



Combines

A cut above

As harvest comes to a close for another year, *CPM* takes a look at what some of the leading manufacturers have brought to the market.

By Melanie Jenkins

Harvest is as ever, a short time window which is incredibly weather dependent, so having an efficient machine that's ready to go at a moment's notice is as important as it's ever been. A raft of manufacturers have launched a range of new products, upgrades and technologies to help make this period as productive as possible.

Case IH

Case IH Axial-Flow 150 series combines for 2023 feature upgrades aimed at further simplifying operation and monitoring. These include an integrated AFS Pro 700 touchscreen for entering machine settings and monitoring operating data, and a new GPS receiver providing enhanced signal acquisition, easing the operator workload over long working hours and maximising machine efficiency.

On 150 series, the AFS Pro 700 touchscreen operating terminal is integrated into the right-hand console, providing all the information of the former right-hand A-pillar display, plus its settings and monitoring capabilities. The terminal provides fingertip setting and operation of all key functions, such as reel, knife, elevator, rotor, cleaning fan and transmission speeds, plus yield monitoring and AccuGuide auto-steering.

It also monitors tailings and losses from the rotor and sieves, and provides the information formerly shown on the A-pillar displays, putting data such as fuel level and engine temperature in the driver's eye-line when observing the header, resulting in a clear view of the cutterbar and reduced operator strain.

The 150 series combines also benefit from a new correction signal receiver, enhancing their auto-steering capabilities, with the AFS 392 unit building on the established performance of the AFS 372 receiver it replaces. The new receiver uses both Galileo and Beidou satellite constellations to minimise the likelihood of signal loss, and offers quicker RTX initialisation/convergence times. It incorporates Trimble ProPoint — the fifth generation high-precision positioning engine from Trimble. This is engineered to provide position and orientation data from a fusion of GNSS signals, globally

“We're able to offer modern, yet affordable machines for smaller-scale farms which want their own grain harvesting equipment.”

accessible high-accuracy correction services, and measurement data from a variety of sensors.

“Bringing Axial-Flow 250 series features such as the integrated AFS Pro 700 terminal into the Axial-Flow 150 range will further boost driver comfort and therefore machine productivity,” says Case IH's Massimiliano Sala.

The Case IH Axial-Flow 4000 combine range, comprising the 4088 and 4099 models, gains operating upgrades for 2023 with revised controls based around a new console, faster operation of some key functions and an integrated touchscreen control and monitoring terminal.

The 4000 series combines now have a new lateral console, ergonomically ▶

GET MORE... FOR LESS

BUY AN T-SERIES COMBINE AND PICK-UP
A BARGAIN TECH+ VALUE PACKAGE*:

**TECH+
PACKAGE
SAVINGS
CONTACT
US NOW**

MASSIVE

High Definition,
widescreen G5^{Plus}
Universal Display



HUGE

software bundle:
AutoTrac[™],
AutoPath[™],
and more

POWERFUL

automation
tools including
Harvest Monitor[™]

COMPREHENSIVE

visibility upgrades:
LED lighting + 3 cameras

TIME-SAVING

tools including Active
Air Cleaning System



JOHN DEERE

NOTHING RUNS LIKE A DEERE

Combines



Case IH Axial-Flow 150 series combines for 2023 feature upgrades aimed at further simplifying operation and monitoring.

► designed to enable easier identification of all main functions and settings. Mirroring the arrangement found on the latest 150 series Axial-Flow combines, the console also now incorporates the AFS Pro 700 touchscreen operating terminal, via which all machine settings can be made and operating data monitored.

Integration aims to make operation even easier, with no requirement to stretch in the seat. The armrest also incorporates a new joystick, designed, like the console, for intuitive operation. Integrated into the joystick is a new electro-hydraulic unloading auger engagement switch, upgraded from manual engagement for easier, smoother, simpler unloading of the grain tank. Electronic actuation responses have been enhanced with the fitment of a

new universal communications module, for faster reactions and more accurate control of key electronically controlled functions.

"With these latest updates, those characteristics remain, but customers will benefit from even easier operation and reduced operator fatigue," says Massimiliano.

Claas

Launched for 2023, Claas has completed its combine harvester family with the new Evion model series. The arrival of the Evion completes the restructuring of the entire Claas combine harvester range which began with the new Lexion in 2019.

As successors to the Avero and the smaller Tucano models, these three five-walker combine harvesters round out

the lower end of the range below the Trion.

"The Evion is a very important product for Claas," explains the firm's CEO Jan-Hendrik Mohr. "With these new combines we're able to offer modern, yet affordable machines for smaller-scale farms which want their own grain harvesting equipment. We're a family business ourselves and want to continue to offer the right machines for smaller farms across all our product segments."

The technology of the Evion is based on a modular system which is used to build almost 40 versions of the Lexion and Trion. "For the Evion, we're drawing on tried and trusted technology which has proven itself in thousands of machines," he continues.

To make the Evion easy to use, it's equipped with a single-drum tangential threshing unit with a large, 600mm threshing drum and a synchronised impeller combined with five 4.4m straw walkers and a feeder housing width of



The Case IH Axial-Flow 4000 combine range, comprising the 4088 and 4099 models, gains operating upgrades for 2023 with revised controls based around a new console.

NEW HOLLAND COMBINE HARVESTERS SUCCESSFUL HARVESTING. IT'S ALL A MATTER OF TIMING.

Plan ahead choose a New Holland CR, CX -7 & 8 or CH and receive not only an outstanding combine but also superb customer service.

To Ensure the Timing of Your Harvest - Act Now!



www.newholland.com/uk



1420mm. This results in threshing concave area of 0.95m² and a separation area of 6.25m² provided by the straw walkers. Complemented by the standard pre-concave flaps under the threshing drum, this arrangement enables high throughput while also delivering high grain quality.

The threshing drum speed in the Evion Classic is completely adjustable over a range of 480-1150rpm (420-1080rpm with reduction kit) using the Cemis 700 terminal. Concave clearance adjustment is performed hydraulically from the cab and features integrated overload protection provided by a diaphragm accumulator to prevent blockages from occurring in the threshing unit. As the threshing concave in the Evion Classic is a Multicrop unit, conversion measures should only be required rarely, if ever, when switching between common threshing crops. When conversion is required, the concave segments can be swapped out easily through the stone trap.

To provide more effective secondary separation and greater throughput, the centre risers of the straw walkers have been redesigned to loosen the crop mat more effectively and to enable a faster transfer to the next straw walker racks.

Another important factor — in addition to the threshing concave overload protection — in ensuring operating reliability is the sensor-based monitoring of the crop flow on the straw walkers. As soon as blockages begin to develop as a result of difficult harvesting conditions, the operator receives early warning both in the form of an audible alarm and as a visual



Launched for 2023, Claas has completed its combine harvester family with new Evion model series.

alert on the Cemis 700 terminal display. In addition, the optional Cemos Auto Crop Flow automatically deactivates the front attachment and the feeder unit in the event of any imminent risk of blockages on the threshing drum or serious belt slippage so that no more crop is fed in to help avoid unwanted downtime.

The Evion's cleaning system consists of a sieve pan which works with the upper and lower sieves moving in opposite directions and has a total sieve area of 4.80m². The sieve design, which features frogmouth openings with optimised flow characteristics, is a known staple of the Lexion and Trion.

In addition to electric sieve adjustment, the standard equipment for all Evion models includes a loss measurement system. Adjustment of the speed of the radial fan is performed from the cab and can be

controlled automatically with the optional Auto Slope functionality when harvesting uphill or downhill. An inspection window ▶



In the Claas Evion cab, there's a modern control armrest with the ergonomic Cmotion multifunction lever and the Cemis 700 touchscreen terminal.



CR, CX - 7 & 8, CH

NEW HOLLAND EXTENDED WARRANTY AS STANDARD

3 YEARS OR 1200 ENGINE HOURS

COVERING ENGINE, DRIVELINE AND AFTER TREATMENT SYSTEM.

Terms & Conditions Apply*



NEW HOLLAND TOP SERVICE 00800 64 111 111
24/7 SUPPORT AND INFORMATION. The call is free from a land line.
Check in advance with your Mobile Operator if you will be charged.

let's get it done.



Combines



Fendt's AirSense, which is an innovative cooling system, has been released on the latest Ideal models.

► allows the returns to be viewed conveniently from the operator's seat. Available as an option is the 3D cleaning system, which can compensate for a lateral tilt of up to 20% when harvesting on slopes.

The grain tank integrated behind the cab holds 5600 litres in the Evion 410 and 6500 litres in the 430. Sensors alert the operator when the fill level reaches 70% and then 10%. In addition to this functionality, a large grain tank inspection window gives the operator a direct, comprehensive view of the fill level and grain quality.

When it comes to unloading, all three Evion models benefit from the 330mm diameter of the grain tank unloading auger and the resulting 90-litre-per-second unloading rate — meaning that offloading can be completed in 1 to 1.5mins. The 105° pivot angle of the grain tank unloading auger ensures that the operator always has a perfect view of the offloading process. A pivoting unloading spout, as already used in the Trion and Lexion, is available as an option to provide

high-precision control of the grain stream directed at the transport vehicle.

For effective straw chopping in medium to high-yield locations the Evion is available with an optional 72-knife straw chopper as an alternative to the standard 52-knife version. Both shear bar and friction bar can be adjusted without tools while the switchover from chopping to swathing is performed at the right-hand side of the straw discharge hood. The straw guide plates are adjusted manually to the working width so that uniform distribution is ensured even when operating with a cutterbar width of 6.8m. Chaff and short straw are distributed across the working width by optional, hydraulically driven chaff spreaders.

Common to both models is the 6.7-litre Cummins B6.7 engine which meets the Stage V emission standard. This is the same common-rail six-cylinder unit used in the Trion and is notable for its ability to deliver high torque at low revs. The full rated output of 204 (Evion 410) and 231hp (Evion 430) is available at just 1900rpm, while the idle speed is a low 800rpm

(1,200rpm with active hydraulic functions). Dynamic Power engine management ensures the engine only delivers as much power as is actually required at any time. This system can reduce fuel consumption by up to 10%. When the grain tank unloading system is active, the highest output level is enabled automatically.

Access to the engine from the maintenance platform requires the cover plate being raised to the open position with the support of two gas struts. A rotating radiator screen cleans the air intake area continuously. For daily cleaning tasks, an air compressor with three connection points — near the cab (for cab cleaning), at the left above the rear axle (cleaning of sieve and straw walker area as well as the drives on the right-hand side) and near the engine (cleaning of engine area) — is available as an option.

Power transmission to the various driven units of the machine is handled by a drive system based partly on components from the Trion and Lexion. The reel drive, feeder housing and front attachment reversing mechanism as well as the threshing drum and fan variator are operated hydraulically ►



The sensor is fitted at the bottom of the grain tank elevator where grain is measured after it's been cleaned.



AGRICULTURAL EQUIPMENT HIRE ENGINEERING & SALES

Magnum



www.agrihire.co.uk

Ybody spinning disc



01473 744088
Sales - Option 5

Ybody vertical beater



agrihire@agrihire.co.uk

FENDT

fendt.com | Fendt is a worldwide brand of AGCO



Fendt
Early Bird



Fendt Early Bird 2024.

Planning certainty for us, unbeatable benefits for you.
Benefit from exclusive savings on the best early bird offers
for our Fendt IDEAL.

Find out more at fendt.com/earlybird2024



It's Fendt. Because we understand Agriculture.



New from John Deere, its HarvestLab 3000 NIR infrared sensor has now been launched on its S and T series combines in the UK.

► — this is a unique approach in this class which enables good operating reliability in difficult and changing conditions. Other important units, such as the threshing unit variator, straw chopper, front attachment and grain tank unloading auger are activated and deactivated electro-hydraulically. Belt tensioners, which are fitted as standard, help to simplify the system check at the start of each working day.

The ground drive is provided by a three-speed, manually shifted hydrostatic drive with a choice of top speeds — 20km/h, 25km/h or 30km/h. For the rear axle, customers have a choice of wheels with a diameter of 1.35m or, for maximum soil protection, as much as 1.50m.

In the cab, there's a modern control armrest with the ergonomic Cmotion multifunction lever and the Cemis 700 touchscreen terminal. The 18cm terminal has a high-contrast display that allows machine functions to be monitored easily even in bright sunlight. The ability to call up saved settings for all common threshing crops allows the machine to be deployed quickly and enables easy, time-saving changeovers between grain types. The operator can override the saved settings at any time during harvesting and adjust them in accordance with the prevailing conditions.

Further advantages include its ability to store jobs and to record fuel consumption separately for road and field operation as well as in litres/hr and litres/ha. As a fully-fledged ISOBUS terminal, it can also be used for other tasks with tractors and implements outside the combine harvesting season.

Both Evion models are equipped as standard with automatic climate control

and a camera while footrests on the steering column are available as an option — as is a 30-litre cool box under the instructor's seat. Other optional items include an air-suspended comfort seat, electrically adjustable rear-view mirrors and a second camera.

The cab also provides numerous storage options as well as one USB port and two USB-C ports which can be used to charge smartphones, tablets and other devices.

Cutterbars come up to 6.80m working width with user-friendly multi-coupler. With its Claas universal feeder housing and multi-coupler, the Evion is able to accept cutterbars used with the Trion and Lexion up to 6.8m. The Trend equipment package includes Contour ground adaptation as standard. This automatically adjusts the front attachment to ground undulations parallel to the direction of travel.

Fendt

In the past year, Fendt has launched the new Corus 500 straw walker series which includes nine variations and three engines with working widths of up to 7.6m and tank capacities from 5200 litres to 6500 litres.

The Corus range offers power outputs of 185-260hp from a four- or six-cylinder engine, with all models benefiting from a new electro-hydrostatic drive. The new machines feature an ergonomic joystick connected to the armrest, panoramic windscreen, and an onboard computer with two optional cameras for an improved view.

There are three engines to choose from including a 4.9 litre four-cylinder, 185hp for the entry level 518, and a six-cylinder 7.4-litre engine which powers the 225hp 522 and the top of the range 526 which

benefits from 260hp.

Two headers are available; PowerFlow with a working width of up to 6.2m and FreeFlow which extends the working width to 7.6m. Both offer automatic control from the cab to adjust the header height and ground pressure with an option to add auto level header control. The Corus also features Fendt's multi crop separator which improves throughput in damp conditions by loosening straw in front of the header.

For the first time Fendt has fitted the walker range with electro-hydrostatic drive. This controls the forward speed of the Corus intelligently and features two drive modes, one for field, and one for the road. In road mode, speed is limited to improve fuel consumption in transit. However, in field mode, the Corus can be operated at full speed.

Another first for the Corus is the adoption of Fendt's Multi Crop Separator (MCS) and threshing system which can be specified as an option to separate more grain before the crop reaches the straw walkers. This has been taken from Fendt's larger L series.

In addition, Fendt's AirSense, which is an innovative cooling system, has been released on the latest Ideal models and is designed to significantly reduce the daily cleaning required around the engine bay and exhaust system.

The AirSense system removes the requirement for a thorough daily clean near the engine thanks to an eight blade, 950mm reversible fan that engages based on engine temperature and time parameters. The total ventilated area is 2.7m², and the regularity of fan engagement means that dust and chaff don't have the chance to build up around the engine, offering extra peace of mind to operators during dusty conditions.

Fendt suggests the AirSense system has multiple benefits for both operator and machine. Most important is the reduction and shortening of cleaning times to boost productivity and operator efficiency. This has the added benefit of enabling operators to be more flexible and begin working faster to make the most of sometimes challenging weather windows. It also offers more time to check other areas of the machine to ensure harvested grain is as clean as possible.

The system enables the fan to invert the air flow, changing it from sucking in air to cool the engine, to blowing air back through the radiators at selected times, to clear any debris build up. It also keeps the ►

MacDon The Harvesting Specialists.

FD2

BIGGER. FASTER. FLEXIER.

More Capacity. More Speed. More Flex.
The all-new FD2 gives you more of everything you need for harvesting performance from the company that brought you the Original FlexDraper®.

More Flex

The FD2 is a three-section flexible frame header. This allows the entire header frame, cutterbar, and reel to follow ground contours, flexing up to 43.2cm (17") on either end while maintaining a close reel-to-cutterbar relationship. This unique flexing action ensures a consistent stubble height and minimal header losses, even in challenging terrain.



Combine Interchangeability

The 2 Series fits all major brand combines with a completion package that integrates seamlessly with your combine for the best possible user experience. This multi-brand compatibility and interchangeability mean your investment will hold its value.



Floating Headstock

Integrated but independent of the combine's auto header height control, this simple mechanical system allows the FD2 to float over ground fluctuations and respond to obstacles effortlessly. This instant float response lets the header cut close to the ground without pushing dirt, minimising combine downtime and delivering a clean, close and even cut every time.



Amazing Reel Performance

The unique movement of the reel picks up and gently places crop onto the draper belts. Our cam design allows the reel fingers to get underneath lodged crop and pick it up before cutting. Integrated header tilt allows adjustment of the knife and belt angle, enabling effortless crop recovery in the most challenging real-world harvesting conditions.



Available Sizes: FD225 (7.6 m) FD230 (9.1 m) FD235 (10.6 m) FD241 (12.5 m) FD245 (13.7 m) FD250 (15.3 m)



BOOK YOUR DEMO TODAY!
Contact your local MacDon Dealer



New Holland's CX is now available with the brand-new FD2 Flex Draper, the first offering from New Holland's partnership with MacDon Industries.

► intake screen on top of the radiator free from dust and chaff build up and there's no rotary dust screen required.

It inverts by changing the pitch of the fan's paddles. This is activated by engine temperature or time since the last inversion, and a visible plume of dust is seen rising from the engine bay when engaged. Manual activation is also possible if the operator feels it's required.

By keeping the engine bay free of debris, combine performance is never restricted as maximum air intake through the radiator is always possible. Coupled to this, the AirSense system should considerably extend the life of the air filter, which requires no cleaning during the season from the operator.

The AirSense cooling system is available on all models of Fendt Ideal from the 7 with its 9.8-litre AGCO Power engine to the largest 10T, powered by a 16.2-litre six-cylinder engine offering 790hp.

Fendt has also introduced a new over pressurised exhaust box to prevent dust accumulation around the exhaust, which helps reduce cleaning times and chaff build up in the hottest areas of the machine. The new AirBox is available on Ideal 8, 9 and 10 combines.

John Deere

New from John Deere, is the HarvestLab 3000 NIR infrared sensor which has now been launched on its S and T series combines in the UK.

"HarvestLab can measure protein, starch and oil contents in five different crops by taking more than 4000 readings per second to create one average value," explains the firm's Dennis Schrijver.

In wheat and barley, the sensor measures moisture content, protein and starch and in oilseed rape, it can detect

moisture content, protein and oil. In addition, it's also calibrated to take measurements from maize corn and soya but this is directed at the US and Australian markets, adds Dennis.

The sensor is fitted at the bottom of the grain tank elevator where grain is measured after it's been cleaned. "The values are mapped at every spot in the field and these create a protein or oil map," he explains.

"For example, having a protein map of wheat means users know exactly if and where they've met milling quality, allowing them to decide if they want to store this load separately to help avoid penalties when grain goes to the millers. It helps with fast decision-making in where to store and how to sell."

Protein maps also help to indicate how efficiently plants have taken up nitrogen fertiliser, says Dennis. "Using the yield and protein values, a simple calculation can indicate how much N has been taken up in the field. This is site specific to roughly 3m² areas in the field, but does depend on combine width.

"It can also indicate where fertiliser applications may have overlapped. Knowing how efficient fertiliser applications have been can help managers to assess performance and plan future strategies. This is especially useful when fertiliser prices are high and as application regulations become stricter. It's all about helping with the small details to fine-tune performance and improve efficiencies by the final few percent."

HarvestLab was originally launched on foragers and for slurry applications and the same hardware can be fitted to the combine with a software update. "It can be fitted to the S 700 series combines and above with Gen 4 display and the T series MY 16 and above," he explains. "We have

plans to bring HarvestLab to our X9 combines in the future, but this requires different implementation and so requires further development."

New Holland

Last year, New Holland celebrated the 20th Anniversary of its CX flagship range combine harvester.

"When we launched the CX, back in 2002, it made a huge impression on first sight with its curvy lines breaking tradition with the boxy shape of combine harvesters of the time," says Lars Sorensen, of New Holland.

In 2020, the Ultra-Flow staggered drum was introduced to the range. This threshing drum design, which uses 16% less total threshing power, reduces fuel consumption and increases the combine's capacity by up to 15%.

Today the CX combine can include the Opti-Speed auto-adaptive variable speed straw walkers, SmartTrax, Opti-Fan, Opti-Clean and Opti-Spread technologies, the Harvest Suite Ultra Cab and the power and fuel efficiency of the HI-eSCR Ecoblue 2.0 FPT engine.

And the CX is now available with the brand-new FD2 Flex Draper — the first offering from New Holland's partnership with MacDon Industries — that features a unique float response, more header flex and good cutting capacity to help deliver a better harvesting experience. Designed with the objective of making harvest easier, the FD2 Flex Draper aims to relieve stress from operators by integrating easy set-up and operation.

The FD2 Flex Draper utilises the MacDon Active Float System which ensures the float response navigates over ground fluctuations with up to 70% more flex. The MacDon ClearCut High-Speed Cutting System provides the torque and durability to help power through the most challenging cutting conditions. The MacDon Active Crop Flow featured as part of the FD2 Flex Draper, provides head-first delivery of crops along the side drapers toward the FeedMax Crop Feeding System to ensure efficient feeding and improved threshing performance.

New Holland's partnership with MacDon Industries, announced in 2021, began over a shared interest in creating harvesting equipment to help farmers increase in-field performance and decrease running costs. This is the first step in the partnership, and the two brands will continue to work together to develop best-in-class harvesting products. ■