



Around 347,000 visitors were recorded during the five days of EIMA.

EIMA show

Italian innovation

While perhaps less well known in the UK than France's SIMA or Germany's Agritechnica, Italy's biennial EIMA exhibition offers just as much international interest in terms of arable equipment developments. CPM shares highlights from November's event.

By Martin Rickatson

Perhaps unsurprisingly, it's not only in the UK that the machinery trade is catching a cold from a sharp downturn in farm investment. Policy uncertainty, support cutbacks, higher farm input costs, rising interest rates and large hikes in machinery prices are all causing farmers to keep chequebooks firmly closed in many other countries across Europe and beyond.

Conversely, manufacturers, importers and dealers are struggling with large inventories, the result of component sourcing problems during Covid-19 which led to machine supply delays. While that issue is now largely solved, the release of the bottleneck has led to significant stocking issues with too much kit and too few potential homes

at the prices sought to make a margin.

Global tractor sales have been calculated to be -12% in January-June, compared with the same 2023 period. In Italy, Europe's third largest market, January-September tractor figures compiled by FederUnacoma, the Italian agricultural machinery manufacturers' federation, showed a 15.6% drop in registered units compared with the same period in 2023, plus a 31.9% fall in combine numbers.

The situation has been compounded by delayed confirmation of revised investment support schemes, and accordingly, the country's manufacturers and dealers are having to tighten their belts and ride out a storm that many believe may last globally for at least another year.

Even so, all of this didn't appear to put off the country's farmers from attending the biennial EIMA International farm machinery show – around 347,000 visitors were recorded during the event's five days.

Neither has it stifled the research activities of key exhibitors, many of whom put their latest developments forward for the EIMA Innovation Awards – a scheme covering new products unveiled at the show split into medal winners and those granted 'special mentions'.

Among the 17 halls covering 13ha of the Bologna Fiere exhibition centre, there were some stand-out arable equipment developments.

Tractor and telehandler tech

Among the medal winners was Case IH which introduced a heavy-duty

suspension system for its 2025-year Quadtrac models, a revised line which adopts the styling of the Quadtrac 715 flagship launched earlier this year.

Said to be the first full-suspended undercarriage technology to be made available on a four-tracked tractor, the system is claimed to not only enhance operator comfort, but also increase track footprint and raise workrates through greater potential operating speeds on uneven land, while also helping achieve the ideal operating speed for the implement attached.

The system is completely mechanical and hydraulically-cushioned with no additional sensors or wiring, and the independently suspended idler and mid-roller wheels are said to provide a 42% reduction in vertical acceleration at the operator seat during road travel.

The independent double axis suspension



The new Case IH Quadtrac track suspension system is said to enhance operator comfort, track footprint, workrates and implement performance.



The Fast-Attach system from Dieci is said to be the only system available which connects all mechanical, hydraulic and electrical couplings.

is said to ensure the mid-rollers closely follow ground contours, permitting higher field travel speeds in rough field conditions to enhance workrates and produce the desired results from implements.

Whereas enhanced ground contact is also said to maximise each track footprint, translating more engine output into pulling power and spreading the tractor weight over a greater area to minimise ground pressure and soil damage. Drive wheel diameter is up by 11%, while each track is 5% longer.

To minimise servicing time, the system is grease-less, and has maintenance-free bushings and pins and automatic track tensioning.

Elsewhere in tractors, McCormick unveiled a 360° vision system designed to benefit both safety and implement hitching/monitoring. It uses a combination of four cameras to provide an all-round view, feeding a central processing unit equipped with specially-designed software.

It offers five main functions including a radar view to identify the distance from obstacles, a 360° view around the tractor, and a projection of the tractor trajectory. The feed from each camera can also be viewed with zoom, and at the front and rear the view can be used to aid implement hitching and monitoring during work.

While not a big name among UK telehandler buyers, Italian maker Dieci's EIMA Innovation Award-winning Fast-Attach system was nonetheless worthy of note. While its creation isn't the first from a manufacturer seeking to automate and speed up the changing and connection of buckets, grabs and forks, Dieci's development is said to be the only one which connects all mechanical, hydraulic and electrical couplings.

Based on a hook-type headstock design, the standard system's faceplate connects the implement mechanically and plugs in a single hydraulic service. Optionally, this can be extended to include a second hydraulic supply, a double-acting feed, and electrical and digital connections.

Also in telehandlers, the Smart Weighing System (SWS) from Manitou earned the French firm an Innovation Award. A fully integral connected system, it features a rapid tare function that means no calibration is required, regardless of the attachment fitted.

The system is configured from the operator touchscreen and users can define the type of weighing required including basic, cumulative, target and ration functions. Weighing data can be recorded in manual or automatic

For when you want to drive down establishment costs and improve soil health...



...but don't want to compromise on yield.



With over 20 years' direct drilling experience, we know that Claydon drilling is good for your soil and good for your pocket.

It dramatically reduces fuel consumption, aids carbon sequestration and reduces soil erosion. Worms just love it. And importantly, yields are healthy too.

To discuss sustainable farming, call your local dealer or Claydon direct on +44 (0)1440 820327



info@claydondrill.com | claydondrill.com

► mode, and data is transferred to and accessible from a myManitou app; accuracy is claimed to be within +/- 2%.

Italy's predominant telehandler maker, Merlo, won a medal scheme 'mention' with its TFe43.7, which brings the advantages of zero-emissions handler to a full farm-scale size. Previewed a year ago at Agritechnica and now entering production, the machine is capable of lifting 4.3t to 7.0m.

Run time is said to be eight hours in 'average' operations whereas charge time is 3.5 hours and top travel speed is 33km/hr. A TFe30.9 variant on its stand included an upgraded lithium-ion battery pack that powers individual electric motors for the boom, other hydraulics and the transmission.

Cultivation equipment

For farms where the power harrow is still preferred for a final land preparation pass before drilling, the awards scheme entries of two Italian firms caught the eye. While such machines have until now topped out at 8.0m working width, Maschio Gaspardo has taken this to 10.0m with its Jumbo X.

The task of creating a machine that folds to within 3.0m wide/4.0m high European transport requirements was shared with the Italian School of Design (SID). Covered by six mechanical and electronic patents, the Jumbo X is formed of a reinforced frame consisting of three main sections arranged around a telescopic and folding design for road transport, which is aided by a patented four-wheel transport system. An ISOBUS-based control system includes the ability to automatically manage headland sequences, including outer wing lifting.

Alpego, whose products are now imported to the UK by Opico, displayed a



Maschio Gaspardo's Jumbo X design takes power harrows into 10m working width territory for the first time.

more conventional power harrow design but with a very different drive system. Created to match what the firm sees as power transmission technology likely to be found in tomorrow's tractors, it's operated via a 700V DC electrical supply.

Each of the five electric motors drives an input gear, and from here, as with a conventional power harrow, the rotors are connected to by a series of gears. In this way, each electric motor is electronically controlled to provide the power and torque required by each rotor, says Alpego, with this independent from the load on the gear. As the system is developed, this may allow automatic real-time adaptation to changing soil conditions resulting in fuel and wearing metal savings, it claims.

In terms of non-powered cultivation equipment, Kuhn was a medal winner with its ISOBUS-based Smart Soil Technology for its Optimizer 6.0/7.5m cultivators, which allows all cultivator settings to be controlled from the tractor's ISOBUS screen.

Functions include Steady Control Ultimate which provides automatic adjustment of the cultivator's contour-following to ensure an even working depth across its full width, using pressure and position sensors to determine the optimum pressure in the hydraulic rams.

Kuhn suggests the system's major innovation is its Auto-Line function, which continuously corrects the cultivator's alignment to address the effects of slopes, changes in soil type or alterations in working depth, and keep it tracking true behind the tractor.

To do this, a sensor mounted on a coulter in the centre of the implement constantly measures implement position in relation to forward movement. The data is sent back by a sensor mounted on it then used to correct the machine's alignment via the gauge wheels and press/roller to balance the lateral forces on the front and rear discs. To ensure even stubble cultivation, the system allows a maximum depth difference of 3cm between the front and rear discs.

Section control enables automatic headland raising and lowering while a headland turning mode can be enabled to take load either on the carriage via the transport wheels or on the roller to reduce soil compaction; there's also an automatic folding sequence. A 'geo' function can be used to modulate working depths using a map entered beforehand, or to record the working depths achieved.

Baling and forage equipment

A 'special mention' in the EIMA Innovations Awards was granted to New Holland for the CropSpeed system developed for its latest FR Forage Cruiser self-propelled forage harvesters. Designed to help operators exploit the full capacity potential of the machines without risking blockage, the system is based around a spout-mounted



The CropSpeed system on New Holland's latest FR Forage Cruiser self-propelled forage harvesters uses a spout-mounted radar to monitor crop flow and reduce blockage risk.

radar sensor that monitors the crop flow leaving the machine, detecting any change in its rate in relation to forward speed.

If the rate should drop, the operator receives a warning to slow the forward speed. New Holland says this helps reduce blockage likelihood and makes dense blockages far less likely to occur, while also helping less-experienced operators drive more confidently to maximise output.

Kuhn was a Technical Innovation award winner with the Baler Automation systems designed into its VB7100 round balers, which combine the benefits of Tractor Implement Management (TIM), Task Controller (TC-BAS, TC-GEO and TC-SC) and Auxiliary Control (AUX-N). The VB 7100 series are said to be the world's first balers with Section Control and a GPS-controlled automated pick-up that's automatically raised when there's no crop present to bale.

The system automates mapping, recording and documentation of data including bale numbers per field/job, customer (for contractors) and field information, yield and bale weight. It also incorporates Tractor Implement Management (TIM), allowing the baler to control the tractor and automate the entire baling cycle including automatically

stopping the tractor when the bale chamber is full, and automatic bale ejection once netwrapping is complete.

Other automated functions include tractor stopping in the event of a blockage along with full automatic unblocking, automatic knife cleaning and automated lifting of the pick-up when reversing.

Spraying technology

Aimed primarily at liquid fertiliser applications, the medal-winning Orion Pro from Arag is an integrated system for regulating and measuring the amount of product applied. Using an electromagnetic flowmeter, a solenoid valve and control unit, the system measures rather than calculates flowrate.

Primary advantages beyond more accurate and targeted application, and hence lower costs through greater efficiencies, include reduced environmental impact for the precise distribution of liquid fertiliser.

Immediate operator notification via the sprayer operating terminal of clogged or defective nozzles is the benefit of Altek's nozzle flow monitor, which continuously monitors individual nozzle flow rates while spraying.



Kuhn's Baler Automation systems designed into its VB7100 round balers combine the benefits of Tractor Implement Management, Task Controller and Auxiliary Control.

Granted an Innovation Award scheme 'mention', it combines a measuring device and sensor unit integrated into the boom clamps of the Altek's Multi-eSpray and Multi-cSpray nozzle bodies. Flow monitoring is possible through all nozzle positions of multi-nozzle bodies, and a warning signal is given when application rate deviates from the expected flow, with the system capable of monitoring rates of up to 11 l/min through all nozzle positions. ■

Now here's an idea

A spreader that's so advanced it maximises every £ you spend on fertiliser



IDEAS FOR
OUR FUTURE

www.amazone.co.uk



Contact your local dealer
or phone us on 01302 755 725

Although we take the exceptional output of the ZA-TS range of fertiliser spreaders for granted, it's the accuracy that counts more and the unique AutoTS gives you at least 17% more yield around the hedge side than any other boundary spreading systems available – but don't take our word for it; take a look at the independent **Innovation Farm** trials results.

All this means that you maximise your cropped area to the full and you get more produce in the barn!

Amazone - future ideas that work for you.



The AutoTS border spreading system delivers proven precision with up to 17% additional yield around the field boundary.



AMAZONE