 ([www.profi.de](http://www.profi.de))

<sup>5</sup> Profi 11-2021 page 14 to 20 ([www.profi.de](http://www.profi.de))

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