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EDITORIAL



DRIVING THE FUTURE

Dear Reader

There is a revolution taking place in agriculture. Called Farming 4.0, it promises to make the job of farming more efficient, more comfortable and more profitable. At its heart are new technologies in sensing, data analysis, location and robotics which are combining as never before.

As our work in automation, drones and maintenance shows in this issue, we at Case IH are determined to be at the forefront of this revolution, bringing to your farm practical and easy-to-use ways to improve your business, your lifestyle and the environment.

Over the page we set out our vision for this future, and then what we and others are already doing. But the Case IH story doesn't stop there, and we are also bringing you interesting stories about our customers and our activities behind the scenes.

I hope you enjoy reading this issue of Farm Forum.

Thierry Panadero

Vice President & General Manager EMEA



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PREPARING TODAY FOR THE AGRICULTURE OF TOMORROW

Thierry Panadero, Vice President and General Manager Case IH EMEA

OUR VISION OF THE FUTURE OF FARMING

Farming is at the dawn of a new era – that of digital agriculture. As 'Farming 4.0' gathers pace, Case IH is committed to helping customers extract the full potential from their businesses by maximising access to digital technology.

By 2050, it's anticipated the world's population will reach nine billion. Meanwhile, the area of global land on which food can be produced continues to shrink, as development, environmental problems and other issues make farming impossible or difficult. Agriculture therefore needs to produce more food from less land. And that underlines the need to make every input which goes into growing and producing food more productive – not just the seeds planted and livestock raised, but the equipment and technology used to look after them.

"When we introduced our first precision farming technology develop-ments two decades ago, Case IH led the way in this sector," notes Thierry Panadero, Vice President and General Manager Case IH EMEA. "As agriculture enters Farming 4.0, the fourth phase of a progression that began with the development of mechanisation, before continuing through the green revolution and into the precision farming era, that long experience is serving us and our customers well."

New digital products will build on progress in precision developments

New digital products and concepts from Case IH will build on progress in precision developments and bring digital farming fully into play to raise profitability. It's set to do that by optimising not just machine performance, but the performance of whole farm systems.

THE MOVE INTO DIGITAL FARMING

The ability to gather operating and field data when machines are at work, and then analyse it to aid future decision-making, was and remains the hallmark of precision agriculture. But it's how this data is used, and the joined-up, connected method in which it's done. that makes the move from this into digital agriculture so different - and so exciting. Add to this the ability to automate monotonous tasks to make them less labour-dependent and more efficient and precise, plus the economic and environmental benefits of more targeted and timely input use, and it's clear digital farming technologies offer great promise.

Through our Advanced Farming System (AFS) and its associated suite of precision farming technologies, such as AccuGuide auto-steering and AccuTurn automated headland turning, Case IH already has available today many of the tools to bring digital farming to life. And from vehicle guidance to remote monitoring telemetry to ISOBUS tractor/ implement control, the groundwork for tomorrow's digital technologies has already been laid.

"With our Autonomous Concept Vehicle (ACV) development, we have shown, when they are combined, what these technologies can do to aid the digital revolution," points out Mr Panadero.

FULFILLING THE PROMISE

Not only can digital technology help boost productivity itself, but it can also help manage variables which are much less easy to influence, such as labour and weather. Farming 4.0 is likely to see much greater use made of real-time data concerning prevalent conditions, for example, with the prospect that autonomous vehicles will be able to decide for themselves when soil conditions are right for working, or too wet to avoid damage. And the potential that autonomous vehicles offer to reduce the need for long, tiring hours in the seat, and free up more time for first-hand observation and management of crop and livestock conditions, could help to make farming an even more rewarding business, as well as addressing concerns over difficulties finding labour.



The groundwork for tomorrow's digital technologies has already been laid.

To fulfil all this promise, Case IH, and the wider agricultural industry, are set to see some significant change.

"We see our future not just as a manufacturer, retailer and support service for farm machines," Mr Panadero explains. "Digital farming and the age of Farming 4.0 will see us build on that to integrate what those machines do into each customer's whole farm system. We don't just want to help customers get the most from their Case IH equipment, but also from their soil, their crops and their livestock, helping them to farm more profitably, more productively and more sustainably."

In this issue of Farm Forum, you'll be able to read more about a few of the things we are already doing to help lead the industry into a new era, by developing and introducing equipment that is technologically advanced yet retains the Case IH hallmark of simple and intuitive operation.

Helping you to farm more profitably, more productively and more sustainably

THE VISION IN ACTION

Case IH shares its digital farming experience at EU EURACTIV conference.

recent pan-European workshop on the benefits of digitising European farming equipment allowed attendees to hear about Case IH progress in this process, with speakers including Thierry Panadero, Case IH Vice President for Europe, Africa and Middle East.

"While precision farming has enabled farmers to more easily gather data, digital farming is now allowing them to develop the application of that data and make their businesses, and the whole industry of farming and food production, more targeted and more efficient," Mr Panadero pointed out at the conference organised by EURACTIV, an independent pan-European media network which focuses on EU policy.

"Our Advanced Farming System technologies and systems such as AccuTurn are already playing a part in this." The workshop sought to define clearly 'Farming 4.0' – the description for the digital age now underway, and which has followed the eras of mechanisation, the green revolution and precision farming. Discussions centred on overcoming barriers of adoption, and machinery manufacturers' role in the digitalisation of agriculture.

"By working together as an industry, we can help farmers overcome the obstacles to digitising their businesses, be part of the EU's quest to support agricultural innovation, bring analogue machinery into the digital age and ensure that the skills of those involved in agriculture are put to the most productive use," said Mr Panadero.

"Digital farming is not just about the machinery used for farming – it's also about the people involved in it."

THE POWER OF DRONE DATA

t PotatoEurope 2017, in the Netherlands, Case IH showed the PrecisionHawk drone, distributed in Europe exclusively through our dealer network. Among other things, the drone's sensors can determine plant stress/activity and plant quantity/ mass, providing a site-specific view of the crop's state of development, and allowing fertiliser/spray applications to be adapted accordingly.

Drone data can help form ready-touse application maps using the AFS mapping programme. Provided the machine behind the tractor is equipped for variable application, it's then a simple matter of transfer to the AFS 700 display via a USB stick before spreading, spraying or sowing.

For more information watch this video https://youtu.be/BswJ1lwAAcE



WORKFORCE TO BENEFIT AS AUTONOMY IS PUT INTO PRACTICE

Case IH has proven its commitment to developing autonomous equipment that will help boost farming efficiencies and enhance the lives of farm staff, by defining the categories of autonomy and announcing a pilot program introducing the technology onto farms.

Since revealing the Autonomous Concept Vehicle (ACV) to the world at global agricultural exhibitions during 2016 and 2017, Case IH engineers have been working on incorporating its technologies into today's machines. That's being done not only to help farmers gain from the efficiencies they can bring to agriculture, but also to relieve staff from long hours and repetitive tasks, answer the challenge of finding skilled labour, and free up more time for detailed field management by existing labour.

Discussions with customers around the world have helped to define exactly how autonomous technology can be implemented for maximum benefit in their operations. Through an Autonomy and Automation Program, this has led to pilot schemes developing autonomous technology in real-life scenarios.

"While the unveiling of the autonomous concept vehicle in 2016 showed the world what's possible, it was just that — a concept," says Robert Zemenchik, Case IH AFS global product manager.

"The ACV provided a platform for us to start discussions with farmers and the industry about the technology needed for high-efficiency farming operations today and in the future. We're ready to show how automation and autonomy applies across agriculture and how it can advance the precision farming solutions our customers are currently using on their farms."

MAKING THE MOST OF PEOPLE

Autonomous technology is not about replacing labour, but about allowing best use to be made of its talents when managing crops and livestock. It provides the opportunity to redeploy staff into value-added and more challenging and rewarding tasks such as analysis, planning and close-up attention to husbandry, reconnecting them with the farm's fields and animals.

In addition, autonomous technology can support tasks such as crop establishment which need to be completed during critical time windows, when limited skilled labour is available. Autonomous machines have the potential to work 24 hour days where possible or required, with no variation in productivity. As result they are able complete more work in less time, with full integration of precision farming benefits such as variable input use. Case IH began providing farmers with precision and automation technology in the 1990s, with AFS AccuGuide auto-guidance, and it continues today

with more advanced solutions, such as AFS AccuTurn automated headland turning technology.

With the ACV, owners and operators have the possibility to continuously monitor the tractor whenever they need and from wherever they are, interacting as required for enhanced operational efficiency. For example, should changes in operating parameters – such as an alteration to seed rate – become essential, or forecasts suggest the weather may change, autonomous technology allows a machine's operating pattern to be modified automatically without requiring direct human intervention.

YIELDS AND CROP QUALITY

This leads to potential financial gains including higher productivity and efficiency, which can lead to further rewards such as more timely and consistent field operations, with consequent benefits for both yields and crop quality. Direct cost savings will vary and are contingent on specific operations, says Mr Zemenchik, but he gives examples such as the potential for greater equipment utilisation, improved efficiency from accurate in-field path planning, and improved labour productivity as the physical burden on staff is reduced.



Accuracy and attention to detail in business management is becoming ever more important in modern agriculture, and data management and analysis is essential for successful farming businesses. With autonomous technology, Case IH is striving to support those needs, reducing the need for hours in the cab, freeing up time for business management - where AFS precision farming technologies are already wellestablished - and reducing the workload burden on farmers and farm staff Just as with the very first agricultural machines, autonomous technology is simply another step on the road to making agricultural work more about brain power than body power - and more pleasurable and rewarding as a result.

FIVE CATEGORIES OF AUTOMATION FOR AGRICULTURE

Customer-driven product design research has shown Case IH that current and future technology needs fall into five categories of automation for agricultural field applications:

- Guidance for manned vehicles
- Coordination and optimisation for manned vehicles
- Operator-assisted automation (i.e. with manned back-up)
- Supervised autonomy of unmanned vehicles
- Full autonomy of unmanned vehicles

"It's exciting to explore the efficiencies and labour benefits automation, and eventually full autonomy, can bring to each farming operation,"

says Mr Zemenchik.

"The logic behind the categories is to provide a vision of what's possible. They are not linear, and a given fleet may even fit into more than one category at a time. Today, many of our customers are already operating in the guidance and/ or operator-assisted automation categories."



For more information on our pilot project on autonomy, watch this video https://www.youtube.com/ watch?v=TXPEJfoSwOI&t=2s



RESEARCHING AND PILOTING AUTONOMY IN THE FIELD

In 2018, Case IH is collaborating with Bolthouse Farms in North America on an autonomous tractor pilot programme, which aims to understand how new autonomous technology can be used and how it meets real-world, on-farm requirements.

he only way to validate on-farm uses for autonomous technology is, quite literally, with field pilots where farmers use it on their own farm, integrate it into their own fleet and conduct their everyday activities," says Mr Zemenchik.

As one of the largest carrot producers in North America, Bolthouse Farms is a year-round operation that farms extensive acreage across four US states and Canada. The company's focus on and openness to advanced technology, coupled with its desire to improve productivity, makes it ideal for the pilot for the Case IH Autonomy and Automation Program.

The pilot programme will focus first on primary tillage and deep tillage — both highly repetitive tasks that Bolthouse Farms conducts year-round. A small fleet of autonomous Steiger Quadtrac tractors working with Case IH True-Tandem disc harrows or Ecolo-Tiger disc rippers will help evaluate autonomous machine control in a variety of tillage applications, soil types, meteorological conditions and sensing and perception activities.

Better use of labour, integration into current machinery fleets, plus the flexibility to work unmanned around the clock with real time data monitoring, and, in the future, the ability to respond automatically to weather events, were the potential benefits outlined at the 2016 unveiling of the ACV. "One of the primary goals of the Bolthouse project is to receive agronomic and operator feedback on the use of autonomous technology in real-world farm conditions, so Case IH can further develop and refine our technological control and machine optimisation systems,"

explains Robert Zemenchik, Case IH AFS global product manager.

"Additionally, we will be able to learn from Bolthouse Farms what uses they envision for automation and autonomy that we might not have already thought of."

Brian Grant, Bolthouse Farms' vice president of agriculture, views the autonomous tractor pilot programme as an opportunity to find new ways to make the company's operation more efficient and deliver high-quality food for the growing population.

"We're just now starting to play the 'what if?' game - where we're asking ourselves and the Case IH engineers the questions about what autonomous tractors are capable of," says Mr Grant.

"And the answers to these questions are not 'if.' but 'when'.'"

Case IH will provide periodic updates throughout the course of the pilot programme.



COLLABORATION BRINGS FORTH THE FUTURE OF SERVICE

Case IH has joined forces with Microsoft to bring the benefits of the software's giant's futuristic HoloLens technology to bear on farm equipment training, servicing and repair.

magine being able to connect instantly with an expert for guidance or help solve a machine issue. Imagine that person can see exactly what you can see. And imagine they can show you exactly what to do – through the use of holograms. Case IH and Microsoft are bringing this exact technology to farm equipment dealers and owners – and sooner than you may think.

With its innovative use of holograms, its ability to allow users who may be far apart to see the same view, and its potential to enhance areas from service school training to in-field remedial work, mixed reality technology has a great deal to offer to the agricultural engineering. A partnership between Case IH and Microsoft means the latter's HoloLens headset development is now being developed for use in the sector, and while it may seem futuristic, widespread adoption could be just around the corner.

Weighing around 579 grams and offering a field of vision of around 30° by 17.5°, Microsoft HoloLens goes beyond virtual and augmented reality technology to blend the two, using 'mixed reality' to display holograms in a map of the environment in the wearer's field of vision, allowing connected users both in-situ and remotely-located to place holograms in real world circumstances, and move them as desired or needed according to the environment around the headset. HoloLens headsets allow hands-free real-time holographic interactions and dialogue, to help deliver accurate, qualified diagnostics.

GET AN EXPERT - VIRTUALLY

At Agritechnica, Case IH underlined its commitment to 'Industry 4.0' – the current chapter in the industry development of automation and data exchange in manufacturing – by announcing a collaboration with Microsoft on an advanced project which makes use of mixed reality to bring the best Case IH maintenance experts instantly to any customer or dealer workshop across Europe, Middle East and Africa. In Austria, Case IH is now testing the potential for HoloLens headsets to aid remote repair and maintenance assistance, and the training of engineers.

Microsoft

HoloLens

The system offers a number of key advantages over other methods of remote assistance. Firstly, users can access Case IH experts handsfree as they work on a machine, with supporting information sent in seconds to the screen of the wearer's headset for faster, more efficient and more accurate intervention. The remotelylocated service expert can consult all relevant technical sources, and show them to the technician via the headset screen. They can also talk direct in realtime via Skype, minimising wasted time and machine downtime. And secondly, training becomes much easier - an



instructor can be remotely connected to multiple people wearing headsets, and give a live class without having to travel.

COMPUTING, INFRA-RED, SOUND

The HoloLens headset contains a miniature computer using adapted Windows 10 software and incorporating three processors: the main Central Processing Unit, a Graphics Processing Unit and a Holographic Processing Unit, which manages the spatial positioning of holograms, recognising the world around the user. Infrared cameras support the device in further understanding the environment and in low-light conditions, while spatial sound speakers deliver a 360° sound experience relative to the real-world positioning of the holograms. Voice command is also available through Microsoft's digital assistant, Cortana.

With the HoloLens project, Case IH and Microsoft are working closely to develop the technologies of the future and to set up a new model for remote maintenance, says Peter Friis, Case IH Commercial Marketing Director for Europe, Middle East and Africa.

> For more about Hololens, watch this video https://youtu.be/upnsFJjNUZ0



Q&A: MICROSOFT'S FABIO MOIOLI MIXED REALITY FROM MICROSOFT

FF: Could you provide a definition of mixed reality?

FM: Mixed reality essentially combines virtual reality, where what the user sees is separated from the real world – a video game, for example - with augmented reality, which utilises holograms projected onto the screen of the glasses worn by the user. These incorporate infra-red cameras and sensors to recognise the general environment around the wearer, and the object - such as a tractor, in the case of a service engineer or trainer in that environment.

FF: Have the value and benefits the technology in HoloLens been proven in other industries?

FM: Mixed reality is a big technology development within Microsoft, and we have customers using successfully it in a huge array of different areas of industry. They range from engineering to medical training of students, and from architectural design to use as a selling aid.

FF: How does the system work in practice?

FM: The HoloLens devices are worn on the head, so are hands-free in operation. Wireless connectivity allows communication between other parties, who are able to see the same view and the same holograms as the first wearer. That can be of a machine, an element of a machine, or any other useful aid to training or servicing. The trainer, or perhaps a senior service engineer, who may be nearby or can be far away, can see the same hologram, and can use it to indicate parts of the machine, and perhaps, for example, where to move them to change settings or make a repair or a service action.

It's also possible to command holograms via voice, using Cortana technology, or even to integrate a translator via Skype, should the service



Fabio Moioli, Director of Consulting & Services, Microsoft

engineer offering advice be based in another country. This is technology that could be used by engineers who may be thousands of miles apart, but are now able to help fix machines with speed and with a lower risk of mistakes.

FF: What are the benefits for dealerships?

This technology has huge potential. Firstly, it offers the scope to reduce training bills through remotely-taught training. It can also mean lower service costs, by allowing remote servicing.

The same is true for sales, as not only can engineers be talked through problems or service tips via the system, but tours of a machine's selling points can be given by dealer staff. That also benefits the customer, of course, with the possibility to 'virtually' be shown around a machine he or she may be considering purchasing, meaning no need for travel.

FF: How soon can farmers and dealers expect to see this technology at work?

FM: HoloLens is now in the testing phase, which is expected to last a year, and is already delivering remarkable outcomes in efficiency and effectiveness. Subsequently, we expect to progress our digital transformation path by developing further applications of this and other new technologies.

CEMA POSITION SETS OUT SMART FARM THINKING

CEMA, the European agricultural machinery industry association, has published a position paper outlining what it believes is required to help all EU farms access Smart Farm Technology (SFT) and progress into the Farming 4.0 era – and how the next Common Agricultural Policy CAP could help.

CEMA



European Agricultural Machinery

he paper's focus is on ways access for all European farms to smart farming technologies can be improved, and it sets out to answer three critical questions raised by Phil Hogan, the EU agriculture commissioner, in the context of the upcoming CAP reform:

- What measures could make SFT accessible to the average (50-100ha) European farmer?
- How can SFT boost sustainability and environmental protection in EU agriculture?
- What kind of SFT should be promoted by the CAP?

The documents sets the scene by outlining how smallholder agriculture still dominates the European rural economy, with 86% of EU farms being sized below 20ha, and 53% of them below 100ha. The paper makes the case that advanced agricultural machinery solutions can help farm holdings regardless of their size - to operate in a profitable, competitive and sustainable manner, with precision agriculture technologies in particular having significant potential in this regard. But it acknowledges that larger farms tend to have higher income and investment capacity that makes such technologies more easily accessible to them.

The bottleneck for the uptake of precision technologies lies in the farm segment below 100ha and with incomes of below €25,000, notes the report. This means that less than 25% of EU farmers have access to precision agriculture technologies.

"Support from the EU's CAP after 2020 to stimulate the wider dissemination of precision agriculture technologies will be fundamental to reduce the negative impact of the scale factor,"

notes Gilles Dryancour, the author of the report and Chairman of the CEMA's Public Policy Group.

EMPOWERING EU FARMERS TO COMPETE AT GLOBAL LEVEL

"If no such supportive action to improve the uptake of precision agriculture technologies for farms below 100ha - representing 97% of EU farms - were to be taken, it could become increasingly difficult for these farms to compete with farms in the USA, Canada and New Zealand or even with larger EU farms, all of which massively invest in PA technologies. Not only could smaller EU farms thus lose their competitiveness, they might struggle to comply with greening targets and EU environmental policy goals. "Precision agriculture technologies are one of the most efficient tools to improve sustainability and productivity in farming, to produce more with less and enhance food security and safety. Practically, they can help manage natural variations like weather conditions, pests, insect and fungal infestation.

SUPPORTIVE POLICIES ENCOURAGING INNOVATION AND TECHNOLOGY UPTAKE

"Some Precision Agriculture diagnostic technologies are already highly affordable, and thus available to smaller farms thanks to smart phones or tablets and their applications. Other fundamental Precision Agriculture technologies, such as guidance, variable rate and precision livestock farming technologies are less available to smaller farms and should therefore be promoted by the CAP. After 2020, a sustainable productivity bonus could be adapted to farm size."

Those interested in reading the CEMA position paper can find it at www.cema-agri.org.

SURVEY REVEALS FARMERS' HOPES FOR **FARMING TECH**

As agriculture enters the 'Farming 4.0' era, Case IH, as part as CEMA the European Agricultural Machinery Industry Association, is taking in active role in Smart-AKIS

European funded project, it is designed to foster adoption and progression of 'smart farming technologies' (SFT) in EU Agriculture, involving farmers, the agricultural machinery industry, academia, research centres, agricultural engineering and public bodies. A survey among farmers outlined their hopes and concerns.

The survey of 271 farmers from France, Germany, Greece, Serbia, Spain, the Netherlands and the UK revealed, among other findings, that many saw development of robots, and of real-time diagnostics, as key SFT they believe will bring most benefit to their businesses.



GPS, auto-steering, drones, mapping, and aerial imagery were considered the most useful SFT in arable crops, whereas agricultural apps, weather stations and soil moisture sensors with automatic data upload were more highly valued by vineyard/orchard

Prioritisation of Smart Farming technologies

farmers. There were doubts about the ability of SFT to help farmers overcome farming challenges, but interviewees suggested they were monitoring technical developments closely, with almost 70% having recently sought out information about SFT.

Among the advances a majority said they hoped to see were development of robots for monotonous work such as weeding, real-time diagnostics via drones, satellite imagery, smartphone sensors, and data for information and decision support.

Lack of access to SFT, especially due to cost, was the most frequently mentioned Compatibility barrier between devices was a major concern, while reducing device complexity, improving data between transfer devices, and transforming data collected by a device into useable and accessible information, were seen as ways to overcome these barriers. To encourage the promotion and dissemination of technology in EU Farming, the project has developed an online Smart Farming Platform collecting more than 1,200 SFTs available from all over Europe. Find out more at www.smart-akis.com

broken down into production systems and countries 120 100 50-Number of farmers 6 0 00 7 samet jo j mber 20-20-10 Arable Open field Orchards vegetable Agricultural apps GPS, controlled traffic, VRT etc. Weather, soil moisture sensors with automatic data upload Robots, autonomous machines Drones, mapping, aerial imagery





THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON 2020 RESEARCH AND INNOVATION PROGRAMME UNDER GRANT AGREEMENT N. 69/294

DID YOU KNOW...?

CANE

While beet is the primary sugar crop in maritime countries, in tropical climates sugar cane predominates, and around 1.686m tonnes of sugar cane is produced globally each year.

FAO statistics indicate the globe's largest cane producers are Brazil, India and China, but Ethiopia produces the highest yields, at 126.9t/ha - almost double that of the USA at 69.9t/ha. Producing 720 million tonnes annually, Brazil grows over 40% of the world's crop and, when combined with the output of India and China, these three countries grow two-thirds of the world's sugar cane crop from an area of nearly 15 million ha. Case IH's two-model range of Austoft

sugar cane harvesters manufactured is at our facility in Piracicaba, Brazil.

COTTON

Minnesota,

USA.

The world's most widely-worn natural fibre, cotton is believed to have first been cultivated 8,000 years ago in Asia. It wasn't until Arab merchants brought cotton cloth to Europe around 800 AD that its use became widespread, and another 900 years before cotton spinning was mechanised, particularly through machines developed in England and the US. The first mechanical harvesters were developed in the following century. Today, FAO figures show the world's largest producers are India (5.88m tonnes), China (4.95m tonnes) and the US (3.74m tonnes), followed by Pakistan, Brazil, Australia, Uzbekistan, Turkey, Turkmenistan and Burkina Faso. Case IH manufactures a threemodel range of Cotton Express cotton harvesters at our factory in Benson,

Shutterstock

THE NEW PUMA X. CUTTING COSTS WITHOUT CUTTING CORNERS

Case IH now offers a new lower-spec, lower-priced line of six-cylinder 140-165hp Puma tractors, which are simpler in specification, but built to the same high standards as others from the St Valentin production line.

ntroduced at Agritechnica 2017, the new Puma X specification is available on Puma 140, 150 and 165 models, and offers an alternative for customers seeking both high quality and simple features in the 140-165hp (rated) power bracket. The new tractors, which feature the Case IH ActiveDrive 6 three-range, six-step semi-powershift transmission, complement the higher-specification Puma Multicontroller tractors with full powershift, and the Puma CVX models with continuously-variable transmission.

"While Puma has always been known as a premium tractor, we recognise that not every farmer and contractor requires the level of sophistication that others might," says Hans-Werner Eder, Puma product marketing manager.

"They also may be seeking a lower cost tractor but don't want to compromise on power by going to a smaller machine, or on quality by switching to another make. For this reason, we created the Puma X."

SPECIFICATION APPEAL

Maximum respective power outputs (without/with Engine Power Management) are 140/175, 150/190 and 165/210hp. Designed to appeal to potential buyers such as livestock farmers and smaller arable businesses, many of the key specification changes occur in the cab, with a basic but fully-functional operator interface incorporating digital information display and simpler right-hand armrest controls. Seat options range from a basic air-suspended seat to Dual Motion seat with dynamic damping. A low-profile roof aids access into buildings, while a high roof option features up to 14 LED worklights. An opening right-hand door in addition to that on the left ensures unimpeded access.

The mechanical remote valves – two, three or four can be specified – are non-configurable, although configuration is optional, as are electrohydraulic mid-mount valves for front linkage or loader operation. A variable displacement piston pump provides instant high flow on demand and no flow when there is no demand, for low power consumption. Maximum flow is 113 l/min, and maximum lift capacity from the electronically-controlled rear linkage is 8,257kg. Standard PTO speeds are 540 and 1,000rpm, with optional ECO speeds.

While they have a simpler specification, a range of optional equipment means Puma X tractors can be equipped with additional features as required, including guidance, front axle and cab suspension and a wide range of other extras. In short, you can add exactly the options you require to make your Puma X your tractor.



NEW FARMALL A BLENDS STYLE WITH SUBSTANCE

Farmall A tractors get a fresh new look for the 2018 model year, but the upgrades are about more than just styling.

esigned to provide cost-effective solutions for small farm, livestock and loader tasks requiring simplicity and robustness, the three new Farmall A tractors - 55A (55hp), 65A (65hp) and 75A (75hp) – are all powered by the same 2.9-litre turbocharged engines, characterised by high power density, low fuel consumption, and exceptional real-world performance. They incorporate common rail fuelling for excellent response and economy. Productivity is boosted by a constant power band from 1,900-2,300rpm, and maximum torque at a low 1,400rpm. A long 600hr oil change interval minimises service time.

Putting power to the ground is the Case IH ManualDrive 8 x 8 mechanical transmission. This features four synchronised gears in each of two ranges, plus a shuttle facility to provide eight forward and eight reverse ratios, with equal speeds in each direction. Top speed on 2wd models is 30kph.

Tractors specified with 4wd come with the same 12F/12R ManualDrive gearbox but with a mechanical shuttle and a 40kph top speed, but can be specified with a 20F/20R creeper system that adds two creeper ranges down to 100 metres/ hr. A 12F/12R powershuttle for clutchless forward/reverse operation is optional.

PTO ALTERNATIVES

The hydraulic system provides up to 47 litres/min of oil flow, to ensure a high lifting force at the rear linkage and a fast and effective response from implements. A 540rpm PTO is standard, while implements requiring full PTO speed but not necessarily full power can be operated more fuel-efficiently via the 540/540E rpm option. In economy mode, this allows them to be operated at a lower engine speed.

Mechanical PTO linkage and controls are simple to understand and easy to operate, like others in the comprehensively-equipped cab. A fourpost frame provides ease of access, excellent visibility to the sides, good sight lines to the extremities of implements, and aids safe manoeuvring around buildings. And inside, it's clear this is a Case IH tractor, with a comfortable environment to ease long working hours, right-at-hand controls, an effective ventilation system and easy-to-read instrumentation.









he new Case IH Maxxum, in its Multicontroller guise with the new ActiveDrive 8 semi-powershift transmission, was awarded the prestigious Machine of the Year title for 2018, in the Mid-Class category, at November's Agritechnica exhibition.

It has also been recognised as having the lowest fuel consumption of all four-cylinder tractors tested by Germany's renowned DLG testing station - almost 9.5 per cent lower than its nearest competitor.





Around 100 head of cattle are sold from the farm each year, with bulls slaughtered when they have reached at least 600kg liveweight, and heifers at around 400kg.

"GRASS IS GREEN, SKY IS BLUE...

...AND TRACTORS ARE MEANT TO BE RED"



Mikko Leikola and his family are known around the world for their breeding of pedigree Hereford beef cattle.

Ask Finnish farmer Mikko Leikola why he and his family have stayed loyal to IH and Case IH tractors for 80 years, and this headline is his tonguein-cheek remark. But when he expands on his explanation, it's clear there is more to his dedication. oyalty is something that has to be earned – and dependability, reliability, efficiency and value are characteristics which tend to inspire owners to be loyal to their machinery.

Since 1938, only tractors from Case IH and its forebears have looked after the land and livestock at the Leikola family's Millola Farm, known around the world for its pedigree Hereford herd. Located between Finland's capital, Helsinki, and the city of Turku, the business has an eight-decade loyalty to red tractors, and has seen three generations drive IH and Case IH machines.

Largely grass, the farm is also home to 95ha of arable cropping for which, in recent years, the main tasks have been contracted out. There are 95ha of spruce, birch and pine forest, annually producing around 10,000 cubic metres of timber, some processed through the farm's own sawmill.

HEREFORD BREED FAME

The core focus is on the Hereford enterprise, and the Leikola family is

known internationally for its Hereford breeding, being one of the hosts of the World Hereford Congress in 2008. Around 200 head of cattle are farmed, and their summer grazing includes 70ha of natural protected wetland around Lake Savijärvi. Half of the herd of 100 suckler cows are pure-bred Polled Herefords, and there are between five and seven breeding bulls on the farm at any one time. Around 100 head of cattle are sold from the farm each year, with bulls slaughtered when they have reached at least 600kg liveweight, usually at somewhere between 15 and 20 months, and heifers at around 400kg, which they reach at 12-14 months.

Despite Finland's northerly position, the cattle thrive outside all year round, and don't even required piped water, thanks to a natural spring that doesn't freeze. However, due to the short summers, supplementary feeding – mostly in the form of round bale silage – is needed for eight months of the year, when there is minimal grass growth. Forage production and feeding is most



of the workload for the farm's tractor fleet, along with some contract work on neighbouring farms.

The first International Harvester tractor at Millola, an F-20, arrived back in 1938, when Mikko Leikola's grandfather first came to the farm. It began an unbroken series of IH and Case IH models, with a total of 17 IH and Case IH tractors now having served the Leikola family. Mikko believes that if something fits his farm, and works well in its surroundings, then there is no reason for change that would only upset a successful system. Just as Hereford cattle have been found to thrive in the often-tough climate, the harsh winters and time-pressured short summers haven't proved a challenge for the business's tractors.

SUITING THE ENVIRONMENT

"Whether they were built recently or throughout the decades we have owned them, IH and Case IH tractors have always seemed to suit our work and our environment well," says Mikko. "Alongside some older models, our fleet now ranges from Magnum to Puma tractors. But they all seem to share the same qualities, being reliable and efficient."

Topping the fleet is a 213hp Case IH Magnum 7230, from the second generation of the first Magnum series. But this one is a little different. While Magnums sold in Europe have always been fitted with 4wd, Mikko decided some years ago that he would like to own something more unusual and American for the toughest arable tasks on the farm, so in 2008 he imported a 1994 2wd 7230 from the US. With the arable area now contracted out, it now has a smaller workload, but stays as the farm heavyweight.

"After 80 years since our first IH Farmall, it was good to have an American-built Case IH tractor back at Millola," Mikko smiles.

STILL AT WORK SINCE 1965

The majority of the workload is overseen by the farm's main mid-range tractor, a loader-equipped 2015 Case IH Puma 160 CVX. During the summer the Puma's continuously-variable transmission is put to good use paired with a Case IH RB 464 round baler to produce silage, hay and straw bales; in the winter its main task is transporting them for feeding. The rest of the fleet, including Case IH 956XL and IH 955, 824 and B-414 tractors, helps as required on jobs such as feeding and muck spreading. The B-414 is now the longestserving tractor on the farm, having arrived new in 1965.

"The reason we have stayed with IH and Case IH for so long is that these are machines we can depend on," says Mikko. "While times have changed, and technology has moved on, they still have the same qualities. The sky is blue, and grass is green, and I think tractors are meant to be red."



Shod on wide flotation tyres, one of the main summer jobs for the Case IH Magnum 7230 is bringing in straw bales.



Millola's current main tractor is a loader-equipped Case IH Puma 160 CVX, which spends its winters moving forage to feed the Hereford herd.

FARM FACTS

- Millola Farm, southern Finland
- Mikko Leikola and family
- Land area: 250ha
- Arable and grass area: 95ha
- Natural protected wetland: 40ha
- Forested area: 95ha
- Hereford cattle: 200 head

TRACTORS:

- Case IH Magnum 7230 2wd
- Case IH Puma 160 CVX 4wd with loader
- Case IH 956XL 4wd
- IH 955 2wd
- IH 824 2wd
- IH B-414 2wd with loader

ON FARM

Purchased mainly to apply digestate from the anaerobic digester (seen in the background), the Aston's Magnum Rowtrac 340 CVX has proved so versatile that they have nicknamed it the 'Swiss Army Knife'. Here it is ploughing in a cover crop of oats and mustard prior to drilling maize, with a 2.8m flail mower on the front linkage to first mulch the cover crop.





FAMILY FARM POWERS GREEN ELECTRICITY

Two enterprising brothers in central England use the crops on their 480ha farm entirely to make electricity, through a 3.5mW anaerobic digester.

he Aston family has always had an eye for business. Tony Aston started with 63 acres at Brinklow near Coventry in 1963 and subsequently developed other businesses which helped to pay for the farm now managed by his sons, Dale and Mark.

After his death the family considered using part of the farm to produce biomass for a proposed anaerobic digestion (AD) plant. In 2014, they gained planning permission for a 500m3 gas-togrid generator facility, and construction began early the following year.

Fed entirely by crops grown on the farm, the plant comprises two 5,500-tonne digesters and one 6,500-tonne gas-tight storage tank, a pasteuriser, separator and belt dryer to reduce the moisture content of the remaining digestate. This produces 1,200m3/hr of raw biogas (54% methane, 46% CO2), of which 200m3/hr is used to power a 500kW generator that provides electricity and heat to operate the plant and offices. Of the remaining 1,000m3/ hr, 540m3 is fed into the national electricity grid, the CO2 being liquified and sold to the food industry.

SAVING CARBON

Growing and processing crops on the farm means that the Astons generate less carbon than they consume, which will be further enhanced when they use gas to fuel quarry and farm machinery.

"Other farmers are showing interest in our system because growing maize in combination with cover crops and the use of digestate is very effective in returning nutrients and humus to the soil while reducing weeds.

"We are very conscious of the environment, and aim to minimise the impact of our operations, including vehicle emissions: one reason for investing in new Case IH tractors. Our Magnum Rowtrac 340 CVX and two Puma 240 CVX models have the latest low emission engines and save fuel.

VERSATILITY

"The Rowtrac is much more versatile than we originally anticipated. It's light and agile for spreading, secondary cultivations and drilling, but can be used





with more ballast and wider tracks for heavy cultivations. We have even used it with a 3m buck rake on the silage clamp.

"Like our other Case IH tractors, it has the CVX transmission and is very easy to drive, is extremely fuel efficient, offers the latest technology and is well-liked by operators."

FARM FACTS

AREA	FARMED.	

485ha plus 365ha rented		
CROPPING:		
Maize	370ha	
Grass	130ha	
Winter wheat	180ha	
Fodder beet	93ha	
Triticale	47ha	
Oats	19ha	
Cover crops	400ha	

MAIN TRACTORS:

Case IH Quadtrac 9380, 425hp (2000) Case IH Rowtrac 340 CVX, 340hp Case IH Puma 240 CVX, 240hp (2016) Case IH Puma 240 CVX, 240hp (2017) Case IH Puma 210, 210hp (2010)

\$11M FLEET EXPANSION FOR UKRAINIAN FARM OPERATION

TWO QUADTRAC 600 TRACKED TRACTORS, 19 MAGNUM 340 TRACTORS, 17 PATRIOT 4430 SPRAYERS AND 12 TRUE-TANDEM 335VT VERTICAL TILLAGE TOOLS IN ONE DEAL.

n one of the largest recent sales of tractors and agricultural equipment in the country, Ukrainian farming business Epicenter K has expanded its fleet of machines in an \$11m deal that will help it handle an expanding land area. Supplied by Case IH importer Titan Machinery Ukraine, part of one of the world's largest market operators for Case IH equipment, the purchase involved a total of 50 machines.

Operating in Ukraine since 2015, Epicenter K has expanded its operations in recent years to now manage over 110,000 hectares, mainly in the Cherkasy, Khmelnytsky, Ternopil, Vinnytsia and Kyiv regions, and further growth is planned. Cropping includes winter wheat, sunflowers, corn and winter oilseed rape.

Negotiations around the deal began in summer 2017, supported by a local hands-on demonstration of the machines involved. Epicenter K announced a tender for the purchase of equipment and invited offers from various manufacturers operating in Ukraine and able to meet the company's machinery needs. Case IH equipment was reportedly chosen for its price to quality ratio, dealer network and unique advantages of selected products, including Quadtrac articulated rubber track technology,

allowing operation earlier in the season when other types of wheeled or crawler tractor could cause soil compaction and damage. The unique Aim Command Flex system for Patriot sprayers, which enables operators to control nozzle output by automatically adjusting the application rate to the specified sprayer parameters and speed, was also said to be an attraction.

The final purchase, delivery, service and specification terms were discussed on the brand's stand at the 2017 Agritechnica exhibition in Hannover, where senior management from Case IH, Titan and Epicenter K shook hands on the deal.

The agreement also affirmed the parties' intentions to work together over the longer term, and negotiations surrounding the purchase of a large batch of Axial-Flow 9240 flagship combines and 6.7m-wide Ecolo-Tiger 875 disc rippers are already underway.



Case IH True-Tandem 335VT vertical tillage tools feature patented 'Agronomic Design' for seedbed creation.

The Epicenter K order included 17 Case IH Patriot 4430 self-propelled sprayers.



WHERE TRADITIONAL FARMING MEETS THE FUTURE

The 250-acre Lower Gazegill Farm in Lancashire's Ribble Valley combines a long history in the same family with a fowardthinking approach to innovation, conservation and education. Access of a

www.metcaltsagri.co.uk

he Robinson family have owned Lower Gazegill for 500 years and championed organic farming long before it became 'fashionable'. The current custodians, Emma Robinson and husband Ian O'Reilley, live there with their children Niamh, Isabell and Oliver.

The couple's view is that nature is never wrong and that happy, healthy animals make better, more flavoursome food, that rare and traditional breeds are better suited to the organic system, and that growing them slowly ensures longevity. But while farming in a sustainable, nature-led way, their vision is firmly on the future, with raw milk and rose veal the latest innovations. Most products are sold directly to consumers all over the country, as Emma and lan have a farm shop and a thriving e-commerce site.

ORGANIC ETHOS

"My father was passionate about his hay meadows, rare breeds and

wildlife," Emma explains. "The farm is all permanent pasture and it's been that way for centuries, the last evidence of ploughing being a small area of medieval ridge-and-furrow land."

"Our ethos is simple," Ian adds. "Having been handed 500 years of carefully farmed land, our intention is to pass it on to our children in as good an order as it came to us. Our aim is simply to put more in than we take out through lowintensity farming, because in the longterm the animals and soils are better for it.

"Farming in a sensitive manner means we only cut meadows for hay once everything has gone to seed and the birds have left their ground nests. This is better for nature, and the hay contains numerous grasses and herbs, so it provides a rounded winter feed for our Shorthorn cows and rare breed sheep, supplying essential nutrients and medicinal herbs as well as being a natural diet for ruminants. What little feed we use is UK grown, with peas, pulses and lupins the protein source, and being organic it's GMO-free.

"During the summer months our cows have free access to pastures where they forage for different plant types and even self-limit any potential illness. This natural, healthy way also means that the vet visits a lot less and it has a direct effect on the quality of the milk, which is higher in Omega 3 than that from intensive silage-based systems."

Producing hay for the livestock is one of the main jobs for the couple's Case IH Maxxum 115 tractor, which they purchased from Metcalf's Agricultural Engineers at Chipping near Preston four years and 2,500 hours ago to replace a smaller JXU model.









Smith and their trusty Maxxum 115.

TRADITIONAL BREEDS

The couple firmly believe that traditional and indigenous breeds better suit their low input, low impact system. Emma's 75 Old English Shorthorns average 4,000-5,000 litres per year and 4.8% butterfat. They are never pushed for higher yields nor filled with proteins and hormones, udders are spotlessly cleaned and sanitised before milking and the raw milk is tested daily. Nothing is done to the milk after it comes out of the cows - it simply goes straight into the collection tank, where it is cooled, bottled in the micro-dairy and sold directly to consumers, either through the farm shop or a weekly delivery scheme.

For lan, the welfare of his animals is also very important, and he regards the normal process of disposing of or exporting male calves as morally wrong. Instead, they are grown on to 9-12 months to produce rose veal. High in protein, low in fat and great-tasting, it appeals to an increasing number of ethical, discerning consumers.

Emma and lan's pig herd is also based on a traditional breed, the Oxford Sandy and Black. Slow grown and with a fantastic fat layer, it produces pork with a taste that most have either forgotten or never experienced, making it a firm favourite in home kitchens and restaurants. The sheep are a mixed



bunch, but mostly Hampshire Downs, a versatile breed that produce strong lambs.

In 2007 the couple installed an on-farm cutting plant to process the meat and opened the farm shop a year later, setting themselves a target of selling all the farm's production directly to consumers by 2015, which they achieved a year early. Controlling the retail price increases returns, making outright production much less important and allowing Emma and lan to operate a traditional, fully-organic svstem.

The next step will be the construction of an on-farm restaurant and holiday lets to tap into the demand from discerning consumers who focus on quality rather than price.

Echoes of its 500-year past may be everywhere at Gazeaill Farm, but cuttinaedge innovations and Emma and Ian's forward-focussed approach will help to ensure that it continues to run for another five centuries.

FARM O N



SPREADING THE WORD

Following in the footsteps of Rachel's parents, who opened the farm to school visits in the 1960s, each year Emma and Ian host 250 to 300 free educational school and group visits, where people of all ages can learn about sustainable, organic agriculture and how food is produced.

Sustainable energy also plays a significant role, the education centre being heated by an air-source heat pump and the water by a solar thermal array. With 4Kw of solar PV and a 20Kw wind turbine the farm is already 75% self-sufficient in energy, and plans include a purifying plant for spring water plus a Hydro-electric generator, which will enable hydrogen harvested using surplus electricity from the turbine to run the farm's

As if that wasn't enough, since August 2013 Emma and Ian have run the Gazegill Education Experience, which offers day activities for adults with mental health illnesses and workplace-based experience in the farm's herb and edible flower poly tunnels and growing area.

The Countryfile TV show visited Gazegill Farm at the beginning of 2018. See it here https://youtu.be/fQrzokQIRvY?t=12m3s





David's new Maxxum 125

FRIENDS REUNITED

In 1994, 24-year-old David Brewer from Gravel Farm, Cleeve, Westbury-on-Severn, Gloucestershire won an 84hp, 4wd Case IH 4230 worth £23,000 in a Farmers Weekly competition, then sold it. 23 years later, he bought it back.

the 4230 back doesn't make me smile: it's like meeting a long-lost friend," says David.

"Farmers Weekly ran a feature about the 4230 every week for six weeks, then you had to answer six questions and write a 30-word tiebreaker. I worked with my mother and father at the time and because I always wanted a new tractor they encouraged me to enter. I was delighted to win and be invited to the Royal Smithfield Show to collect the keys from William Waldegrave, Minister of State for Agriculture.

The 4230 became our main tractor, but a year after I took over in 1997 I traded it in for a new Case IH 4240. Every time I saw a 4230 it made me wonder what became of my tractor. Last year I was looking to sell a front-end loader and went on eBay to get an idea of prices. One that came up was on a 4230 being advertised by a dealer in Shropshire, and I was convinced that it was 'my' tractor. Then I saw the number plate M545 RUJ, which I'd chosen.

I'd sold the 4230 in mint condition at 2,500 hours and here it was showing just 6,500 hours and looking not much different. Having bought a new 80hp two-wheel-drive to work inside buildings, and with two other tractors, I didn't need

another, but realised I'd never get the opportunity again and regret it if I didn't. It was such a coincidence that even my wife encouraged me to make an offer.

When the 4230 was delivered I was just as excited as when it came here new. It seemed like it'd been for a long holiday and the original front-end weights were still in the barn waiting for it to come home. Having the tractor back reminded me of my father, who died in 2007, as he'd been so happy when I'd won it.

I couldn't spend £8,000-£9,000 just to have it stand in the shed, so it's used

on a straw chopper, which helps to keep it in good working order. The tractor doesn't clock up massive hours, but certainly earns its keep.

Buying back the 4230 made me reconsider Case IH. We'd changed to another make when our dealer changed franchise, but last September Guy Medlicott at Cotswold Farm Machinery invited me to look at the latest Case IH models and I traded in two other tractors for a new Maxxum 125. Having gone back to Case IH there's no way the 4230 will ever leave this farm!"



David Brewer's family have farmed at Gravel Farm for more than 60 years, its 160 acres supporting 90 suckler cows and 160 followers/stores. In 2011 David diversified into turkey rearing and now produces 12,000 stags for a major processor.

Wiltshire farmer Bruce Waight

FARMING A UNIQUE LANDSCAPE

The sound of machine-gun fire, shells exploding and tanks driving through crops are part of everyday life at Compton Farm on Salisbury Plain.

selfith troop carriers, propelled howitzers and battle tanks driving through his crops and over grassland, Wiltshire farmer Bruce Waight faces some unique challenges. The British Army began operating on Salisbury Plain in 1898, and the MOD now owns 390 km2, making it the UK's largest military training area. Some 100 km2 are permanently off-limits to the public while other areas have greatly restricted access, which make it a wildlife haven.

Encompassing areas of ancient ridgeand-furrow meadowland dating back to medieval times, and one of the country's largest round barrow burial sites which links with the world-famous ancient monument at nearby Stonehenge, Compton Farm is unique for numerous geographical and historical reasons.

Bruce's grandfather started farming there in 1872 and today the business encompasses over 10,000 acres, some of it licenced from the MOD. Much of the land is Schedule 3, so the MOD can drive across it whenever they want and do whatever they want. Bruce and his team

are not allowed onto some areas when they 'live-fire' - over 200 days a year or for two weeks every month when they do parachute jumps.

While most of the flinty, chalk soils support extensive grazing, there are 1,700 acres of arable crops, organic leys for 450 organic suckler cows and followers, plus 800 outdoor sows. Certain areas are farmed to benefit wildlife, some to preserve the area's archaeology, while others are ideal for military training.

"The scale and geography of this area make our farming system very extensive and labour intensive," Bruce states. "Because of the dangers, we attend regular firing range safety courses and must contact Westdown Camp before entering or leaving controlled zones. To graze cattle in certain areas we have to apply for permission 10 weeks in advance and can only go there before 8am or after 5pm.

"Cattle often escape because tanks or other vehicles have taken out electric fences, so I sleep with the 'phone beside the bed."





The Waight family's association with Case IH goes back to Bruce's grandfather, who owned a 10-20 Titan, a model built by International Harvester from 1915 to 1921. The connection with Case continued with his parents, Bruce's mother driving a 31hp Case D model in a War Office film 'The Great Harvest' made on the farm in the 1940s. Bruce operates a Case IH Magnum MX340, Puma 215 and a Puma 160. The full-time staff include Bruce's sons James who manages the livestock and Henry who manages arable operations.



Tracked military vehicles tear up grassland and arable crops



One of the round barrow burial sites at Compton Farm



Not a sign you see on every farm: the 62.5 tonne Trojan engineer tank is used to clear pathways through minefields!

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HELPING HABITAT FOR HUMANITY'S 'HERO BUILD'



In 2017, the charity Habitat for Humanity's Lake Agassiz group, in Minnesota USA, celebrated its 57th home build - the 'Hero Build', with the help of local Case IH employees. The story is of heroes coming together to help a police force and community heal the scars of a tragedy, and a single mother to build a new future.

t 7pm on 10 February 2016 police in Fargo, North Dakota responded to a 'domestic situation' after a man was reported to have opened fire on his wife. Shots came from the property, and Officer Jason Moszer of the Fargo Police Department was gunned down by home-owner Marcus Schumacher. Mortally wounded, he passed away the following day.

The location was difficult for his colleagues to pass by on patrol, but then something good happened. On 3 March 2017 it was demolished and at the request of Mrs. Schumacher the City of Fargo donated the land to nonprofit housing organisation Habitat for Humanity (www.habitat.org).

"This was an opportunity to turn something very negative into something positive. We called it the 'Hero Build'," states Jim Nelson, Executive Director.

"We wanted to celebrate the hero in the police officers and emergency services personnel who risk their lives to help others," adds Pete Christopher, Resource Development Manager. "At Habitat we work with families to help build strength, stability and self-reliance through shelter. The need is very great – we get roughly 50 applications per year but can only provide two or three homes."

HELPING THE COMMUNITY

Case IH Fargo Plant Manager Adi Garg wanted it to have a greater involvement in the community. Having been involved with Habitat at the plant in Saskatoon, Canada, he and Human Resources Manager Peggy Hayes worked with Pete Christopher to get the project underway. Under Peggy's direction, 28 participated CNH employees, in Industrial- sponsored home-build days in September 2017. "Being a part of the Hero Build was especially important because this tragedy took place in my neighborhood, but it was such a positive outcome", stated Hagen Gunderson, who took part. "Very rewarding", said colleague Jack Plankers, while Erin Beard added: "Hearing the owner's story and seeing her appreciation was the icing on the cake."

OVERCOMING GREAT ODDS

Danielle John, the owner of this new home, has overcome great odds, turned her life around and is now a hero for others. A single mother with four children aged 10 years to six months, she states: "My story is also a sad one as I am a survivor of domestic sex trafficking, so now I work in the non-profit world to help others. When people pass this property, they don't see something sad, they see something beautiful. Without Habitat's help I could not have bought a house and I am grateful to everyone who contributed money, time and effort to make it happen."



NEW TRAINING ACADEMY HELPS ZIMBABWE'S FARMERS TO INCREASE PRODUCTIVITY

A new initiative to encourage best practice in Zimbabwean agriculture, by training the country's farmers in the latest principles and technologies, is benefitting agriculturalists across Africa.

arming principles in Africa are often outdated due to a lack of exposure to modern concepts, lack of training, and limited access to technology. Consequently, there is a need to help farmers better understand the principles of mechanisation, technology and management.

All these issues are now being addressed by a new training academy on a farm at Chinhoyi in Mashonaland West Province in Zimbabwe. Owned by local farmers, it has 2,000 hectares of land, mostly dedicated to maize and wheat production. Training activities are a partnership between BlueSky Farms, which leases and operates the facility, Agricon Equipment, an agricultural and construction equipment supplier based in Harare, together with Case IH.

Over 100 guests from Zimbabwe, Botswana, Zambia, South Africa, Kenya, Sudan and Egypt attended the opening ceremony in September. They included farm operators, agricultural equipment dealers and distributors, together with directors and senior managers of Case IH and Agricon Equipment, Case IH's Zimbabwean distributor.

IMPROVING PRODUCTIVITY

At a time when the country is striving to regain food self-sufficiency, the academy will enable farmers to gain or strengthen their skills through handson technical and operational training, helping them to improve agricultural productivity through increased mechanisation.

The academy includes an array of Case IH equipment, including a JXT 75 utility tractor; Puma 210 multi-purpose tractor; Magnum Rowtrac 380 CVXDrive with continuously variable transmission and rear tracks, Axial-Flow 7140 rotary combine, Patriot 3230 sprayer and 24row Early Riser planter.

Many were available for guests to try under real-world conditions. Lana Saeed, a sales engineer with CTC Engineering in Sudan, stated: "This was a great opportunity to gain practical experience of machines that I can't drive back home. Handling them in a real working environment and exchanging ideas with participants from all over Africa was very useful."

BROADENS HORIZONS

Jacobus Bezuidenhout, an agricultural equipment service manager from Botswana, added: "Involving specialists from different markets across Africa in commercial training on a working farm is a great concept." Hassan Elkadawy, Sales Manager for Case IH in Egypt, added: "Being able to interact with commercial specialists from various regions broadens horizons and demonstrates how to provide practical solutions by taking a different approach."

Jason Smith, Chief Operating Officer of Agricon Equipment, said: "This exciting new facility will undoubtedly contribute to improving the agricultural industry in Zimbabwe."







Adél and Tamás meet Andreas Klauser, Brand President of Case IH.

THE TRIP OF A LIFETIME

FOR #RAISEDRED COMPETITION WINNER

■he split-second that it took for Lévai Adél's camera to record a vibrant image of her with the family's Case IH MX120 tractor and RB464 baler in a field just after last year's harvest was enough to win this enterprising young Hungarian farmer first prize in the #RaisedRed photographic competition, which marked the 175th anniversary of Case IH. All of us who work for Case IH recognise that farming is much more than just a job. It's a lifestyle dedicated to getting your hands dirty. A lifestyle of chasing quality and progress.

> A lifestyle that lives in the hearts and minds of producers who have contributed to 175 years of equipment innovations by embracing Case IH and its dedication to customer-driven product design. It's a lifestyle that shouldn't go unnoticed.

That's why in July 2017 we launched a photographic competition for those who were born in the field and #RaisedRed. Running through to 18 August, it provided entrants with an opportunity to showcase their pride in Case IH and win a range of prizes. Amongst them was a VIP trip to experience the innovation which takes place at the Case IH headquarters in Racine, Wisconsin, and at our Research and Engineering Center in Burr Ridge, Illinois, with the bonus of seeing the sights which the vibrant city of Chicago has to offer.

For Adél, who had never previously travelled outside of her native Hungary, or even flown in an aircraft, it was a dream come true, a once-in-a-lifetime opportunity to visit the USA with her husband, Tamás. Together with their two young daughters, the couple live at Napkor in Eastern Hungary, where they farm 80ha, producing grain, corn, sunflowers, cabbages and apples.

"We took the photograph and submitted it to #RaisedRed, but never thought it would win," Adél commented. "I could not believe that a girl like me, with two children could be so lucky and have an opportunity to travel to the USA - we were so excited about the trip."

At the beginning of December, Adél and Tamás boarded their flight, their first destination being the Case IH combine harvester factory in Racine, where they joined other winners from South America, Argentina and North America. The following day they toured the Case IH Development and Research Center in Burr Ridge, before taking in the sights of Chicago. During the next few days they visited the 110-storey Willis Tower, enjoyed a boat tour along the Chicago River, took a helicopter flight to gain a bird's eye view of the city and visited the Winter Wonder Fest, the annual winter carnival at the iconic Navy Pier. After it was all over Adél commented:

"A huge thank you to Case IH! They have made my dream come true and let a small person like me see the big-big world. I felt like I was in a fairy tale, so thank you to all who voted me – I could not have gone on this trip without you. Years ago, my mother told me she hoped that one day I would be able to travel overseas and see beautiful places. Tamás and I are so grateful to have had this experience!"

ITALIAN COLLECTOR HAS AN INTERNATIONAL PASSION

e is adamant that he "would never want the letters 'IH' to disappear from the hood of Case IH tractors". Since starting his hobby 25 years ago, Alberto has amassed almost 70 examples from the different manufacturers which contribute to Case IH's illustrious history. His collection includes some of earliest products from Case, Farmall and International Harvester, including a rare Mogul 8-16, International Harvester Titan 10-20 and Case K18-32 Crossmotor.

Alberto's passion for the brand started at an early age on the family farm. Having succeeded his parents into the family business Azienda Agricola Boselli, he lives with his wife Daniela and 22-year-old son Andrea on the 70ha dairy farm which incorporates grassland, hay and forage crops.

INTERNATIONAL START

His first association with International came in 1980 when he bought a fourwheel-drive 955 from Mazza Macchine Agricole in Parma, the first in the area. Chosen for its comfort, quality and value for money, the tractor encouraged Alberto to purchase more Internationals, a 453, 744 and two 844s, which average 400 hours per year. The current fleet includes several International tractors, a 633, two 844XLs, a 995 and two 1455XL models, plus a Case IH Maxxum 5150. Alberto's classic collection focuses on original and special tractors from 1914 through to the 1990s. He states: "The internet has played a significant role in helping me to expand my collection by dramatically increasing the chances of finding tractors that would have previously have been difficult or even impossible to locate. Now, I own most of the ones I want."

ONE HOUR PER DAY

Helped by Daniela and Andrea, he spends an hour each day restoring and caring for his impressive fleet and enjoys taking them to shows. A recent highlight was being invited to exhibit at the 50th anniversary of the Automotoclub Storico Italia (ASI) Club in Turin.

Alberto loves every tractor in his collection, but there's one that's particularly special because, as he says: "To start the 100-year-old Titan gives me an incredibly strong feeling of pride and happiness". And that perfectly summarises what classic tractors are all about.

The final part of Alberto's dream is about to come true, as the local city hall has just granted him permission to build a museum next to his house in which to display this large collection of classic tractors.

ALBERTO BOSELLI'S COLLECTION INCLUDES:

CASE

Crossmotor K18-32, SC Rowcrop

INTERNATIONAL HARVESTER – WHEELED MODELS

Mogul 8-16, Titan 10-20, 8-16 Junior, 10-20, 15-30, 20-40, 30-60, D-217, D-320, D-430, D-440, DF-25, DLD-2, DED-3, DGD-4, 323 Vigneron, 423, 523, 624, 633, 706, 724, 744, 756 4wd, 806RC, 824, 844, 946, 1246, 1255, 1455, 1455XL, 3588

INTERNATIONAL HARVESTER – TRACKED MODELS

T20, TD-6, TD-340, TD-24, TD-340, W-400, W-450

FARMALL

M 11/2hp, 3hp and 6hp, F-12, F-20, F-30, Cub, A, BN, C, H, M, MD, BMD, 50B, 340, High Crop, WD-40, W-4, W-30, W-40, W-12, WD-9, BWD-6, 450 6PL







Alberto Bosell, who farms in Reggio Emilia, Northern Italy, is the country's largest collector of classic International tractors.

WOMEN ENTREPRENEURS

A survey by the Global Entrepreneurship Monitor (GEM) Research Center discovered that 51.2% of all entrepreneurs who started new businesses were women (2014).

COFFEE: PLANTING DREAMS, HARVESTING OPPORTUNITIES

MARISA CONTRERAS' ENTREPRENEURSHIP HAS A STRIKING AROMA AND FLAVOUR

ake risks, look for new achievements, do what you love - this is the life lesson that Brazilian grower Marisa Helena Sousa Contreras likes to share. After 22 years in the pharmaceutical world, she changed career, and today manages a property, in Areado in the state of Minas Gerais, that belongs to the Fazenda Capoeira Coffee brand. At the same time she is motivating women in the area to engage in the coffee industry. In 2017, her work was recognized with the 'Mulheres de Negócios' (Business Women) award in her state, in the Rural Producers category, presented by the Brazilian Micro and Small Enterprises' Support Service (Sebrae).

COFFEE IN BRAZIL

Brazil is the world's largest coffee producer. It grows around 1/3 of global production, 2.6 million tonnes, of which 2 million tonnes is exported. Coffee is grown on around 200,00 farms totalling 2.3 million hectares. Specialist coffee presents 4% of all national production, which increases annually by 10%. **Sources:** Brazilian Coffee Industry Association (ABIC), International Coffee Organization (ICO)



Back in 2010, Marisa had witnessed major changes in the pharmaceutical market, which made her realise that it was time to move to plan B. "With that in mind, I combined the relationship with the land that runs in my family with my entrepreneurship. My father worked in the coffee business, he loved dealing with people - and he also believed in women's transformative power and independence", she says.

DEVOTED TO COFFEE

"I started working on the farm, even though I didn't know anything about coffee. I was still working in pharmaceuticals, and only left for good six years ago. Today I live on the farm, so I can be completely devoted to the coffee", she explains.

Today, the farm's Case IH Coffee Express 200 harvester gathers three thousand 60kg bags a year, which are exported to

CASE IH COFFEE EXPRESS 200

Power: 55 hp Harvest Speed: 400 to 1600 metres/ hour Harvest Capacity: 150 bags (60 kg each) / hour Length: 5.2m long Height: 3.7 m high Weight: 4.04 tonnes

four countries. After 12 years managing the property, Marisa has learned a lot. "When I decided to change career, I wasn't able to say what a good coffee was", she says. "While trying to learn, I watched several lectures and started a post-graduate course in coffee-growing management." She dedicated herself to understanding how the quality processes worked, and learning about the importance of reproducing the conditions, the flavour and the fascination of the coffee plant and the land.

Marisa is sure Fazenda Capoeira Coffee produces "special coffee for special people" that recognizes the value in the product and the whole production process behind it. For her, coffee is life, because it brings people together. "It's a drink that helps people socialize, and sees no differences", she says.

WOMEN AND ENTREPRENEURSHIP

In the last 14 years, women's entrepreneurship in Brazil has grown 34%. According to Sebrae, more than 7.9 million women started micro and small businesses in order to pursue financial independence. As well as being one of these women herself, Marisa Contreras firmly encourages this expansion.

"I strongly believe that women can bring changes to the coffee business. Women, coffee, and quality go together because of our innate qualities, such as care, love, passion, and cleanliness. They are paramount in assuring the production of a high quality coffee", she comments. Back in 2014, in order to drive women's participation, knowledge sharing and information about the coffee market, Marisa created the Meeting for Coffee Growing Women at Fazenda Capoeira Coffee. Last year, the fourth of these events brought together over 300 women for lectures covering quality and successful partnerships.

At the company, women now have a strong influence over the coffee production chain, from planting and harvesting to consumption, making sure the final product is high value.

"In the end, women contribute by spreading values important to coffee production, such as sustainability, profitability and the quality of the coffee. They also bring important values to the business side too, such as passion, commitment, discipline and ethics",

concludes Marisa.

For more about Fazenda Capoeira Coffee, watch this video https://youtu.be/AA-cK5HzIAw (Portuguese commentary)





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