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FARM FORUM

The Case IH Magazine



Spread the Red
**Case IH European Dealer
Convention 2012 in Linz**

Farmall
**The cost-effective all-rounder
in the 55 to 115 hp class**

New LB 4
Better baling

FROM 15 OCTOBER 2012 TO 28 FEBRUARY 2013

WINTER CHECK-UP



**TECHNOLOGY & EXPERTISE:
A QUALITY CHECK-UP EXCLUSIVELY AT CASE IH!**



0% FINANCE available for 12 months⁽¹⁾

(1) A copy of the dealer invoice to the customer must be faxed to 01268292423 for checking by CNH Parts & Service. Failure to do so will result in the dealer being liable to CNH Parts & Service for subsidy costs. Flat rate of 0% (excluding fees) for 12 months. Minimum 10% deposit required. Example: Credit of £10,000 payable via 12 equal monthly payments of £750.00. Typical APR of 3.4% (based on Admin Fee of £95). Total duration of the loan is 12 months. Agricultural related businesses on only Case IH new parts or manpower for a minimum of £5,000 sold by Case IH dealers will participate in this operation. Finance is subject to status and credit approval. Terms and conditions apply. Payment example is based on Cost Of Funds applicable at time of printing and is subject to Change. Offer valid until from 15th October to 28th February 2013. Only valid for the UK market.

(2) Customers must send the completed entry form (available from Case IH Dealers) to: 'Case IH Winter Check-up', Formara Ltd, 16 The Candlemakers, Temple Farm Business Park, Southend-on-Sea, Essex SS2 5RX before the 28th February 2013. There will be two winners selected at random. The winners will win the chance to go on a Case IH factory tour in St Valentin (AUSTRIA). The promoter will organise a two days trip for the winners to the Case IH Factory in St Valentin. The two days trip will include flights, accommodation for one night and one person and one factory tour per winner, to a maximum total value of £1,500 / 1750 €. No alternative prizes will be available. Only one winner per household (same name, address). The winners will be the first entry drawn at random, from all valid entries and will be contacted by CNH UK Ltd within 28 days of the closing date. After verification of the winner's details and eligibility, CNH UK Ltd will contact the winner to explain the handover process. For terms and conditions visit <http://caseihwintercheckup2012.cnh-publications.co.uk>. Your submission of an entry is confirmation that you agree to be bound by such terms and conditions.



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EDITORIAL

BEST-IN-CLASS SERVICE: ENSURING YOUR EQUIPMENT IS ALWAYS PRODUCTIVE

Dear Farm Forum Readers,

One of Case IH's core principles is our aim to provide today the technology of tomorrow, to ensure our customers benefit promptly from the very latest developments in productivity and reliability. We apply this principle not only to our agricultural equipment itself, but also to the professional services we back it with, and we have set ourselves the target of providing you with a higher standard of world class service for your Case IH agricultural machinery.



As a result we have seen a significant expansion to our service and spare parts organisation. Our European dealer network of more than 1,500 service centres helps Case IH to ensure your machinery is maintained with utmost care and attention, and that rapid diagnostics – and rapid repairs – are put into action in the event of any problem. In addition to having advanced service and troubleshooting tools at their disposal, our staff, our dealers and their engineers all receive top-class training in our training centres. In addition with our service support, such as Max Service, we offer new concepts to provide Case IH equipment owners with maximum downtime prevention. Our objective is to offer you best-in-class service in all aspects of machine management, and as part of that we are also setting new industry standards in spare parts supply. Over the past twelve months we have introduced a streamlined logistics system in Europe, based around seven depots with a total of more than 185,000 square metres of storage space holding over 700,000 spare parts in stock. Our target is to supply our customers with spare parts within 24 hours. Last year we handled nine million spare parts orders, transporting more than 72,000 tonnes of spares to our dealers and customers.

But it's not only our spares and service support that is adopting tomorrow's technology. The monitoring and management of machinery through our telematics systems, which are currently being launched throughout Europe, represents the next step in professional service for our customers. In addition to its role as an on-farm management tool, telematics allows Case IH to enhance even further its back-up capabilities, by providing us with the possibility to ensure customers' machines are running at their optimum, monitoring them on-line to provide new levels of service, such as the ability to identify and address potential problems before they can become serious. The result is significant customer savings in both time and money.

All these developments are designed to work together to create a package that ensures you benefit from Case IH dependability – red excellence you can rely on.

Yours sincerely

Matthew Foster

Vice-President and General Manager, Case IH Europe

IMPRINT:

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OVER 1,200 PARTICIPANTS FROM 29 EUROPEAN COUNTRIES STAND FOR IMPETUS AND SUCCESS OF THE BRAND AT DEALER CONVENTION / CASE IH ON COURSE FOR GROWTH THROUGHOUT EUROPE / PRESENTATION OF SALES TARGETS TO BE MET BY 2015 AND INNOVATIONS FOR THE 2013 SEASON

„SPREAD THE RED“ CASE IH EUROPEAN DEALER CONVENTION 2012 IN LINZ

At the end of October Case IH hosted the European dealer convention in Linz /Austria as an innovative and growth-driven company. Following the successes of recent years the current focus is on sharpening its image as a service provider for efficient and productive agricultural businesses. Headed by the slogan "Spread the Red", the European management team presented their strategy for growth in Europe and an impressive array of innovations. "I am convinced", said Andreas Klauser, President and CEO at Case IH, "that in Europe we are headed on a course of tangible growth, comparable to that in the USA. We have innovative products that set industry standards, we have motivated employees and dealers, we have top service – and that is how our European network will contribute reliably to the success of our customers."

Matthew Foster, Vice President at Case IH and responsible for the European market also made it clear: "Our clear target is to continue rapid development of the European market. Case IH is a dynamic brand that is driven by its customers and their needs. We have asked our customers what they really need

and the answer is where we have set our bar: reliability, high performance, cost-effectiveness, immediate start of operation with rapid supply of spare parts."

"Combines are a particularly good example," said Paul Harrison, Harvesting Manager Europe, "where we have listened to the needs of the European market. More powerful engines, lower fuel consumption, larger grain tanks, wider headers with higher performance, crawler gear, and harvest residue management are critical elements. The opportunities offered by the innovative technologies in our Advanced Farming System (AFS) for precision agriculture will be decisive in Europe - being able to diagnose problems and perform fine-tuning adjustments while the machine is operating - online virtually from the office."

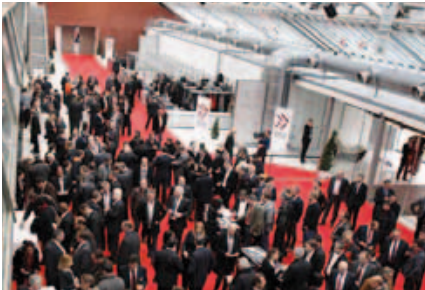
Case IH extends all power classes

"It's important to recognise," said Matthew Foster, "that in addition to leading the highest horsepower tractor segment, Case IH is also providing small and medium-sized farms with innovative and reliable technology. As part of our European growth strategy - 'Spread the

Red' – we are currently intensively extending our offering of productive multi-purpose tractors for small and mixed farms and here again the world-class engine technology from FPT is one of our many strengths.

The network of really good and competent dealers - and this is something Matthew Foster stressed in particular - is without doubt a key requirement for 'Red Excellence' – to meet Case IH's expectations for offering more than just standard services reliably over the long term.





FARMALL BY CASE IH – THE COST-EFFECTIVE ALL-ROUNDER IN THE 55 TO 114 HP CLASS

The Farmall name is deeply rooted in Case IH history. Case IH launched the first Farmall series back in 1922 and it rapidly became a success all over the world, in particular because of its reliability and versatility. This tradition lives on in the new Case IH Farmall series, launched during a product presentation at the end of July in Switzerland. Case IH presented the latest series, available as the Farmall U, Farmall C and Farmall A versions. FarmForum was there - here are some first impressions.

Farmall U – the all-rounder in the 100 hp class

The Farmall U series has been completely redeveloped and designed for use as an all-rounder with front loader capability. In addition to a new design, the Farmall series features the latest engine technology, the heart of which is a completely new engine with innovative exhaust cleaning based on an EGR system. Three models are being launched in this series with 95, 105 and 115 hp to choose from.

Farmall U – with the most modern engines

The new Farmall U Efficient Power series also delivers an increase in power in all areas including PTO and hydraulics and is equipped with a number of interesting new features. These include a completely new 3.4 litre common rail engine with Wastegate turbocharger and intercooler and an external EGR system. To meet the future stage 4 exhaust emissions regulations, Case IH employs EGR technology on the new Farmall U EP tractors. In addition to the external exhaust gas return system, a cooled oxidation catalytic converter and diesel particulate filter post treatment system is also used. As a result, the new Farmall U series fulfils the exhaust emissions standards EU 3b and Tier4 interim.

Farmall U – transmission for every situation

For the new Farmall U EP series there is a wide range of transmissions available, depending on the area of application. These include a 12x12 Power Shuttle on the standard version and a 24 x 24 Power Shuttle with 2-stage

Powershift for enhanced driving comfort.

An optional 20x20 Power Shuttle with creeper gears is also available.

Farmall U – powerful hitch

There have also been improvements to the power available at the hitch. The Farmall EP now achieves a maximum lifting force of up to 5,400 kg and an electronically regulated hitch that provides convenient control of all key functions such as position control, transport lock and maximum hitch height.

Farmall C – the new front loader professional by Case IH

The Farmall C series consists of tractors between 55 and 75 hp that have been especially designed for use around the farmyard, in the field and for specialty farming. These tractors are characterised by excellent manoeuvrability, power-to-weight ratio and versatile hydraulic performance.

This tractor is a completely new development designed specifically for working around the farmyard, with a front loader, for example and for livestock businesses.

Thanks to its compact dimensions the new Farmall C is also suitable for vegetable farming and specialty crops. With all-round visibility and an excellent view of the main work areas, this tractor sets new standards.





Farmall C – responsive modern engines

The Farmall-C series rounds off what was previously the Quantum C series in the 55 to 75 hp class and consists of three tractor models with 55/41, 65/48 and 75/55 hp/kW. The Farmall series is powered by a 3.2 litre four-cylinder engine from FPT - Fiat Powertrain. The new, compact geometry and powerful engine deliver a favourable power-to-weight ratio so that the Farmall performs powerfully and yet with agility.

Farmall C – extremely manoeuvrable

With its short wheelbase the turning radius is just 3.80 metres. Choose between a 12x12 speed synchronous transmission or a 20x20 with creeper gears; both are available with mechanical shuttle or PowerShuttle system. The top speed is 40 kph while the optional creeper gearbox drives at speeds as low as 123 metres per hour.

Farmall C – cab with feel good factor

During the development of the new Farmall C series, Case IH engineers focused on driver comfort and ergonomics. For the first time the Farmall C features a flat-deck cab. What this means is that the floor is on the same level throughout the cab. The innovative design of

the cab roof with an integrated roof visibility window provides an optimum view of the front loader work area. This series also features a high quality passenger seat.

Farmall A – more flexible, responsive and efficient

With the new Farmall A series, consisting of six tractors at the time of launch ranging between 65 and 113 hp, Case IH has stocked up its offering of manoeuvrable and highly versatile tractors in the lower power range. The Farmall A stands for productive and efficient tractors characterised by powerful engines and a very responsive ride - thanks mainly to their compact design, excellent manoeuvrability and convenient control concept.

The heart of the Farmall A series are the latest three-cylinder and four-cylinder turbocharged engines from Fiat Powertrain, equipped with an EGR exhaust cleaning system to fulfil the criteria of current emissions standards. These feature a rugged and compact design.

The performance characteristics of these engines include high torque rise for fewer gear changes, high efficiency and low fuel consumption.

In addition, the new Farmall A series features a wide choice of transmissions. Depending on the area of application, farmers can choose between a very economical 12x12 shuttle transmission, a 20x20 creeper gearbox and

a 12x12 with Powershuttle. The Powershuttle system delivers smooth changes in direction, optimum gear selection in all situations and significantly more convenience for the driver as a result.

Faster manoeuvres

Thanks to the Powershuttle transmission with control lever right next to the steering wheel, changing between forward and reverse is much easier and quicker during front loader work, for example.

Farmall A - the new comfort zone

In the new Farmall series cab the very latest ergonomic advancements have been implemented. This starts with a very wide and convenient entrance, with key operator controls located on the right-hand side of the cab.

One of the highlights is a high visibility window integrated into the roof of the cab. This enables you to keep an eye on the front loader in the raised position. New, powerful work floodlights have been directly integrated into the cab roof.

Superb manoeuvrability

A turning radius of just 5.10 metres is achieved thanks to the new 60-degree steering lock on the 4WD axle. Combined with the compact design, this ensures optimum operation inside sheds and in row crops.



CASE IH TRACTORS ARE TEST CHAMPIONS IN THE NEBRASKA TRACTOR TEST LAB COMPARISON /
STEIGER 600 RECEIVES BEST MARKS FOR PULLING POWER AND FUEL EFFICIENCY

EFFICIENT POWER FROM CASE IH SETS NEW RECORDS



Very soon after Case IH launched the Efficient Power System it achieved proven success worldwide in agriculture. Efficient performance and greatly improved fuel efficiency have made the Efficient Power system the leading industry solution to comply with new standards. Meanwhile there are already more than 15,000 Steiger, Magnum and Puma tractors with Efficient Power systems in operation on farms around the world. The key to the Efficient Power system is the most innovative engine technology and an exhaust gas cleaning system featuring SCR technology with AdBlue.

The exhaust cleaning stage is performed by a separate system outside the engine. More power, much lower fuel consumption and enhanced reliability is achieved as a result. The engines are factory-tuned for the highest performance without increasing pollutant emissions or reducing efficiency. A precision-regulated combustion process without exhaust gas recycling through the engine means a noticeable increase in fuel efficiency.

Extensive field-tests in the USA

This has also been confirmed by recent tests at the Nebraska Tractor Test Lab, one of the leading independent testing and research institutes for tractor technology in the USA.

Champion in the Nebraska Tractor Test Lab

Results from the Nebraska Tractor Test Lab demonstrate that Case IH tractors with Tier 4A engines set new industry records in terms of fuel efficiency - like the Case IH Steiger 600, for example.

This tractor is not just the most powerful tractor in series production today with a record in pulling power, now it has also set a new record for fuel efficiency.

At maximum power the Steiger 600 is 8.4 percent more efficient than its nearest competitor (John Deere 963). At 75 percent power output the results are even better. Here the Steiger 600 is 10.5 percent more efficient. The test lab results show that the whole Steiger series provides significant advantages

in terms of fuel efficiency and lugging power compared to competitors' models, explains Gabriele Hammerschmid, head of marketing for Case IH tractors in Europe.

Trendsetter in agriculture

Case IH decided some years ago to implement SCR as a key technology to fulfil stricter exhaust regulations worldwide. Since 2004 Case IH has worked together with the engine specialist FPT on developing engine innovations for agricultural machines to meet Tier 4 regulations. "Other tractor and agricultural machinery manufacturers decided much later on, mostly for other solutions. Now they have to upgrade their concepts. Case IH customers receive a technology that already meets tomorrow's demands today, that has already been proven in the field and that has been confirmed in its reliability and efficiency by well-known research institutes", reports Gabriele Hammerschmid.



CONTRACTORS IN WEST MÜNSTERLAND RELY ON CASE IH COMBINES / HIGH CAPACITY IS ESSENTIAL FOR CONTRACTORS / AXIAL-FLOW ROTOR AND CRAWLER TRACKS DELIVER OPTIMUM PERFORMANCE / EASE TO MAINTAIN AND OPERATE THANKS TO FEWER DRIVE BELTS AND INTUITIVE CAB CONTROLS

SOFTLY OVER THE GROUND, EFFICIENT AT WORK

Lowest cracked grain losses, very high productivity and excellent straw - that's how the contractors Agrarservice Westmünsterland and Friedrich Gottschalk sum up their experience with the new type 7230 and type 7120 combines from Case IH.

Ground protection crawler gear

Andre Hübers, employed at the contractor Friedrich Gottschalk in Isselburg and driver of the 7230 Axial Flow combine explains: "We have been using this combine with a crawler track system for a couple of weeks and have been able to operate perfectly in wet conditions and hilly terrain. Driving with crawler tracks takes a bit of getting used to in the beginning, but the pressure exerted on the ground by the tracks is several times lower. Customers in this area specify ground protection during our operations, and this machine ideally meets these requirements." The crawler tracks have already proven highly effective on Case IH Quadtrac tractors in terms of traction, ground pressure and reduced transport width. That's why they have now been integrated into the 7230 series combines from Case IH for operating on difficult terrain.

Small Tube rotor for extremely low grain crackage levels

The heart of the Axial-Flow system is the Small Tube rotor. Case IH combines dispense with the drums fitted with beater bars that you would find in conventional combine

harvesters. With a single rotor the transition between threshing and separation is seamless. A high centrifugal force is achieved even at low rotor speeds. This ensures a very careful threshing process as a result, so that only unharmed material is fed into the grain tank. In difficult operating conditions the rotor speed can quite simply be increased. The rasp bars are arranged in a three-layer spiral formation around the rotor to deliver optimum threshing results, perfect straw quality and minimal fuel consumption.

The Axial-Flow combine operated by the Gottschalk contractors is equipped with a 7.60-metre-wide VariCut header. The combine reaches a capacity of four hectares per hour, while the average size of field of customers around Isselburg is three-and-a-half hectares. Thanks to the variable setting of the threshing cage, standing crops can be processed at a speed of up to nine kilometres per hour. Unloading the grain is also extremely fast at 141 litres per second.

Case IH 7120 - unbeatable performance

In Ahaus, Wilhelm Lamsing from Agrarservice Westmünsterland rates the Case IH 7120 combine as the ultimate weapon. For his contractor business the main thing is to be able to deliver high capacity whilst coping with tighter and tighter harvesting windows. The Case IH combine manages to harvest three-and-a-half hectares of grain per hour. That's a massive performance considering the average



field size is three hectares. Grain crackage is extremely low - almost zero percent according to Lamsing - a performance that impresses contractors as well as customers.

Minimal service costs, reduced fuel consumption and increased ease of use

Compared to other manufacturers, Case IH combines feature very few drive belts and other moving parts. Problems caused by slipping and wear are reduced accordingly and very little time is needed for maintenance. This is reflected in high uptime and minimal servicing costs. The 7230 combine is equipped with the latest engine that fulfills the Tier 4a emissions standard. Nitrogen oxides and particulates are removed from the exhaust gas thanks to selective catalytic reduction (SCR) and AdBlue technology, which at the same time reduces fuel consumption.

The level of operator friendliness that is typical of Case IH tractors is also found on these combines. With the multi-function lever all key functions can be controlled with one hand. The most frequently used controls are arranged intuitively and ergonomically. As a result all header functions and the unloading auger are easy to control.

THE NEW LB SERIES FEATURES NUMEROUS INNOVATIONS TO DELIVER A HIGHER LEVEL OF PERFORMANCE COMPARED TO PREVIOUS MODELS - UP TO 20 PERCENT HIGHER PERFORMANCE, DEPENDING ON THE OPERATING SCENARIO

BETTER BALING.

THE NEW LB 4 LARGE BALER - NOW WITH EVEN HIGHER PERFORMANCE

A unique design, a significant increase in efficiency and numerous innovations characterise the newest generation of large balers from Case IH: the LB 4 series.

At the European Field Day in mid August - held on the Magdeburg plains in Germany - Case IH presented the new LB 4 to the agricultural technology world for the first time. The new series consists of four three: the LB 334 (bale dimensions 80 x 90 cm), LB 424 (bale dimensions 120 x 70 cm) and the LB 434 (bale dimensions 120 x 90 cm).



All-round baler for all crops

On the new LB series virtually all systems have been revised and in some areas redeveloped. An example of this is the design of the very rugged central frame and the new pickup and rotor system for efficient collection and transfer of the crop material. The development engineers at Case IH have kept some of the proven components from the previous LB series, including the extremely reliable double knotter system. What has been added

is a new compressed air cleaning system for additional cleanliness and reliability in the knotter system area.

New design - new advantages

The exterior appearance of the new LB series reflects the completely new design. For the first time high quality and extremely rugged composite synthetic materials have been used, which in addition to saving weight also greatly reduces the quantity of dust that enters the baler as well as the dust deposits on the baler itself. The entire front cover of the baler can easily be opened to provide ideal access to all drive units.

More performance right at the pickup

Many of the innovations are featured in the LB 4 pickup system, which now has a working width of 2.40 metres. A swath suppressor, available as a rake or a roller, and an additional intake auger plus central feed roller ensure rapid and loss-free material transfer, even with bulky harvest material such as maize straw. The jockey wheels on the pickup can be adjusted to new working conditions without using tools. New heavy-duty materials and components have been implemented for the pickup fingers, providing additional stability and enabling deployment in all types of crop, including biomass materials like maize straw. The height of the pickup is always positioned ideally to collect the crop, minimising the risk of damage to the material. At the headland the large pneumatic jockey wheels ensure maximum ground protection. Optimum ground tracking is provided by the hydraulically height adjustable pickup using an adjustable suspension system that

supports the movement of the jockey wheels. To smooth irregular swaths the swath rollers can be adjusted manually to match operating conditions.

Optimum crop flow and faster filling of the press chamber

While designing the stuffer system the Case IH engineers focused on a higher crop flow rate. New materials and a revised layout result in faster straight-line crop flow within the baler. The stuffer channel and all transfer points -



e.g. from the pickup into the stuffer channel - have been optimised. Thanks to the much higher flow rate of crop entering the baler, the stuffer speed has now been increased to 48 strokes per minute. Overall this has resulted in an increase in performance compared to previous models - up to 20 percent higher performance, depending on the operating scenario.



Compact and manoeuvrable

In spite of its higher performance and capacity, the LB series features a very compact construction. Even with 600 tyres it is still within three metres overall width. Transport speeds of 60 kph are possible on the road, depending on local regulations.

New service deck

The new LB 4 has a new service deck to the rear. Safe and convenient steps at the back provide fast access to the service deck. From here any maintenance work required can be performed from a safe position.

In addition, all side panels can be opened to provide safe and convenient access. The new design also contributes greatly to reducing dust.

The optional Comfort Package includes a safety rail for the deck, a large dust-tight toolbox and a water tank for washing your hands.

AFS innovations

Modern control and AFS management systems are already standard on these balers. Choose between the AFS 300 and top-of-the-range AFS 700 colour monitors to control the ISOBUS-compatible baler. With this

equipment it is also possible to operate the baler using ISOBUS-compatible tractors from other manufacturers.

New steering aid for more quality

The AFS monitor continuously supervises and displays all key baler functions, including the knoter, for example. A new function - implemented for the first time on the LB 4 series - is a steering aid to assist left-hand and right-hand filling when picking up very small irregular swaths. This ensures that uniform, sturdy bales are formed even in difficult conditions. Images from several video cameras can be displayed simultaneously on the AFS Pro 700 monitor.

A GPS logger is available as an option for registering moisture and together with the bale weighing system can be used for documenting bale weight and moisture. Data can be exported onto a USB drive if required. With GPS data logging and computer mapping software, all data relating to the baling process can be viewed at any time.

Two bale ejectors in one baler.

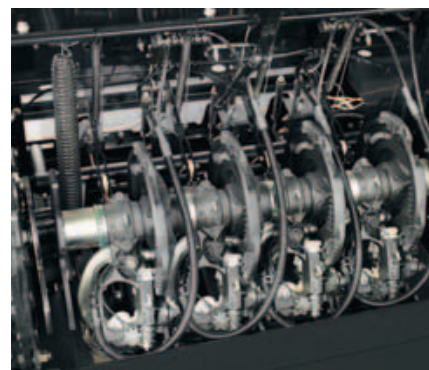
The standard bale ejector empties the stuffer channel, which opens wide. The additional partial bale ejector only ejects the finished

bale at the back while keeping the next incomplete bale in the stuffer box so that the bale chute can be folded away for transport.

Fewer stops

In the course of increasing performance the twine supply has also been increased. A total of 32 rolls of twine can now be stowed. This means less downtime and fewer stops for re-threading.

The new series of balers is available for the 2013 season and can be ordered from September 2012.



IN BURR RIDGE / ILLINOIS CASE IH INVENTS AND DEVELOPS NEW TRACTORS AND COMBINES. WE TAKE A LOOK BEHIND THE SCENES AT ONE OF THE GROUP'S MOST IMPORTANT RESEARCH CENTRES WORLDWIDE.

TOP SECRET: BURR RIDGE DESIGNS TOMORROW'S CASE IH TRACTORS



Thanks to virtual reality the number of prototypes required for designing a new model can be reduced.

30 km west of Chicago, Illinois, in the heart of the expanses of the USA's agricultural belt, there is Burr Ridge – one of the CNH Group's key plants. Here, in addition to the company management's offices, you will also find one of the group's most important research and development centres worldwide. For decades, Case IH has been inventing, developing and testing tractors, combines and corn planters at this location in the strictest secrecy. "Burr Ridge is one of 28 centres of this kind that belong to the group worldwide. 16 of them are located in the Americas, 12 in the USA alone", explains Scott Clausen, head of product planning and development for tractors. The centre in Burr Ridge specialises in the design and planning of new combines, compact and high performance tractors, front loaders for agriculture, seed

drills and engines. The development centre is also responsible for materials and equipment for the construction industry."

Starting with Farmall

The Burr Ridge facility has been the starting point for new Case IH products for a very long time. "It all started in 1917 when International Harvester decided to use the plant as an experimental dairy farm", explains Scott Clausen. "It was in Burr Ridge that the first Farmall tractor was designed, manufactured, tested and approved for launch in 1923. In 1959 the main building was officially transformed into a research and product planning centre. Burr Ridge has been the headquarters of the group since 2007. Today, management, sales and the research and development department with a total of 600 employees are all under the same roof."

Designing and testing machines ready for the field

The plant premises currently has a total area of 54 hectares, 4 of which are taken up by the four buildings. "Burr Ridge also has an 1850 metre-long oval track for testing machines, a research department with laboratories, centres for product design and material development as well as a state-of-the-art virtual reality centre", adds the product manager. The team of engineers at Burr Ridge develop new materials that are then tested in extreme conditions using comprehensive in-house testing systems to ensure performance, durability and stress resistance.



From Magnum 370 CVX to the AFS systems

An example of one of the latest products from Case IH is the brand new Magnum 370 CVX, which comes directly from the research centre in Burr Ridge. Projects concerning new technologies are what the engineers are really focused on. It was they who had the original idea and then developed Case IH AFS systems. And there's more. Burr Ridge also specialises in the design of new engines and engine components. In addition, the teams are responsible for testing Case Construction products. You needn't bother asking – there's no way you will find out which tractors the engineers are currently working on to be launched in three or four years' time.



The Burr Ridge facility stands on 54 hectares and consists of four main buildings and an oval 1850 m-long track for testing new machines.

Up to 30 or 40 people in action

While they are working in the strictest secrecy, the Burr Ridge teams are not sitting in an ivory tower. In fact they regularly swap places with colleagues at other research and development facilities all over the world. In order to develop a new tractor, combine or other product, the engineers at Case IH review customer feedback - especially from farmers - as well as taking into consideration information obtained from sales and product development. Engineers and technicians at the Burr Ridge centre can be working simultaneously on up to three new projects. Between 30 and 40 people can be working on the largest projects. Some engineers are specialised in the design of tractors or combines, while others can

be involved on a wider range of projects. The research and development centre also offers students internships over the summer vacation.

A virtual reality centre

In 2006 the facility opened a much admired virtual reality centre, which proved to be extremely useful, and since 2009 Case IH has greatly increased the number of virtual tests performed. Implementing virtual reality allows the number of prototypes produced for developing a new model to be reduced. However, it has become apparent that virtual reality has a number of additional advantages. Thanks to this new technology, potential customers can now visualize a new tractor at a showroom

and assess the interior of the machine in detail before they place their order. The product team now also use virtual reality to optimise the way in which individual components of a new machine are assembled before they actually go into production. This increases productivity at the same time as lowering production costs. The different virtual reality centres within the group can be connected through a network. As a result, engineers at several Case IH research and development centres worldwide can view the same images and share them in real time. These new working methods minimise time-intensive and costly business trips. The group has three other large virtual reality centres at its disposal: Lancaster in Pennsylvania, Modena in Italy and Zedelgem in Belgium.

RICHARD AND BERTRAND ISAUTIER COME FROM A FAMILY BUSINESS INVOLVED IN RUM PRODUCTION AND TODAY OPERATE A 350-HECTARE FARM ON THE ISLAND OF LA RÉUNION. THEIR MAIN CROP IS SUGAR CANE

LA RÉUNION: ON THE ROAD TO RUM – AND ESPECIALLY SUGAR

The connection between the Isautier family and La Réunion's sugar cane goes back a long way. It started with the brothers Charles and Louis Isautier who came from the Nice area. In 1833 at the age of around 20 they moved to Bourbon Island where their great uncle, a former navy chemist, lived with his children. At that time sugar cane trade was booming, which helped the island enter the era of industrial sugar production. The two brothers bought plots of land on the south side of the island. In 1845 they founded their own sugar factory, followed by the first industrial-scale distillery on La Réunion. Since then rum produced by the Isautier family has been attracting customers all over the world. Today it is the cousins Richard and Bertrand who manage the distillery, which has remained a family-owned company.



200 hectares of sugar cane

"In 1950 our grandparents founded the Société Civile Agricole de Bérive (Agricultural association of civil rights in Bérive), which we still run today", explain Richard and Bertrand Isautier in the south of La Réunion. "Our farm covers an area of 350 hectares, 150 hectares of which is at an elevation of 1600 m, an area that we use for a herd of 150 Limousin cattle." On the remaining 200 hectares, all of which is below 600 metres, we grow sugar cane, not for the distillery, but for one of the two sugar factories on La Réunion belonging to the Tereos group. "We have always grown sugar cane as a monoculture", explains Richard Isautier. "The soil and the climate here on La Réunion is ideal for this method of production. It protects the soil against erosion." You have to remember that La Réunion is in close proximity to the Tropic of Capricorn and as a consequence benefits from a tropical climate with elevated temperatures all year round and much precipitation. "La Réunion holds several world records for rain, which can amount to up to 10 metres in a year", says Bertrand Isautier. "Rainfall of more than 1 metre in one night is quite possible! At the same time we are not immune to droughts, which can sometimes last for longer than eight months."

Planting sugar cane in a 7-year cycle

"We normally plant sugar cane between November and March", explains the La Réunion farmer. On average it is planted for a duration of seven years so that we need to replant around 30 hectares every year." Planting takes place manually using cuttings. Sugar cane stalks are placed closely next to each other in furrows spaced 1.60 metres apart and then covered. The Isautier family uses plants that can then be used to take cuttings

later on. These plants have been selected by eRcane, the Centre de recherche variétale de La Réunion (La Réunion plant variety research centre). "Thanks to the work of the researchers we have been able to increase sugar cane yield by 25 to 30 % over the last 20 years", says Bertrand Isautier. "The harvest yield produced by the La Réunion farmers is among the highest in the world. While our company obtains between 90 and 130 tonnes of sugar cane per hectare - for an average yield of around 100 tonnes per hectare on the most favourable fields on the island, the maximum harvest yields can reach 170 tonnes/ha - the highest in the world! In Brazil and Australia sugar production is far more intensive at 60 to 80 tonnes/hectare. Sugar cane produced on La Réunion is one of the most sugar-rich. Its sugar content is around 14 % at the time of harvesting." Payment for sugar cane works as follows: 39.09 €/t for a sugar content reference value of 13.8 %. The plantation owners are also able to improve their income thanks to regional, national and European aid.

As soon as the sugar cane has been planted it has to be kept free of weeds in several stages using herbicides, mechanical methods and also manual weeding. Neither fungicides nor insecticides are used. During planting Bertrand and Richard Isautier combat grubs by applying a fungus to the soil that is harmful to the larvae. To increase soil fertility they use a compound 15-12-24 fertiliser that is worked into the ground after the harvest. Byproducts from sugar production such as skimmings and raw ash are also mixed into the soil during the sugar cane planting process. Newly planted fields at medium height can be cut for the first time after 15 to 18 months, while those near the coast can be cut after one year. "Despite heavy rain we still have to irrigate our sugar cane fields, although



we only cover 50 % because the remainder at elevations of up to 600 m cannot be irrigated", says Richard Isautier. "Sugar cane is very dependent on water, needing between 25 and 35 millimetres of water every 10 to 15 days between the previous year's harvest and September. If it doesn't rain then we need the irrigation."

Sugar cane harvesting with Case IH

The sugar cane is harvested using a 330 hp single-row Case IH A 7000 cane harvester that has been in operation at the farm since 2008. They have also been using a Case IH Austoft cane harvester for more than 20 years. "The Brazilian-built A 7000 is extremely reliable", says Bertrand Isautier. It moves over the rows of sugar cane, channeling the stalks using cone-shaped augers. Two rotating discs fitted with knives cut the sugar cane just above the root. The stalks are chopped into lengths between 20 and 30 cm by an adjustable chopping system and then the leaves are removed. The pieces of sugar cane are then fed into a conveyor where the leaves are removed for a second time. Before the crop reaches the machine an ancillary system grinds up the flower section of the stalk and distributes it over the ground. At the upper end of the conveyor belt an ejector chute instigates the secondary separation stage. The crop then drops from the conveyor belt into a trailer alongside the sugar cane harvester. "This

machine has a capacity of 50 to 60 tonnes/hour, although we normally harvest only 250 tonnes a day because we are limited by fixed quotas and specific delivery and harvest forecasts imposed by the factor. "The delivery centre is around 6 km away from us. With our production volume of almost 20,000 tonnes a year it takes us around 100 working days to process our business from mid July to mid December, working a five-day week." The machinery fleet includes a bulldozer, six tractors (along with recently purchased PUMA 210 and 125 tractors from Case IH), four trailers for transporting the sugar cane plus equipment for tillage, hay harvesting, irrigation and spraying. The farm relies on 13 employees: two farm managers, seven harvest workers, three people for sugar cane care and one person for rearing cattle. "Like our European and French colleagues specialising in sugar beet, we also hope that the new GAP will continue to provide financial support for sugar production on the island – an indispensable factor for the survival of our agricultural business", says Bertrand and Richard Isautier. "Sugar cane is vital for our local economy – it provides 12,000 jobs and accounts for 2.2 % of the islands GDP – likewise for local landscape cultivation. The farm also participates in the production of renewable energy. Bagasse, a fibrous by-product of sugar production is used as a fuel in the sugar factories and provides around one tenth of the island's energy requirement."

LA RÉUNION IN NUMBERS

- Geographic location: in the Indian Ocean, 800 km southeast of Madagascar
- Useable agricultural area: 43,700 ha (19 % of the total area)
- Area planted with sugar cane: 24,300 ha (57 % of the useable agricultural area)
- Number of sugar factories: 2 (Terreos Group)
- Number of sugar cane farms: 3,400
- Annual sugar cane production: 1.9 million tonnes
- Average sugar cane yield: approx. 80 tonnes/ha
- Mean temperature: 31 °C in summer, 26 °C in winter on the coast. Between 0 and 18 °C at higher elevations

FEEDBACK FROM FARMERS WITH EFFICIENT POWER

Real fuel efficiency

"There are many things we have to take responsibility for as a business", says agricultural engineer Marco Pissors. "That includes modern tractors - like the Puma CVX 230 - which already complies with the stricter tier IIb emissions standards set for the future."

"We have already had much positive experience with the continuously variable transmission produced by Case IH following many years of using Case IH CVX tractors. However, the Puma CVX 230 with EP raises the bar", explains Marco Pissors, going on to list the key strengths of this tractor. "The tractor is very well balanced. That makes it a really excellent all-rounder."

"What also impressed us was the new performance characteristics of the six-cylinder engine. The Puma CVX is equipped with the perfect engine, which thanks to boost performance delivers excellent handling even in difficult conditions. "We feel that

"We are impressed with the new power characteristics of the six-cylinder engine."

the engine is even more agile, especially in terms of response and pulling power. What is really pleasing is that we have experienced a noticeable reduction in fuel consumption in practice."

Puma delivers a sleek ride across the field

The young farmer also lists the new double-clutch system as a highlight. "The transmission changes through the four mechanical driving ranges without any interruption. You just need to set the split throttle lever to the minimum and maximum engine speed and the automatic productivity management system does the rest. Not only does this mean less stress on the driver - it also saves fuel because the Puma CVX intelligently ensures the optimum match between transmission and engine."

– Marco Pissors,
Ackerbau GbR Falkenhain / Germany



The Puma now purrs even better

Farmer Hans-Martin Schiffer from Linnich-Hottorf runs a farming business in the middle of the Jülich Plains. The most important factor for him is high productivity.

Only then can he take optimum advantage of the time windows available, because he runs his farm on his own. Last year he decided to extend his tractor fleet with a new high power tractor, adding to the Case IH 5130 and MXU 125 he already has in operation. "Its main duties

are heavy tillage and transport work", says Hans-Martin Schiffer.

He chose a Puma CVX 160, which has been using since the end of 2011. The farmer has achieved a clear result: "The new Puma CVX with Efficient Power features a very powerful common rail engine which delivers high pulling power. I think it is a good strategy to keep the modern exhaust cleaning system separate from the engine. That's because the engine can still deliver its full power. The high constant power range of the Puma CVX ensures that at just 1500 rpm the same power is available as at the nominal speed. At the same time a travelling speed of 50 kph is also reached at 1550 rpm. This gives you a significant advantage. By lowering the engine speed it is possible to significantly lower fuel consumption without having a negative effect on productivity. An important argument for transport work on

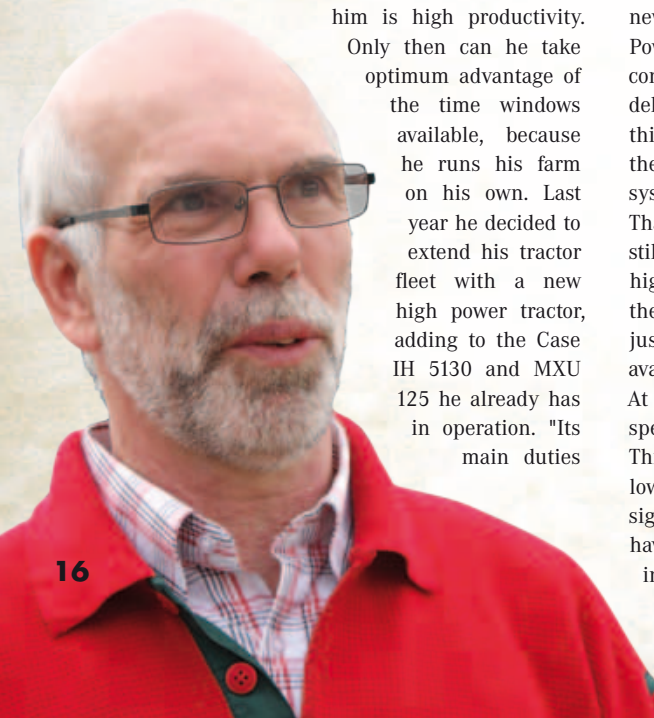
the road and PTO operations."

He is also impressed by the transmission's double-clutch technology. "You hardly notice gear changes. The Puma runs smoothly in all situations."

He also rates the comfort of the cab as a significant development. "Thanks to the front axle suspension, cab suspension and additional suspension in the driver's seat to cancel out oscillations, you get a really comfortable ride. The control concept is very straightforward and convenient. Everything is focused on the right-hand armrest. I also really like the way the AFS 300 terminal is integrated into the concept. As

a result all key data are in full view and the most important tractor functions are at my fingertips."

– Hans-Martin Schiffer,
Linnich-Hottorf / Germany



"Puma CVX 160: a tractor that is simply fun to drive."

"Our Puma CVX is great fun. Optimised operator controls and a powerful engine with plenty of grit and very cost-effective fuel consumption really makes driving a pleasure", is how Helmut Windmaier, a farmer from Schöndorf in Bayerischen Wald sums up his experience.

Since spring 2012 the young farmer has been relying on a Puma CVX 160, which he uses for all the work he needs to do on his dairy farm, plus makes it available to a machinery ring. Five farmers in the region work together to perform work in the field from applying fertilizer to the full range of forage harvesting jobs.

"With this concept we have managed to lower the operating costs of each farm and we use the latest technology in all areas, especially because of the greatly increased area we need to cover and the time available", is how he describes the advantages of working together. Helmut Windmaier specialists in grassland harvesting tasks such as tedding, raking and

"The double clutch transmission operates smoothly and provides a high level of driving comfort and safety."

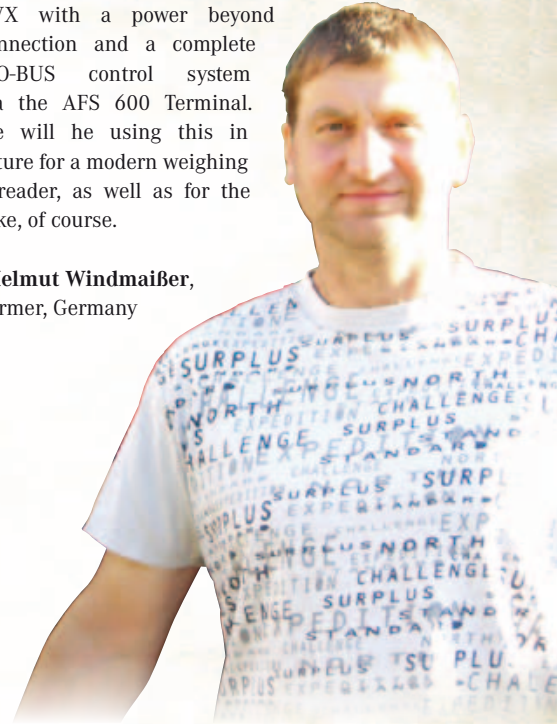
the transport part of the harvesting sequence. "Our initial impression is that the Puma offers an intuitive and convenient control concept. Changing over from the Case IH CS was no problem at all. Even new drivers become familiarised very quickly", says the young farmer. "The double clutch transmission operates smoothly and provides a high level of driving comfort and safety." He describes the cab's space and features as a real highlight. The Puma CVX provides a comfortable workplace well above the standard of a car, especially in terms of noise level.

He also rates the developments in engine technology very highly. "Thanks to the new exhaust gas cleaning system, which dispenses with exhaust recycling and implements all filters externally, the engine is ideally tuned. We have also found out that it has an extended constant power range, which means that you hardly ever need to drive at full power. The automatic productivity management system (APM) regulates the accelerator automatically depending on the situation. This ensures

extremely cost-effective fuel consumption when working with the stubble cultivator or disc harrow, for example."

He has equipped his Puma CVX with a power beyond connection and a complete ISO-BUS control system via the AFS 600 Terminal. "We will be using this in future for a modern weighing spreader, as well as for the rake, of course."

– **Helmut Windmaier**,
Farmer, Germany



The investment pays off: Puma CVX 130 ticks all boxes

Gilbert Schwarzmüller's farm in Leiblfing Hankofen near Straubing in Bavaria has been enjoying a period of growth for several years. Together with his wife Monika and son Christoph, he now farms more than 120 hectares of agricultural land - part-time! "That is why we need to have optimised mechanisation at our disposal in order to make the most of available time windows for spring planting and spraying, etc.", explains Gilbert Schwarzmüller, whose day job is in a bank.

He has been relying on Case IH tractors for several years for a variety of reasons: "The intuitive control concept with Multicontrollers in all tractors makes operation easier, especially for new drivers".

In addition the good service provided by the local Case IH dealer and the high resale value also play a role. "As a rule we change the tractors after six years and have been pleased with the performance so far", says the farmer and banker, who has always got an eye on the figures.

At the end of last year we were looking to invest in a new all-rounder for arable operations - in addition to planting winter wheat we also

"We decided to go for the latest engine technology from Case IH."

want to plant sugar beet, potatoes, maize and soya into this high quality soil.

Here the farmer decided on a new Puma CVX 130 EP that has been used since the beginning of the year for transport, crop care and tillage work. "There were a number of reasons why we chose the latest engine technology from Case IH. Case IH offers an advanced concept for exhaust gas cleaning, which has already been successfully implemented in the heavy truck industry. This technology will definitely have an influence on the resale value of the

machine. With diesel prices at EUR 1.50 - and I can imagine that energy costs will continue to increase over the coming years - fuel consumption is an important argument. In my opinion we are well prepared with the new Puma CVX with Efficient Power. In addition to the latest engine technology, which works very efficiently, modern assistance systems play a role too, like automatic productivity management (APM). The tractor intelligently controls the engine speed so that it always delivers very fuel efficient operation. Our experiences in heavy work situations - such as ridge forming during potato planting in our heavy soil - is that fuel consumption is up to ten percent lower than comparable tractors without Efficient Power."

"We also appreciate the pleasant driving performance, which is due to a number of factors such as smooth gear changes thanks to the double-clutch transmission, the very quiet cab and the optimised suspension system with front axle suspension, cab suspension and a suspended driver's seat. So far we are very satisfied!"

– **Gilbert Schwarzmüller**,
Leiblfing Hankofen /
Germany



TOMORROW'S TECHNOLOGY – TESTED & DRIVEN TODAY



Participants from all European markets took the opportunity to test & drive in operating conditions



"Tell me, I'll forget. Show me, I'll remember. Involve me, I'll understand!" This ancient Chinese proverb aptly describes the experience participants enjoyed at this year's Case IH Training Camp, which ran from the beginning of September until mid October in Sopron, Hungary.

More than 1100 participants – primarily sales advisers and managers from more than 350 European Case IH dealerships and 20 importers – took the opportunity to familiarise themselves with the very latest Case IH technology during thorough testing in the field.

This event formed the largest European training camp ever organised by Case IH in the history of the company. At its heart was a fleet of tractors and combines delivering more than 10,000 hp, including the latest tractor models such as the complete Farmall series and the Puma range with ABS.

"At Case IH we have a simple, clear strategy," says Matthew Foster, Vice President at Case IH responsible for European business.

"We want to be the preferred brand of European farmers when it comes to modern agricultural technology backed by best-in-

class service, and our dealers are at the centre of that desire. That's what is behind our decision to invest intensively in expanding our dealership network, and the introduction of new services, particularly in terms of first-class training for sales and service employees,"

"We are adopting a new training strategy, with examples of this including our Web University and the Experience Centre in St. Valentin, Austria. Our training camp, which takes place every one or two years, is a highlight of the new strategy, and here we provide the opportunity to gain more than just theoretical knowledge about new Case IH technologies, as participants can also test them extensively in the field," explains Mr Foster.

The commercial training team at Case IH, together with sales support staff, were responsible for a large part of the hard work that went into organising the event. The latest technologies, including round balers and the new 130 and 230 series combines with new luxury cab and new headers, were presented by more than 25 trainers at six country-specific stands. The training camp also focused on the new telematic systems integrated into

the Advanced Farming System (AFS) from Case IH.

In action in the field

A total of more than 800 hectares was made available for extensive testing in the field, meaning there was no shortage of land to work on. "There certainly aren't many occasions or venues at which this much space is available on which to test drive machinery," notes Gabriele Hammerschmid, Marketing Director at Case IH and responsible for all product launches in Europe.

"Participants had the opportunity to try out tractors ranging from 55 hp to 670 hp, incorporating the latest farming technology. In small groups they were able to discover the reasons for various latest products, and learn what advantages they will bring to farmers in the field.

"We also make use of the training camps to listen to our sales advisers. Their feedback comes directly from our customers, and naturally provides important information for our development engineers and ongoing Case IH marketing programmes. We obtain a great deal of valuable input here."

NEW TO THE CASE IH FANSHOP

MANY NEW ITEMS FROM THE AUTUMN/WINTER COLLECTION 2012 ARE NOW AVAILABLE FROM THE WEB SHOP WWW.CASEIHSHP.COM !

All prices include VAT. Printing errors excepted. Available while stocks last.



Case IH softshell jacket
Three-layer ID-Tech quality: outer layer durable and stretchable, mid layer functional membrane with wind and water resistant properties, lined with soft, insulating micro-fleece. Sizes S-XXXL.

€ 89,20



Case IH fashion cap
New fashion cap, polyester

€ 10,12

Case IH ice scraper
Ice scraper and ice breaker in red plastic, rubber wiper

€ 2,80



Case IH 600 Quadtrac
Scale 1/32. Details like the original. Definitely a must have in your collection!

€ 39,90

IH 955
Scale 1/32. With cabin, dual tires and front weights.



€ 94,90



€ 18,90

Case IH knitted cardigan for women
Yarn 90% cotton / 10% nylon, mottled grey, with embroidered Case IH logo. Sizes XS-XXL.



€ 58,91

Case IH jersey scarf
100% cotton, approx. 180 x 29 cm, red & white stripes



€ 31,80

Case IH coffee cup set
Porcelain coffee cup set for two persons in elegant curved design. Cup diameter approx. 8.5 cm

50 CASE IH QUADTRACS MEET IN LINCOLN TO SET NEW WORLD RECORD / 3,000 SPECTATORS WATCH THE SHOW / OVER £ 20,000 IN DONATIONS RAISED FOR CANCER RESEARCH / ENTRY IN GUINNESS BOOK OF RECORDS ACHIEVED

CASE IH QUADTRACS TOGETHER AGAINST CANCER



Case IH Quadtrac owners from all over the UK sacrificed a day in the field with their vehicles to participate in a Case IH Quadtrac parade in Lincoln. The aim of the event was to raise funds for cancer research. And to set a new world record with the largest gathering of tractors ever.

The event was organised by Helen Rainthorpe in memory of her father who died of cancer in 2010.

The Case IH Quadtrac drivers were successful in their bid: watched by 3,000 spectators the 50 huge tractors ploughed their plot in seven minutes and 47 seconds. This time was sufficient to secure their place in the Guinness Book of Records.

There was also much joy about the amount they raised from donations: the participants and spectators put together £30,000 to be invested in cancer research.



SIGNIFICANT INCREASE IN READINESS TO INVEST – FARMERS SET COURSE FOR FURTHER BUSINESS DEVELOPMENT – INNOVATIVE TECHNOLOGY KEY TO ENSURING COMPETITIVENESS

OPTIMISM POINTS THE WAY

The current mood in European agriculture is optimistic. This is demonstrated by the results of the European trend monitoring that the DLG (German Agricultural Association) conducted in seven countries in western, central and eastern Europe. The most significant result was that farm managers rate the current situation as well as expectations for future developments as positively as in the business boom year of 2008. As a consequence there is a notable increase in the readiness to make investments", say the agricultural economists at the DLG. Based on the favourable outlook for agriculture due to the global increase in demand for agricultural produce and the ongoing low level of interest on loans, farmers are looking to set a course for further business development. They believe that the use of innovative technologies is a key to ensuring their competitiveness. A total of 3,000 farmers in Germany, France, Great Britain, Kazakhstan, Poland, Russia and Ukraine were interviewed during the survey.

Great business prospects

The survey indicates that expectations regarding business development have improved on the survey carried out in Germany in autumn 2011 and have reached the previous best level of spring 2008. Slight improvements have also been registered for France and Great Britain. Farm managers interviewed in Kazakhstan, Russia and Ukraine also have a positive outlook. Polish farmers on the other hand have more reserved expectations regarding business expectations.

Readiness to invest six percent up in Germany

Expectations in business development within the various sectors of the farming industry have also improved in many EU countries

compared to the last survey. Crop farmers, dairy farmers and pig farmers are all equally optimistic about the coming months. The level of readiness to invest is supported by the current low level of interest on loans. Livestock farms are catching up on investments following the increase in costs as a result of the biogas boom over recent years, forcing a downturn in investment. In addition, obtaining planning permission for livestock sheds has become less certain (grants, local protests), so that farm managers want to use the current conditions for the next step in business development.

Shift in investment sectors: livestock management leads the way

In all countries the readiness to invest has increased most in the livestock sector - amounting to a six percent increase in Germany compared to autumn 2011. Farmers involved in foreign trade also indicated an increase in investment of three percent. One area that shows a downturn in investment plans is the renewable energy sector. According to the current survey 19 percent of planned investments are going into this sector compared with 28 percent in autumn 2011.

Main aim of investment is to reduce costs

70 percent of the farmers who are prepared to make investments are set on reducing production costs by using the latest technology. In livestock management this involves better use of working time and more efficient usage of land (reducing costs in raw forage production, for example). The key to achieving this aim is the implementation of modern technology.

BIG GROWTH POTENTIAL IN GLOBAL AGRICULTURAL PRODUCTION



Can agriculture cope with increasing global demand for raw materials in the medium term? This question was a central theme at this year's agri benchmark cash crop conference. This network of leading agricultural production economists coordinated by the Johann Heinrich Thünen Institute and the DLG (German Agricultural Association) held their meeting at the beginning of July in Pilanesberg, South Africa. Leading agricultural economists from 23 countries discussed the current developments and perspectives in global farming production. Using case studies in Argentina, Australia, Bulgaria, Morocco, Poland, Ukraine and the USA they demonstrated the huge scope for increasing output from both a technical and economic standpoint. According to Pawel Boczar from Posen University in Poland, wheat yields of 4 t/ha are normal in Poland, for example, while well-organised farms manage 6 t/ha, i.e. 50 % more. However, this is dependent on an improvement in nutrient supply, better quality seed and optimised plant protection.

Argentina's example clearly showed that it is quite possible to extend farming area without

incurring especially high costs. Martin Otero from the Argentine partner organisation, Hillock, explained that it would be realistic to extend farmed area by 20 to 40% by 2020, even with the strict deforestation regulations. Assuming that the grain market remains stable for Argentinean farmers, an increase in oil seed production of up to 25 % and in grain crops of around 75 % is feasible.

At the moment it is high raw material prices and a significant improvement in the viability of arable farming that encourages the expansion in production. It is possible that the market for agricultural raw materials again becomes a buyers market as a consequence. Reference invoices for agri benchmark farms indicate that the wheat price could fall from its current level by at least 30% or 50 USD/t over the long term. According to Yelto Zimmer from the Johann Heinrich von Thünen Institute (Braunschweig/Germany) it is possible - or quite likely even - that we will see an extended period of very low raw material prices, despite international agencies forecasting high prices.

Divan van der Westhuizen of the BFAP (South Africa) and Kelvin Leibold from Iowa State

University (USA) presented a comparison between American and South African maize production. A statement was that due to the high prices and low productivity of nitrogen maize production with irrigation is relatively expensive in South Africa. One of the possible reasons is that maize/soya rotation is no longer practiced by farms so that the maize does not benefit from the nitrogen in the residues left in the soil.

During the global forum, Somporn Isvilanonda from the partner organisation KNIT (Thailand) and Luan Nguyen (Vietnam) presented success factors for small farms focusing on rice production. Thailand and Vietnam are by far the largest players in the worldwide rice market. Reliable land ownership rights, access to loans and advice, as well as a well-functioning infrastructure have proven to be decisive success factors.

Presentations from the Global Forum can be downloaded from www.agribenchmark.org/cc2012.html. You can also obtain more information by contacting Dr. Yelto Zimmer at the Johann Heinrich von Thünen Institute by email: yelto.zimmer@vti.bund.de,

AREA-SPECIFIC TILLAGE SAVES ENERGY AND TIME

Prof. Dr. Yves Reckleben from Kiel Technical College and his team investigate the advantages of area-specific tillage. Tillage with differing working depths is the next step to follow previous conservation soil preparation methods and saves time and energy.

FarmForum: Why are tests being performed to investigate area-specific soil preparation?

Tillage processes for specific areas is the next step in optimising work in the field after the conservation processes implemented so far. It is not necessary to use the same working depth in every area of a field because straw levels and soil structure will vary. Sandy soils have fewer structural particles, for example, and are easier to compact. Deep loosening action is necessary. On the other hand, areas of heavy soil can often regenerate themselves and loosen up, so that the working depth can also be reduced where necessary. Adapting the working depth can save more energy than conservation processes that apply a consistent depth.

FF: Which implements are used during testing?

The tillage implement we have been using since 2003 is a stubble cultivator disc harrow combination - an Amazone Centaur. The choice of stubble cultivators with adjustable working depth was very limited when we started the project. Since then other well-known manufacturers have followed suit. The Centaur has a tine frame that can be infinitely adjusted by hydraulics and is equipped



Many years of successful cooperation with Case IH

The tractors that we have been using in our tests since 1999 are from Case IH. We have been driving a Puma CVX for two years. We have concentrated on Case IH because the issue of obtaining specific measuring data for the tractor is not solved in the same way by every manufacturer. In addition, we need data from the manufacturer for our tests that some companies are not pleased to provide. Case IH is very open and made these data available to us. We work together very closely and also perform many tests together. It is important that the manufacturer is interested in supporting such developments and that we are able to work together on equal terms. All the feedback we collect also has a tremendous advantage for the tractor manufacturer because they can see the thresholds where the tractors are maybe not ideally balanced, or the weight class is not ideal. The result is that the design engineers have information for implementing improvements.

with additional measuring and control instrumentation. The disc harrow and packer roller can also be depth-adjusted.

FF: How is the working depth calculated and controlled?

We use an algorithm that was developed together with our partner Dr. Vosschenrich. The texture of the soil is recorded to calculate the working depth: the ground and the relief are mapped. These factors are laid down in an application map.

The data calculated from the application map are transmitted to the Centaur's job computer using GPS. GPS is an important element because it indicates the position in the field and creates the link between the current area of the field and its data. The computer recognises at which point a working depth of 20 centimetres is needed, and at which point 10 centimetres is sufficient. It then sets the required depth using the hydraulics.

In most cases we arrive at three different working depths. These are generally between 10 and 25 centimetres. The more accurate the GPS the precisely we can define specific areas in the field. To increase accuracy it is possible to upgrade to an RTK signal to enable a pass-on-pass overlap of 2 centimetres. This reduces work, lugging power and wear.

Another method - without complex mapping and GPS - is to monitor working depth in real time using a sensor fitted to the tractor that measures the soil conditions and then converts the information into a signal that can be directly applied to the working depth of the implement.



FF: What kind of results can be achieved from area-specific conservation soil preparation?

Experience gained over many years indicates that compared to conservation systems that previously operated at a constant depth, on average we can save between 30 and 50% of fuel per hectare.

Increased output can also be achieved. This is dependent on making sure that you do actually drive faster over areas requiring shallow working depth. Normally we try to operate the stubble cultivator at 10 kph for ideal results. If you are suddenly able to increase your speed from 10 kph to 12 kph because more energy can be converted into speed, then output goes up 20%. From a technical point of view you are certain to save energy per metre and cover a greater area per time unit than with comparable technology. In addition we have monitored crop yields. Each year we have recorded yield - using the yield mapping system on the combine

harvester - to compare the fields where we have used area-specific tillage and conventional conservation tillage. We have built up consistent documentation where we can see that shallow working in specific areas of a field has not had a negative result. Yields are virtually identical.

FF: What do Farmers need to watch out for?

If you are thinking about applying area-specific working depths then the first thing you need is a decent implement. You have to find the right bit of equipment for your location and your requirements. Then there is a lot of relatively new technology now available with tractors, so there are many factors that need to be taken into consideration at the same time. It is well worth taking the time to investigate what is available, and get advice on how to get started. There's quite a bit of electronics to deal with, and with electronics there is always a good chance that things aren't going to work first time! The technology you choose should be

proven - use manufacturers that already have experience.

FF: How do you think research into area-specific tillage is going to develop in future?

I think that over the next few years we will see a wide offering of equipment that is capable of area-specific operation. From my point of view it will be necessary to test which manufacturers are really good, and which are not.

Input data is also an important issue. At the moment we are able to detect soil data and relief data. On top of that there is a range of measurable parameters that are important such as straw quantity and various regional soil characteristics and compaction levels. This is where real time sensors would be interesting. I think that a combination of application maps and real time sensors is the way we will be going in the future - so that moisture can also be measured during tillage, for example.



EFFICIENT POWER SPRING DEMO TOUR

Case IH had a busy and successful Puma Efficient Power Spring Demo Tour in the UK this Spring. There was excellent customer attendance throughout the tour, as the demo team travelled around the country to Kildalton College in Co Kilkenny, Greenmount Campus in Co Antrim, Askham Bryan

College, Shuttleworth College, Harper Adams University and finally the Royal Agricultural College in Cirencester.

Customers had the opportunity to operate a number of Puma models with a variety of implements attached. The Case IH team presented a fuel comparison test using a

dynamometer, which showed once again a significant fuel saving when using the Efficient Power tractor in comparison to the Tier 3. Tests undertaken at these colleges showed a total financial saving (combined fuel and Adblue) of between 13% and 16% versus a Tier 3.



STUART DAVIDSON - KNOCKOTHIE FARMS,
ELLON, ABERDEENSHIRE



CONTROLLED TRAFFIC FARMING AND THE AXIAL-FLOW 9230

With more than 1800 acres of winter barley and winter OSR to be farmed at Knockothie Farms in Aberdeenshire, the move to controlled traffic farming has been a carefully considered one.

As a member of Controlled Traffic Farming UK for the past three years, Stuart Davidson has discussed the issues facing the transition with fellow members, industry experts and product managers at Case IH. "I'm convinced the move to controlled traffic is right for our business. With various implements running at different widths, I calculate that we currently have wheel contact with over 95% of the land on the farm. With controlled traffic we hope to reduce that to less than 20%. It's the next best thing to no-traffic farming," says Mr Davidson.

One of the long-term goals is to improve soil structure, biology and drainage across the farm. "The move to CTF can involve a considerable investment, so we've looked at the machinery we have and what needs to change. We decided to move to 10m regime, using a 10m combine working width and a 10m drill. We currently use a 36m sprayer that we are adjusting to work at 30 metres. It was essential that we developed a system that was as future proof as possible, and we've been working closely with the manufacturers to that end."

The farm's current Axial-Flow 9010 combine has given four years' excellent service and completed more than 11,000 acres, so replacing it with a new 9230 was a logical choice but Mr Davidson did look at other machines. "The Axial-Flow is simple, reliable and cheap to run, and when you consider the purchase price and the high performance and quality, it is also very good value.

"We have a neighbouring farm with an industry-leading straw-walker combine, and the Axial-Flow 9010 was able to take off more tonnes per hours. We were using the same haulier, same weighbridge on the same night so it was a direct comparison. Furthermore, my combine operator, Ray Chapman, has become an expert at setting

up the Axial-Flow, even assisting some of Case IH's other customers, so staying with Axial-Flow made most sense from a productivity point of view."

With a performance increase from the latest Tier 4 engine and a new faster unloading auger, Mr Davidson is looking to further increase productivity on the farm. "The new independent cross auger allows the tube to be emptied, which reduces weight and allows partial unloading. The extended tube length was also a major consideration when deciding our base width for controlled traffic."

Improvements in residue management now complement the move to the small tube rotor. "We bale our straw ourselves and quality from the Axial-Flow is good and bales are easy to handle. The myths about rotary combines continue but we find it performs as well as, if not better, than a big straw-walker even in damp conditions."

Mr Davidson, who also runs a Case IH Quadtrac tractor, has decided to specify the new 9230 with tracks as the first major step in the transition to CTF. "The new combine runs on Case IH's

proven track technology that has been developed for the Quadtrac. Not only does this have an improvement on soil compaction but reduces the overall combine width for easier handling on the road."

The farm's approach to improve soil quality and there for improved productivity has been through accurate control. The farm uses the high-accuracy RTK guidance system to operate both the combine and the tractors. The 9230 has been specified with a 10.5m header to ensure the 10m working width can be comfortably achieved and RTK enables Ray to carefully monitor combine performance rather than concentrate on steering.

In addition, a Barth trenchless drainage plough will be draw by the Quadtrac using the RTK system as part of an extensive drainage initiative on the farm. "No matter how powerful the machinery you run over the top of it, if the soil quality is reduced so is productivity. Through controlled traffic farming and reduced cultivation we can improve soil quality, which means better yields and therefore full use of the capacity Axial-Flow combine."





FOR ONE SUFFOLK FARMING BUSINESS, A TRACKLAYER HAS BEEN THE TRACTOR OF CHOICE AS HEAD OF THE FLEET FOR THE PAST DECADE, BUT CONCERN OVER HEADLAND COMPACTION HAS MEANT A RECENT SWITCH FROM A CONVENTIONALLY STEERED TO AN ARTICULATED MACHINE.

PIROUETTE OR PIVOT?



Rubber-tracked crawlers have prompted large farms to flock back to tracklayers, since their introduction 25 years ago. They largely banished the old steel-track crawler issues of road-transport hassles, slow working speeds and uncomfortable operation. But the majority of the machines on the market remain true to the original crawler principle of twin tracks and skid-steering, albeit nowadays via more sophisticated differential speed arrangements, rather than braking individual tracks. The exception, introduced almost a decade after the

first rubber-tracked tractors, remains Case IH's pivot-steer Quadtrac, with its articulated tractor design and four individual track units. While the system is available only on tractors of 450-600hp, in that power bracket the design has taken a considerable proportion of the market, and its steering method is arguably one of the key reasons for that. That's certainly the case at Westrope Farming Ltd's contract farming business, based at Loudham, near Woodbridge in Suffolk. Two years ago, farms director Andy Rankin replaced his conventional tracklayer with a Case IH Quadtrac 485. But he's no stranger to tracked tractors. With 3480ha of combinable and root crops on contract-farmed and tenanted land, spanning blowing sand to medium clay, they first ran them in 2000, when the Westrope business expanded from 800ha to 1800ha. More recently, though, when the company's main machine came up for replacement, Andy Rankin reassessed the type of prime mover best suited to the business's needs. "Just over ten years ago, we were running a 260hp John Deere 8400 as our main wheeled tractor, which was dualled-up for drilling with a 6m Vaderstad Rapid," he explains. "But the new land we added was around 10 miles from our base, so duals became impractical, particularly as we didn't want to have to travel with an escort. At the same time, we also wanted to move up in

horsepower, to allow us to operate an 8m drill and cultivator." Headland compaction "Although we'd expanded the land area by almost 50%, I wanted something that would again be capable of handling almost all our cultivations, plus the drilling -- bar the rape -- on our combinable crop land. We looked again at all three main tracked tractors, but felt that only the Quadtrac could help us overcome our headland compaction problem. I'm never keen to buy the first of something, and I felt that after ten years since the new-type Quadtracs were introduced, they should be pretty sorted. That led to our decision to trade in for a Quadtrac 485, switching to articulated steering and moving up another 145hp." "One of the other big plus points of the Quadtrac was its ability to travel smoothly on the road at 40km/h, whereas I think a conventionally-steered crawler would be more twitchy at that speed. And although we've a big fleet from another manufacturer, I wasn't afraid to go elsewhere for what I was looking for." There was also the offer of a full-service contract for the machine, which has already done 3000hrs and is in its third season. Priced at £1.50/hr, and covering all service costs, including oils, filters and labour, it's enhanced by DoePlus cover from supplying dealer Ernest Doe Power, which covers breakdowns caused by engine components, transmission failures, and

electrical, fuel, cooling, steering and hydraulic issues. With cropping centred around roots (see Farm Facts) there's work for the crawler almost all year round, particularly as it does nearly all the combinable crop drilling, as well as most of the cultivations. Its first task of the season tends to be loosening land in July after carrots, onions or potatoes, with a Keeble seven-leg subsoiler, which also incorporates 16 front ripper tines. The machine has run very well, clocking up approximately 3000hrs in the two full seasons it's so far completed. Ultimately though, the decision to switch to an articulated tracklayer has been justified by the impact it has had on headland compaction, he believes. Working width "It's eliminated the scuffing problem, and had a marked effect on drilling quality in general," says Mr Rankin. „We prefer not to operate the widest kit, but instead go for slightly narrower working widths to ensure we're always working at the best speed for the job. With this approach, plus more power to help us work as deep as necessary and master the job, we're never scrabbling for grip.

With our subsoiler, for example, we can work at up to 8km/h where possible, with sufficient power to cope with the bow wave of soil this can create in front of the roller. And levelness and uniformity of cultivations is much improved." But he didn't feel the need for a bigger model, despite the fact that a 535hp version was available when the Quadtrac was purchased. "We try to run all our own equipment at 100% efficiency, hiring in equipment or contracting out additional work if necessary where there's more to be done. We felt that the 485 matched our machinery, and would be on top of the work without being excessively overpowered. "That said, I'm not keen on operating equipment around the clock. We work on the basis of having what we need to complete the job in a good working day, employing good operators who make the best of the machines." In the case of the Quadtrac, the man in the seat is Ben Cave, who spends a total of around eight months of the year in the cab. While the new machine was his first experience of Quadtracs, he says he found it simple to operate from the off.



"The dealer showed me the basics, and Case IH themselves offered further training, but at the time we were too busy. It's an easy machine to get to grips with, though. "When drilling, a full tank of diesel lasts two days, or three-quarters of a day when subsoiling," notes Ben. "We're using more fuel than before, but for a higher workrate, meaning output is greater and jobs are completed faster." Assisting him in his job is a Trimble 232 GPS receiver and auto-steer system, working on the 2-5cm accuracy Omnistar XP signal. "The Quadtrac has certainly proved to be the right tool for the task, and with a new combine delivered last season, complete with yield mapping for the first time, we should now have a clearer idea of how headlands are yielding."

IRISH FARMER WINS FARMALL 65C

The 20 suckler cows on Barry Quinn's farm at Corrakeen, a few miles north of Castleblaney, may get a shock when they see a bright, shiny new Case IH Farmall tractor roll into their yard next week. But it is unlikely to be anything like the shock Mr Quinn got himself when he found out that he had won the 40,500 prize. "The phone call left me speechless. It was just unreal," admitted Mr Quinn at the announcement of his win at the National Ploughing Championships in Wexford. Mr Quinn, who bought a tractor for 3,000 last year, said that while he had never owned a new tractor, he had certainly dreamed about it. Competition entrants were asked whether Case IH started farm machinery production in the 1700's, 1800's or the 1900's? 'Although Case and International Harvester merged in 1984 to become Case IH, Jerome Increase Case founded the J.I. Case Company in 1844. The International Harvester name dates back to 1902, when McCormick Harvesting Machine Company and Deering Harvester Company merged. The entrant was also asked ,If you won the Farmall 65C, what customised registration plate would you give it? Most imaginative suggestion wins.' "I put in a couple of entries and thought of the name in bits and pieces when I was out on the land," said the full-time farmer. His winning entry, "the win that shapes the barley", was

considered the best entry out of thousands reviewed by a panel of 15 judges. When asked if he would be tempted to sell the tractor, Mr Quinn was adamant that it would be going nowhere once it was delivered to his farm. "It's the perfect size for me," he grinned. It is unlikely Mr Quinn's neighbours will be

as surprised as Mr Quinn's cows with the new machine's arrival. "All my relations and neighbours know already. In fact, a lot of them came all the way here today to join in the celebrations," said the triumphant Monaghan man.

Winner of the Farming Independent Case IH Farmall worth over 40,000, Barry Quinn from Corrakeen, Castleblaney (centre) pictured with Farming's deputy editor, Darragh McCullough, and Sean Byrne (left), sales manager Case IH Ireland



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