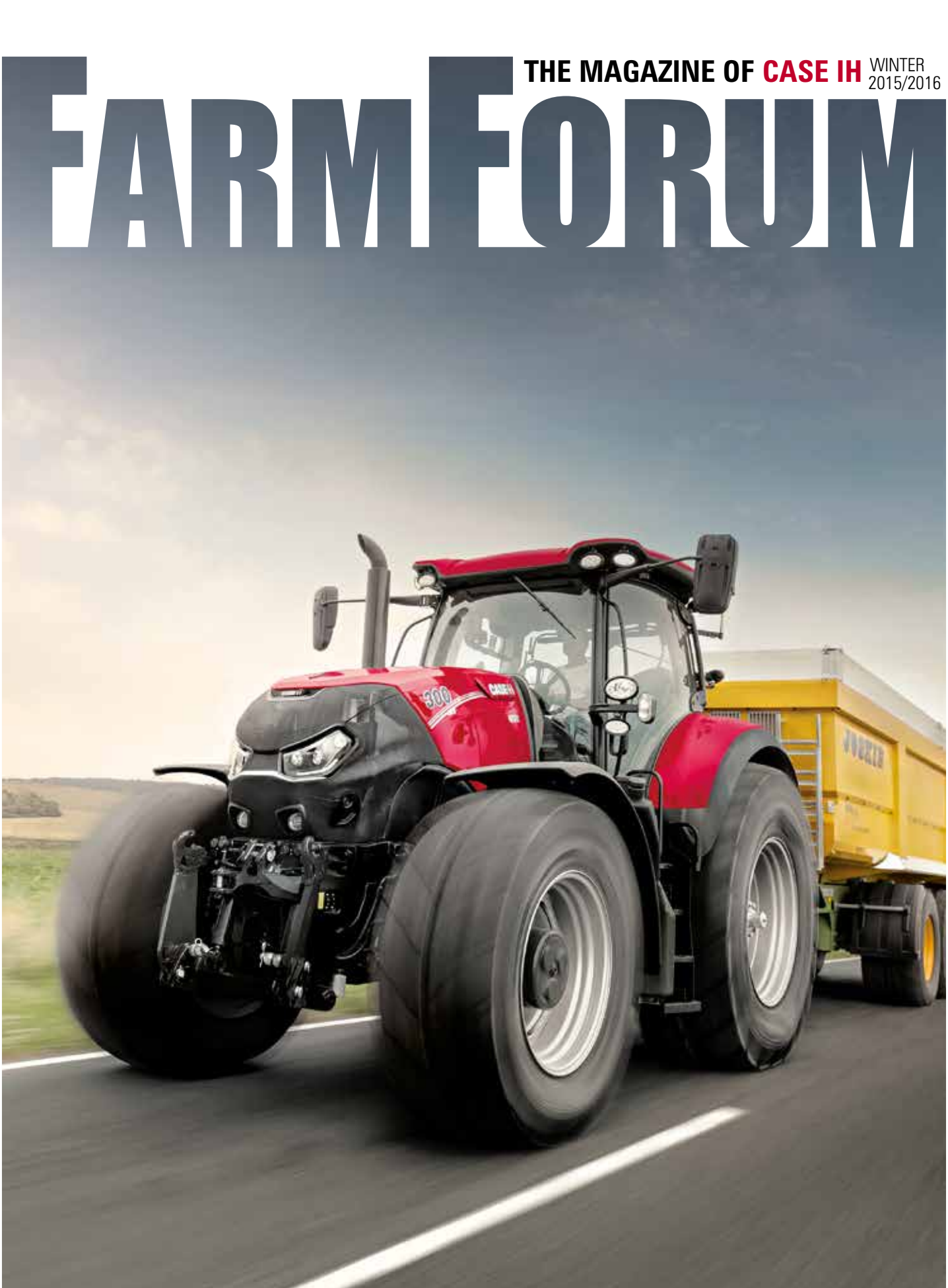
FARM FORUM

THE MAGAZINE OF CASE IH WINTER 2015/2016



OPTUM CVX
EFFICIENCY RETHOUGHT

QUADTRAC
THE ORIGINAL

AXIAL-FLOW
CLEVER INNOVATIONS

ONLY TRUST
THE ORIGINAL

QUADTRAC® SERIES

Case IH introduced agriculture to the benefits of having four tracks in 1997, and we've been the ones perfecting track technology ever since. Our legendary Quadtrac® series tractor features four independent oscillating tracks on an exclusive five-axle design. It's an agronomic design that provides you with better traction, superior flotation, reduced compaction and a great overall ride. So if you're looking to maximise productivity and performance in even the toughest conditions, look no further than the tested and proven track leaders at Case IH. See the difference for yourself at your local Case IH dealer or online at **caseih.com.**

MACHINE OF THE YEAR 2014

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CASE IH AGRICULTURE

CONTENTS

LEGAL DETAILS
FarmForum provides information about Case IH products, trends in the agricultural sector and experience-based reports, and aims to help you to manage your farm business successfully.
Publisher: CNH Industrial Österreich GmbH, Steyrer Strasse 32, 4300 St. Valentin, Austria
Edition Winter 2015/2016

EDITORIAL
BIRTH OF A NEW LEGEND

DEAR READERS OF FARMFORUM,

The bar has been set very high indeed: 'Birth of a new legend' is our response to the unveiling of the Case IH Optum CVX, a completely new series of Case IH tractors developed and manufactured in St. Valentin, Austria. In this edition of FarmForum we shall be imparting everything you need to know about 'The Newcomer'.

It is now more than 170 years ago that Jerome Increase Case developed and built his first threshing machines in Racine, Wisconsin, USA. One of his greatest strengths and a source of inspiration was his practical background in the development of solutions to make working life more efficient and, above all, easier to contend with. Ever since that time, a hallmark feature of Case IH has been to focus on practical needs and requirements.
After all, machinery and vehicles conceived in design offices and manufactured in factory buildings are only ever as good as they can later prove themselves to be in practical working life. Feedback from our customers, either to ourselves directly or gathered indirectly through our dealerships, our 'eyes and ears at grass roots level' are therefore of elementary significance. This feedback is a key prerequisite for us to be able to provide a continual succession of new, innovative, powerful and dependable solutions to meet the increasingly challenging practical needs of the farming sector.

For the Optum CVX series presented in this edition, we involved our customers more than ever before, and did so right from Day One. In a wide-ranging and very detailed survey, we recorded the experiences, expectations and wishes of potential users. We then took these self-same experiences, expectations and wishes gathered from practitioners, some of whom were still using technology from other sources, and converted them into guiding images and target parameters for our engineers to turn into reality.

I am convinced that the new Optum CVX tractors accomplish far more than simply satisfying the expectations we had of them! Without any exaggeration, we can see today that our product portfolio is more comprehensive, more capable and more innovative than it has ever been. Even though the new Optum CVX series occupies pride of place in this editorial and we invite you to allow yourself to be pleasantly surprised by all the other product highlights and reports that we have compiled for you on the following pages too.

Wishing you a great deal of reading pleasure!
Best regards,

Stefan Bogner
Business Director Case IH Germany

FUNCTIONAL 'HIGH-PERFORMANCE DESIGN'

THE NEW OPTUM CVX

A POWERFUL TRIO: DESIGN – FUNCTION – PERFORMANCE!

Of the innovative design features of the Optum CVX, alongside its appealing looks, those that make the greatest contribution to the performance levels of the new series include the relatively low basic weight of the unit, derived from its design, which does a great deal to alleviate soil compression and so makes this tractor much kinder to the ground it drives over. The there is the combination of low weight and compact dimensions which enables the available engine power to deliver superior performance when the tractor is being driven on roads. In particular though, it is the rugged design of the Optum CVX and all of its sub-assemblies that imbues it with maximum levels of reliability, even after a great many hours in operation.

The 'strong trio' of design, function and performance really comes to the fore in the new design of engine block and oil pan, because the oil pan also constitutes the backbone of the tractor. This not only reduces the load imposed by the engine block, but also replaces the chassis, thereby facilitating an increase in payload capacity. Furthermore, the sump and the fuel tank have been optimised to facilitate maximum steering lock positions on the front wheels. This design therefore sets a yardstick for the Optum CVX achieving top-of-class results in terms of efficiency. Examples would be its versatility, the high permitted GVW for attached implements and ballasting, the great steering lock-to-lock range of the front wheels and also the short distance between front axle and front-mounted hydraulics, delivering compact overall measurements and great manoeuvrability even while front-mounted implements are attached.

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FUNCTIONAL DESIGN IN DETAIL

Functionality and design belong together with all components. The new front axle is an example of this: an adaptive control unit records the vertical load and adapts the response characteristics of the suspension accordingly. At the same time, only a small number of moving parts are installed. This virtually eliminates the need for maintenance work. Even the intelligent hydraulic circuits on the Optum CVX are characterised by innovative design. One of the most remarkable details here is the oil temperature-dependent valve which controls the flow of oil to the oil cooler. The lower the oil temperature, the lower the pump performance level is required to be. An additional oil sump below the transmission housing is yet another of the cleverly conceived design features. Without increasing the oil level in the transmission itself, and therefore the potential oil losses, an additional supply of about 70 litres of hydraulic fluid is available.

The workplace in the Optum CVX is a further expression of this clearly enunciated design: The familiar Case IH cabs, highly thought of by operators in the field, have evolved still further to new and higher levels. For example, there is the individually adjustable driver's seat that can also be swivelled to either side by as much as 15 degrees, the tyre pressure monitor integrated in the AFS 700 screen, serving up to 16 tyres, the options of 360-degree lighting, or the modular and requirements-based ballasting options for rear wheels, front wheel and for the rear-mounted hydraulics: Attractive design and optimum functionality go hand in hand with every design detail on the Optum.


300

CASE IH OPTUM CVX RANGE

EFFICIENCY RETHOUGHT

"WITH ANY NEW TRACTOR, WE NEED TO BOOST OUR PRODUCTIVITY AND TO BE ABLE TO ACHIEVE THE BEST POSSIBLE RESULT". THIS WAS THE OUTCOME OF THE CUSTOMER SURVEY, CLEARLY FORMULATING THE 'JOB OF WORK' FACING THE CASE IH DEVELOPMENT TEAM. THE OPTUM CVX IS OUR EQUALLY CLEAR ANSWER!

The customers surveyed in Europe had very precise notions of how that 'job of work' should best be implemented: the wish list featured higher engine power ratings combined with lower operating costs, more powerful hydraulics and lifting power together with other efficiency features allied to a higher permitted GVW, more ballasting options and further improvements to the workplace environment of the driver. All well and good: the same tractor also was required to cut a good figure for itself on fieldwork and out on the open road.

COMPACT AND POWERFUL

The new Optum CVX series comprises two models with a 6.7 litre six-cylinder engine from FPT Industrial with variable turbocharger (eVGT) and Hi-eSCR only exhaust gas treatment. Without additional systems, such as exhaust gas recirculation (EGR) or particle filters, optimum combustion is assured and emissions level IV is achieved. At an engine speed of 2100 rpm, the nominal ratings of 270 and 300 horsepower (hp) respectively enable the two Optum CVX models to achieve the performance levels of larger tractors allied with the compact dimensions of a Puma – and this combination yields a perfect match with one of the core requirements of our customers.

With its four driving ranges, the upgraded continuously variable transmission (CVT) on the Optum CVX models leaves no wish unsatisfied: The two variants available are the 0.03 to 40 km/h Eco or the 0.03 to 50 km/h Eco. In conjunction with the recently developed front and rear axles, a wheelbase measuring just 3 metres and Group 49 tyres ensure that the Optum CVX delivers superlative power transmission and fabulous traction, while also being remarkably manoeuvrable.

PTO SHAFT SPEEDS 'MADE-TO-MEASURE', GREAT LIFTING POWER

The new Optum CVX models feature a four-point PTO shaft at the back and an optional two-point PTO shaft at the front. The rear PTO shaft with Electronic Speed Shift delivers 540 rpm at an engine speed of 1930 rpm, which the 540 Eco achieves at 1598 rpm, delivering 1000 rpm at an engine speed of 1853 rpm while the 1000 Eco achieves the same at an engine speed of just 1583 rpm As with the rear-mounted PTO shaft, both speeds for the front-mounted PTO can be engaged electrically from the cab. For this, the 1000 and/or 1000 E rpm is available.

For Optum CVX models, instead of the standard 165 l/min CCLS hydraulic pump, there is also the option of a 220 l/min CCLS pump. In both cases, the rear-mounted hydraulic unit can lift up to 11,058 kg while the front-mounted powerlift can make light work of loads weighing up to 5821 kg. That makes these tractors remarkably versatile and their impressive high performance levels deliver real conviction.

OTHER TECHNICAL HIGHLIGHTS

A practical basic weight of 10,800 kg and a permitted total weight of 16,000 kg highlight the payload and, therefore, also the wide range of options afforded by an Optum CVX tractor. A 630 litre diesel tank and a 96 litre tank for AdBlue facilitate long and productive working days in the

1 **EFFICIENT AND PROVEN ENGINE**
2 **COMFORTABLE RIDE**
3 **TECHNOLOGICALLY ADVANCED**
4 **CONTINUOUSLY VARIABLE (CVT) PRODUCTIVITY**
5 **LIGHT AND POWERFUL**

field and on the road, in particular as a result of the fuel-efficient FPT engines. The new parking brake delivers a clear safety bonus because, while the vehicle is stationary, it is activated automatically just 45 seconds later, and also five seconds after the driver leaves his seat, as well as after the engine has been switched off. Of course, the ex-factory standard equipment includes ISOBUS Class III functionality and RTK+ together with Headland Management II and the new file transfer function AFS Connect, which enables vehicle and equipment data to be queried via an appropriate wireless portal and then loaded into the farm management software. The Optum CVX is therefore well positioned on the notional starting grid. Experience it for yourself!

OPTUM CVX ENDURANCE TEST

HOT, COLD, DUSTY, SEEMINGLY ENDLESS LOAD DUTY CYCLES – BEFORE A NEW TRACTOR FROM CASE IH EVER GETS UNVEILED TO THE PUBLIC, PROTOTYPES AND COMPONENTS WILL ALREADY HAVE COMPLETED INCREDIBLY LONG AND CHALLENGING 'TRACTOR LIFESPAN' TESTING.

Anyone who believes that a new tractor has 'as good as accomplished its objectives' once the design, development and build phases have been completed should take a look behind the scenes during the product validation stage; they would then emerge with a very different view indeed. The tractor and its individual components and sub-assemblies are literally tested to the limits of their endurance capabilities - because that is the only way that our engineers can be absolutely certain that all of their calculations have been correct, that all of the innovations achieve at least what is expected of them - and that our customers can then purchase a vehicle that is, in equal measure, reliable, powerful and user-friendly.

IT ALL STARTS WITH SUB-ASSEMBLIES AND COMPONENTS

One example of the harshest everyday stresses and strains that can be simulated on a modern kind of medieval rack would be the distortion tests applied to the chassis. Clamped between its front and rear-mounted lifting gear, the chassis is required to withstand 50,000 compression and tension cycles at maximum load without manifesting any mechanical problems. The same applies to front axle or to front-mounted hydraulics. In fact, these are required to complete 100,000 lifting cycles at maximum load. Efficiency maps and maximum performance tests on the PTO shafts are other examples of how individual components get validated.

However, these comprehensives series of tests address more than simply maximum performance and maximum durability: they also look at issues such as the convenience of operation and the well-being of the driver and co-driver. By way of example, frequency maps are produced of the noise emissions that can be measured inside the cab and the overall noise level is measured and evaluated. Examples of what these measurements cover include acoustic emissions from the engine, PTO shafts and hydraulic pumps etc., and are conducted in accordance with OECD specifications.

REALLY KICKING UP SOME DUST

During one of the following tests for the complete tractor, in a 'worst case scenario' under the very harshest of conditions, the dust build-up at key components is measured, together with the cleaning function of cooling air to the engine, the function of air scrubbing for the air-conditioning unit and the seal integrity of the cab (prevention of dust ingress) are all recorded. Then the vehicle goes to the 'bump track', an arduous obstacle course driven across at two 'torture levels' - at 7 km/h and then at 20 km/h - constituting a serious durability test for the vehicle design and for its ride characteristics. Here too, a vast range of real-life scenarios are tested, requiring the tractor to negotiate the track without the weight of attached implements, with load only on the front-mounted hydraulics, only on the rear-mounted hydraulics and with load applied to both front and rear, mercilessly to and fro across this rough test track.

The test runs also include altitude tests at up to 2500 metres above sea level, repeated cold-start tests, brake function endurance tests and extensive function tests for front and rear PTO shafts at various different altitudes. These also include countless test kilometres on public roads, uphill and downhill, braking tests with ABS on various road surfaces and, of course, many test runs towing different loads, also on public roads.

With these series of tests, particular emphasis is placed on the fine tuning of all open-loop and feedback control components to ensure that the tractor can be operated on an everyday basis at maximum levels of efficiency.

THEN IT'S OFF TO THE FIELDS!

The final and decisive function and endurance test runs are conducted out in the fields: in Fargo (USA) at low temperatures, in Arizona in great heat and in Austria, Italy, the UK and Sweden under 'normal' European conditions. Out in the field, the focal points for testing include heavy-duty towing operations, challenging PTO work, or ISOBUS III functionality in a vast array of combinations of tractor and attached implements or trailers and towed appliances.

In overall terms, all of these 'Stations on the Martyr's Stake' serve just one single purpose: they enable us to ensure that the expectations our customers have in relation to the new tractor from Case IH are more than satisfied, safely and reliably.

AS A PRODUCT MANAGER WITH A KEEN SENSE OF RESPONSIBILITY, DAN STUART HAS ACCOMPANIED THE OPTUM CVX RIGHT FROM ITS INITIAL CONCEPT STUDIES. SINCE A COMPLETELY NEW DEVELOPMENT OF THIS KIND DOES NOT COME ALONG EVERY DAY OF THE WEEK, FARMFORUM DECIDED TO TAKE A CLOSER LOOK:

OPTIMUM SOLUTION

FARMFORUM: Mr. Stuart, even an agricultural specialist like Case IH cannot simply conjure up a new tractor out of thin air. What historical background gave rise to the Optum CVX?

Dan Stuart, Case IH Product Marketing Manager Tractors Europe, Middle East, Africa

DAN STUART: Needless to say, we 'keep our ear to the ground' and that means we receive a continuous stream of feedback from our dealerships, as well as directly from our customers. This helps us to formulate a clear picture of prevailing requirements and trends. Equally clearly, our development departments are always asking themselves how we can further improve our products, and how we can offer innovative solutions that deliver effective support to our customers and help them to progress in their businesses. However, with the Optum CVX, we decisively and very deliberately took all of that to the next level. We conducted a survey of farmers in Europe and the USA who currently employ 'different coloured technology' (i.e. our own as well as competing brands) ranging from 180 to 300 hp. We did this because we wanted to know what operators expect from a Case IH tractor in the performance range up to 300 hp.

FARMFORUM: Do farmers in Europe have the same views as farmers in the USA?

DAN STUART: There are very tangible differences! Whereas American farmers favour different tractors for different tasks, and also place emphasis on size and weight in respect of translating engine power into traction as effectively as possible, European farmers pursue a quite different strategy. In Europe, the emphasis is placed on high engine power ratings combined with compact dimensions - and versatility is also a key requirement. By that, I mean that a single tractor needs to be able to efficiently tackle as many different tasks as possible, so needs to have plenty of power in reserve, enabling it to achieve a maximum number of operating hours at minimal cost. A credo shared by European farmers runs like this: "A tractor can quickly get too heavy, but can never be too light because it is always possible to add ballast!"

FARMFORUM: What does that mean for the new Optum CVX?

DAN STUART: Case IH is the only global manufacturer to produce innovative agricultural technology for all requirements and markets – and that fact is highlighted very clearly by the new 'Miracle of Versatility', i.e. by the new Optum CVX. The typical vehicle weight of the new series is 10.8 tons, but with the addition of an appropriate weight of ballast, this can rise to as much as 16 tons. This means that the Optum CVX series, developed and built in St. Valentin, is a clear answer to the requirements of the European market while at the same time, through the addition of the right amount of ballast, satisfying the requirements of farmers in the USA. There is plenty of power available with a choice of 270 or 300 hp. The four-point rear-mounted PTO shaft and the two-point front-mounted PTO shaft provide for a versatile range of applications, while the factory equipment with ISOBUS Class III and RTK+ take that all one step further: the Optum CVX gives customers the 'optimum solution' to meet their operational challenges.

FARMFORUM: Many thanks for these insights.

CASE IH FARMALL U PRO

FAST TRACK TO SUCCESS

SINCE ITS INTRODUCTION, THE CASE IH FARMALL U PRO HAS DEVELOPED INTO A GENUINE ICON OF SUCCESS, ONE THAT HAS PROVEN WHAT IT CAN DO ON FARMS IN MANY COUNTRIES OF EUROPE, TO THE EXTENT THAT IT IS NOW VIEWED AS THE TOP ALL-ROUNDER. WITH THE NEW MODEL YEAR VERSION, CASE IH HAS FURTHER UPGRADED THE FARMALL U PRO. REASON ENOUGH FOR US TO TALK TO REMO MÜLLER, THE PRODUCT MANAGER RESPONSIBLE, ABOUT THE REASONS FOR THIS SUCCESS STORY.

Remo Müller,
Case IH Product Marketing Manager, Tractors

FARMFORUM: What makes the Farmall U Pro so popular and successful?

REMO MÜLLER: With this tractor, our engineers have once again succeeded in rolling a winning score with the proverbial dice: in the 100-horsepower segment, which is one of the most important market segments in Europe, the Farmall U Pro offers customers more power, greater versatility and better comfort than most people would expect to get in this class - and has accomplished this with a superlative price-performance ratio. With our optional cab suspension, for example, we can deliver a unique level of ride comfort for a marginal extra cost, a level that other manufacturers only achieve with the much more expensive option of a spring-mounted front axle. There are good reasons why the Farmall U Pro has won so many of the tractor comparison tests throughout Europe.

FARMFORUM: What are the particular strengths of this series?

REMO MÜLLER: Customers get their first 'wow' experience in the cab: it is spacious, designed with exceptional ergonomics, and it provides the familiar environment that also characterises the larger tractors from Case IH. This includes operation using the Multicontroller, whereby all of the important primary functions can be operated ergonomically and single-handed. The four-cylinder engines with turbocharger and intercooler deliver maximum power, even at low engine speeds. This is the key to fuel efficiency, low emissions and a low noise levels, which really matters, especially on long working days. Furthermore, maintenance intervals of 600 hours mean lower costs and - yet another decisive argument - the range of applications of the Farmall U Pro is incredibly diverse and varied, thanks to the 4-point PTO shaft and to the indefatigable supply of hydraulic power delivered by the 100 litre CCLS pump.

FARMFORUM: At the present time, the Farmall U Pro is also available with LEDs in the front and rear worklights, without any cost penalty. What are the benefits of this to customers?

REMO MÜLLER: LED lighting is a very interesting option, and there are several reasons for this. For the driver, illumination and visibility are much better with this white light than they are with standard lamps. By the way, standard lamps only convert 20% of the energy consumed into light, while about 80% is turned into unproductive heat.

THE FARMALL U PRO DELIVERS CONVICTION:

On many medium-sized arable and livestock farms, tractors in the performance class of up to 100 hp have a clear and leading role to play. Particularly in livestock farms, a front loader is an indispensable tool – and suitability for working with a front loader is therefore a key decision-making factor in the selection of a new tractor. Since the launch of the Farmall U Pro, a clear trend has become discernible - not only when replacing older models of Case IH, but also when switching from 'other colours of technology' (i.e. competing brands) to the Farmall U Pro. With a range of three models, a nominal rating of 99 to 114 hp, 32 x 32 quadruple Powershift and Powershuttle, all-wheel drive, 540 / 540E / 1000 / 1000E rpm at the rear PTO shaft and 1000 rpm at the front PTO shaft, combined with lifting power of max. 2250 (front) and max. 4700 kg (rear), the Farmall U Pro can deliver proof of its value day after day.

CASE IH AFS ACADEMY
available for

iOS

PRECISION FARMING KNOW-HOW BY APP

NEW AFS ACADEMY APP

ENJOY TUTORIALS ON THE BASICS AND ON CURRENT TOPICS RELATING TO PRECISION FARMING, NOW AVAILABLE AS AN APP FOR SMARTPHONES AND TABLET PCS / THE ADVANCED FARMING SYSTEM IS EXPLAINED IN USER-FRIENDLY TERMS

All Case IH AFS customers can now benefit from an innovative form of e-learning. The new Case IH AFS Academy mobile app is an easy-to-use, 'on-the-go' application containing information, mostly in the form of short online videos explaining the basics, applications and all relevant topics relating to Precision Farming with Case IH AFS systems.

Right from Day One, this app contains almost 100 learning videos and tutorials - and that range is being extended all the time. As well as videos about basic subjects, there is a large number of technical videos on topics such as the installation and calibration of steering systems, or their operation, as well as AFS mapping software, all available to call up on demand.

"As a current topic, we have also incorporated recommendations about the new AFS Connect TeleMatics system. Step by step, interested parties can learn here about the performance capabilities of these TeleMatics solutions. The range is being extended all the time, with current topics being added continuously. Anyone wishing to have information, for example about the calibration of the turning angle, or simply some tips about the mounting of implements, will find what they need here.

This app can be used free of charge and is available as a download for smartphones and tablet PCs with Android, as well as Apple IOS. Keyword: Case IH AFS Academy

Farmer Kristian Oelze is committed to Controlled Traffic Farming

ARABLE FARMERS WITH CLEAR PRINCIPLES

IT'S THE GROUND THAT SETS THE PACE

ON THE FARM BELONGING TO KRISTIAN OELZE IN DAHLEN, NEAR STENDAL, JOB ONE INVOLVES DELIBERATE FOSTERING OF ORGANIC LIFE AND BIODIVERSITY IN THE SOIL, A CONSIDERATION AT THE HEART OF ALL PLANTING OPERATIONS. THE OBJECTIVE OF KEEPING SOIL BIOLOGY INTACT IS TO BOOST YIELDS, TO PROMOTE METABOLIC CYCLES AND, ON A PROGRESSIVE BASIS, TO CUT BACK ON THE USE OF ARTIFICIAL FERTILISERS AND HERBICIDES. ON THE PATH TO THIS GOAL, THE FARMER IS ALSO COMMITTED TO THE USE OF MODERN TECHNOLOGY: CONTROLLED TRAFFIC FARMING HELPS THE GROUND EVOLVE IN THE RIGHT DIRECTION.

"In arable farming, the most important events are happening under the feet of the farmer", states Kristian Oelze with a grin as he shows us around his farm. However, one thing became very clear when we sat down with this forward-thinking farmer for a serious talk: this is the cornerstone of his philosophy of arable farming, i.e. a clear focus on deliberate promotion of soil biology, the preservation of soil structure and the rapid build-up of humus.

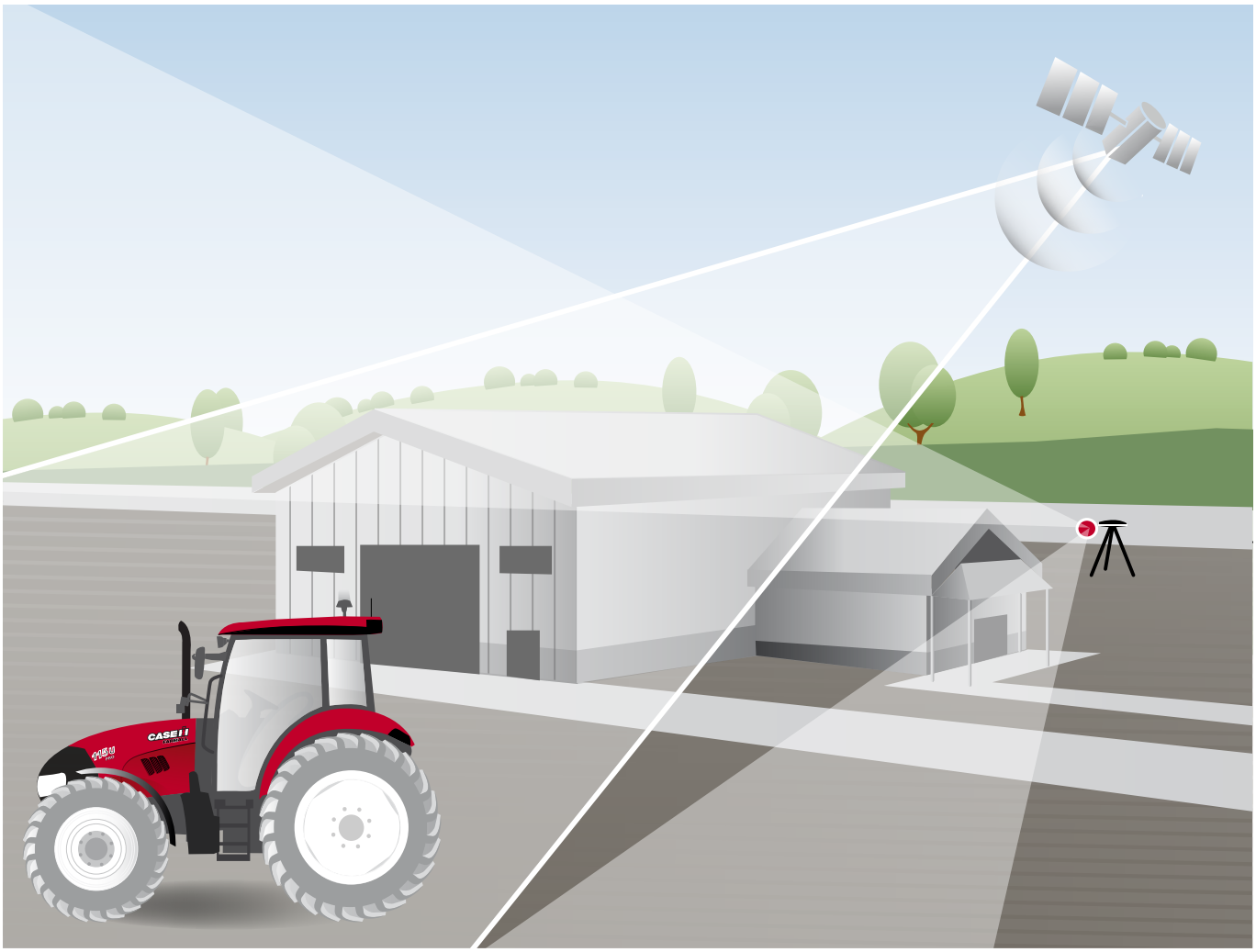
"Over the last few decades, we have perhaps lost sight of one or more ancient pieces of arable farming wisdom about System Soil - which remains a living organism with a multiplicity of reciprocal interactions - and have all too often forced the ground into a suitable condition for a given planting operation through the use of 'high levels of chemistry and horsepower'. Nor would I exempt myself from that critique either", summarised Oelze "and current experience shows virtually no further progress in crop yields is being achieved while, at the same time, arable farming problems such as erosion and damage to soil are getting worse all the time.

OUR WEALTH RESIDES IN HAVING TOPSOIL RICH IN ROOTS

Ever higher and more intensive working methods coupled with greater working widths and their resultant heavy farm vehicle weights do not leave the soil unscathed and this approach, in my view, will not lead us to the Promised Land. Our soils are sensitive to compression loadings, and they punish these mistakes that we make. Therefore, if we wish to develop arable farming any further, seek to protect and increase crop yields, and, above all, if we wish to run our businesses sustainably, protection and preservation of soil life and soil structure are now more important than ever before; this involves careful promotion of the reciprocal interactions between the soil and its diverse properties. The wealth of a farmer resides in having topsoil rich in roots", states our arable farmer in summary.

ADJUSTMENTS REQUIRED

To achieve the desired infrastructure in the soil, Kristian Oelze employs a diverse range of measures. "Over the last few years, we have adapted our crop rotation gradually to reflect our local conditions. For example, we have done away



completely with beet crops and have incorporated more leguminous plants in our crop rotation which now comprises rape, barley, corn on the cob, wheat and 10 percent of potatoes. We are also testing 'recovery and companion plants' to an increasing extent, examples being clover or peas among our winter rapeseed".

"WE FERTILISE THE GROUND - NOT THE PLANT"

Kristian Oelze is also exploring new avenues in the provision of soil and plants, primarily with the aim of gradually cutting down on the use of artificial fertilisers and herbicides, ultimately with the intention of eliminating these altogether from his farm.

Here he is committed to the principle further developed by American agronomist and farming consultant Neal Kinsey that is founded upon the reciprocal interactions of nutrients, in particular of micronutrients that are viewed as the basis for fertilisation of soil - and focuses less on crop yield and extraction values. "This principle is founded upon the desire to remedy the existing imbalance of soil nutrients. This focus not only boosts crop yields, but also prevents the incidence of disease, weeds and pests.

CONTROLLED JOURNEY ACROSS ARABLE LAND

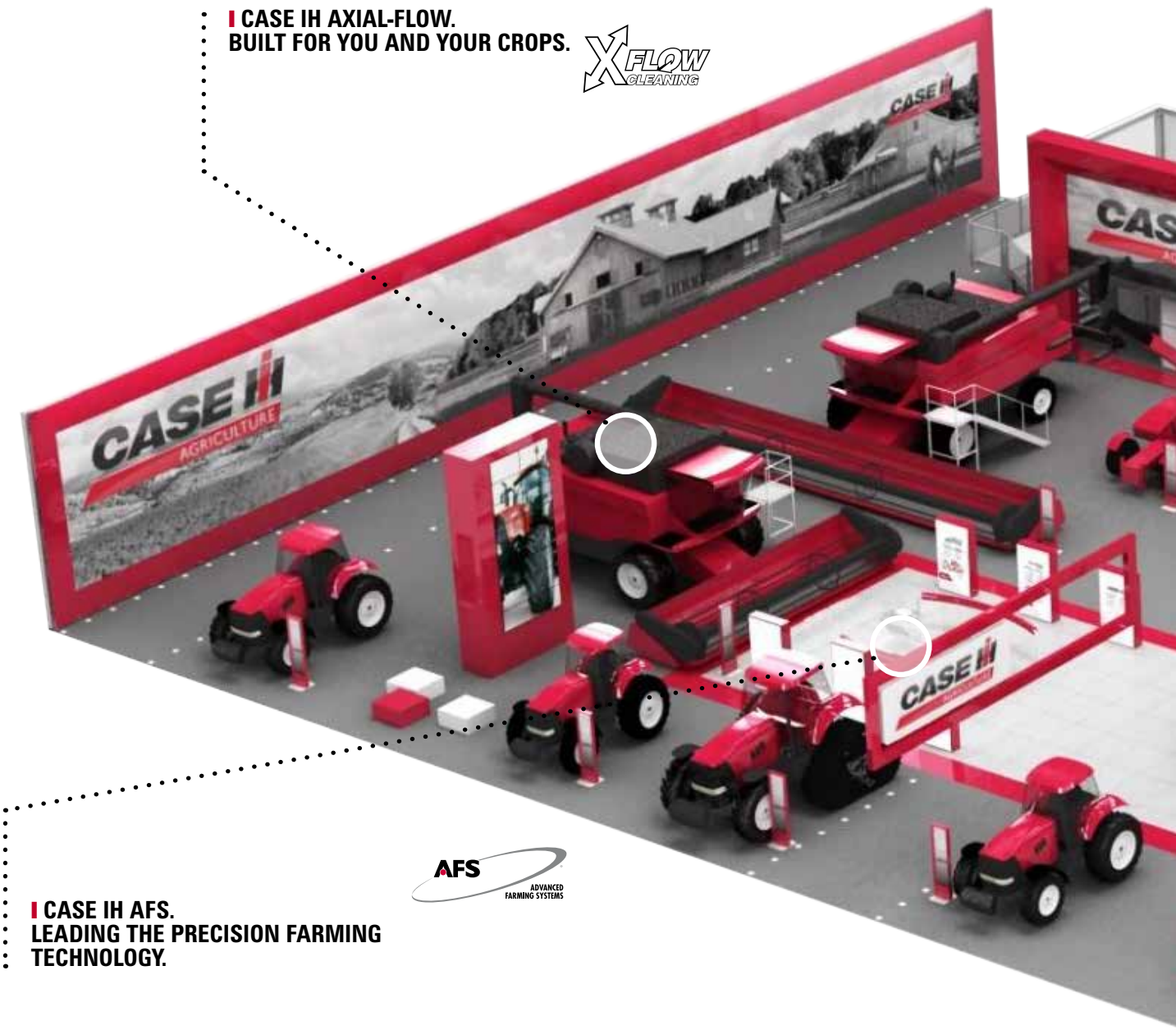
The cornerstone of the planting operation is provided by what is known as Controlled Traffic Farming (CTF), and Oelze views this as the basis for absolutely minimal intervention in the soil. By means of GPS signals supplied with correction signals from their own RTK station, he can drive the same track every time to an accuracy of within two centimetres, over a working width of 7.20 metres and a track width of 2.40 metres. Kristian Oelze has this to say about it: "This enables us to reduce the proportion of vehicle track on our parcels of land to an absolute minimum; working widths and track widths need to matched and coordinated very precisely. The system enables us to cut the track width proportion to below 40 percent. By driving only on defined tracks, we are able to protect the soil from vehicle compression to the greatest possible extent. Of course, the situation is different when you are dealing with potatoes. However, even there, we achieve a result using seasonal CTF".

ADDITIONAL EFFECTS

Not only that, but planning operations become more efficient, according to our arable farmer, because Controlled Traffic Farming makes it possible to cultivate larger surface areas, for example through cutting down on the number of unladen trips and on the number of turning operations required. All the vehicles on this farm are therefore equipped with the AFS system from Case IH, including a Case IH Steiger 385 articulated trailer and – since the most recent harvest - a new 6130 Axial Flow combine harvester. "Here, we really appreciate the great level of service we receive from the team at our dealership Mager & Wedemeyer in Klötze".

THE SOIL IS MOVING INTO CENTRE STAGE

For the future, Kristian Oelze assumes that planting operations in Germany will come to focus increasingly on soil quality. "Over the long term, energy prices are going to increase, and the critical way we deal with the causes of climate change - for example the climate-relevant levels of nitrous oxides being emitted from farmland - oblige us to rethink the way we do things. Controlled Traffic Farming and deliberate promotion of soil biodiversity constitute cogent and practically relevant approaches to achieving this outcome", states Kristian Oelze in conclusion.



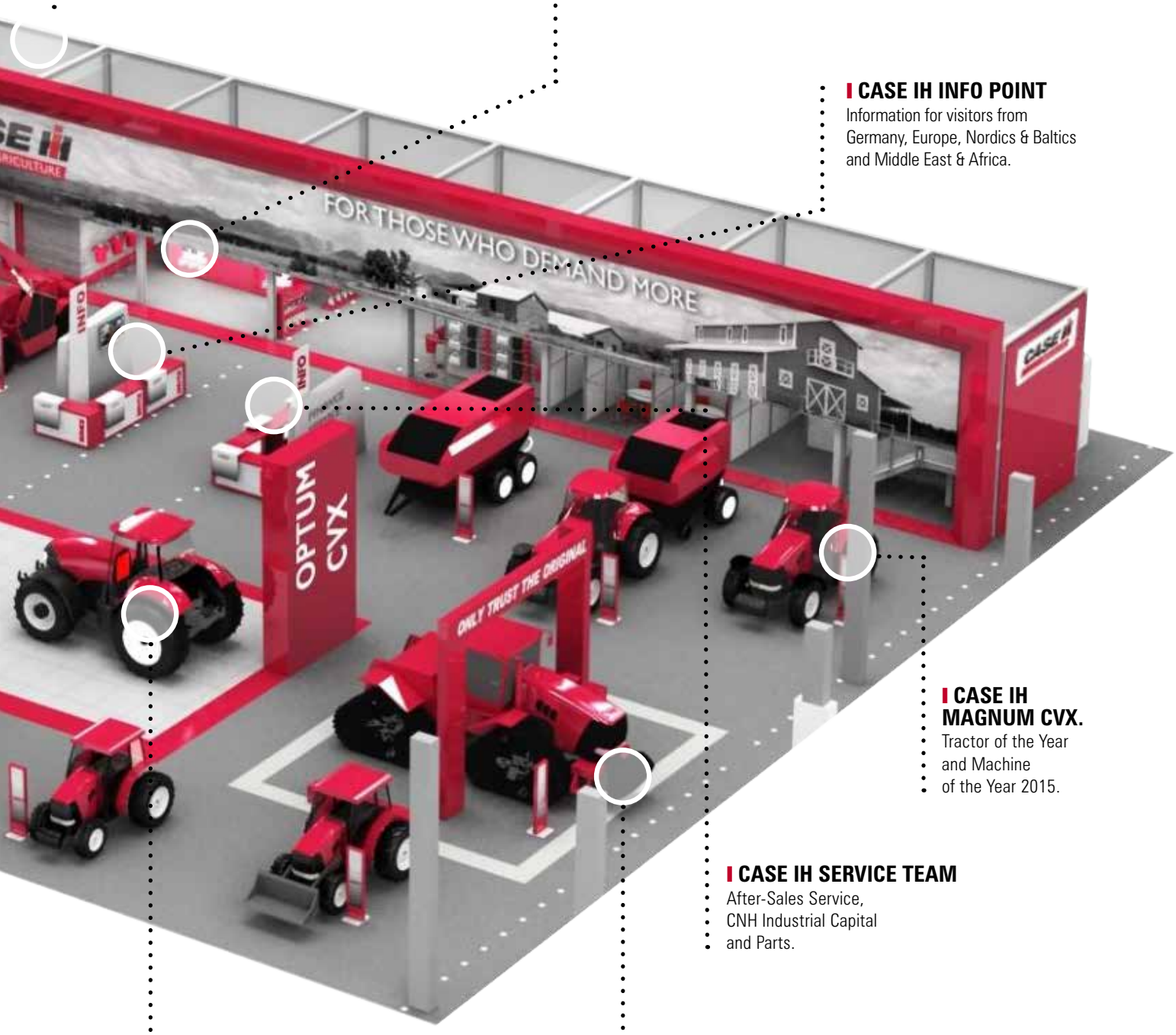
AGRITECHNICA 2015

CASE IH PRESENTS THIS YEAR A WIDE RANGE OF HIGHLIGHTS AT AGRITECHNICA IN HALL 5, STAND B 14: HARVESTING INNOVATIONS, PRECISION FARMING, CONTINUOUS VARIABLE TRANSMISSION – AND THE NEW OPTUM AS AN EYE CATCHER. CASE IH HAS STRENGTHEN THE LEADING POSTITION IN SOIL PROTECTION – AS LEADER OF THE TRACKS SINCE 1997.

CASE IH LOUNGE, BAR

CASE IH FANSHOP

CASE IH INFO POINT
Information for visitors from Germany, Europe, Nordics & Baltics and Middle East & Africa.



CASE IH MAGNUM CVX.
Tractor of the Year and Machine of the Year 2015.

CASE IH SERVICE TEAM
After-Sales Service, CNH Industrial Capital and Parts.

CASE IH QUADTRAC. BEWARE OF IMITATIONS.

CASE IH OPTUM CVX. HEAVY DUTY PERFORMANCE AND VERSATILITY.

IN DISCUSSION

SHOWCASING SOLUTIONS

AGRITECHNICA IS THE BIGGEST AGRICULTURAL TECHNOLOGY TRADE FAIR IN THE WORLD, AND IT TRADITIONALLY PROVIDES A FORUM FOR INNOVATIVE TECHNOLOGIES IN THE FARMING SECTOR. THIS HIGH-CALIBRE SHOWCASE EVENT, HELD EVERY TWO YEARS, IS A SET FIXTURE ON THE CASE IH CALENDAR - AND THIS YEAR IT PROMISES TO BE EVEN MORE EXCITING THAN EVER BEFORE THROUGH A VERITABLE FIREWORK DISPLAY OF INNOVATIONS.

Dr. Reinhard Grandke
CEO Deutsche Landwirtschaftsgesellschaft (event organiser of the Agritechnica trade fair)

With Dr. Reinhard Grandke, the CEO of *Deutsche Landwirtschaftsgesellschaft* [the German Agricultural Society] and the organiser of this trade fair, FarmForum discussed current trends and developments.

FARMFORUM: Dr. Grandke, for many years, Agritechnica has enjoyed a great reputation, and it is known for showcasing trends and developments in the global farming technology sector. How do you view the current situation and the 'readiness to innovate' of this sector?

REINHARD GRANDKE: The agricultural sector is currently facing great challenges. Many farms view the situation in a critical light: Low producer prices, a high level of political risk and social claims all have a dampening impact on sentiment. At the present time, farmers have a gigantic need for information. Agritechnica is therefore happening at just the right time. It is the world's leading centre for innovations and new products in the agricultural sector. It also offers, with its bundled information, a broad international understanding from industry, farming and science as well as from consultancy institutions - essentially a unique 'Future Workshop' for the global farming sector. Agritechnica is therefore not only an innovation platform for modern technology, but also a source of ideas and impulses for important questions relating to the future of the agricultural business. For that reason, Agritechnica specifically targets those farmers who wish to survive into the future, and who are prepared to do what it takes to accomplish that – which includes the use of the very latest of modern technology.

FARMFORUM: Which impulses will be transmitted by Agritechnica 2015?

REINHARD GRANDKE: Farmers take broader social concerns very seriously indeed. They perceive the future of their businesses lies in sustainable farming of the land, they know just how important the mix of economic, ecological and social aspects really is and they seek to act on this awareness. Agricultural technology can make substantial contributions towards farmers being able to produce more cost-effectively and in a more environmentally compatible manner. At this year's Agritechnica, exhibitors will therefore be showcasing a wide range of solutions that enable farmers to work more precisely, more efficiently and with less impact on resources. Further developments in electronics and sensor systems are the pace and trend-setters here.

FARMFORUM: How does society at large perceive this innovation-based agriculture? Does it take special efforts to get society at large on board with these developments?

REINHARD GRANDKE: The worldwide challenges we face can only be addressed effectively with innovative agriculture, i.e. by an approach to farming that incorporates continuously rising amounts of knowledge and capability. To this end, a flexible and continuous consensus with society at large is essential to the ongoing health of agricultural production processes. Progress in agricultural production and in production methods, and their evaluation within a social context, are things that must, at their heart, go hand in hand. There are a few areas where this is not the case at the present time. The farming sector therefore faces the great challenge of coming to terms with the declining social acceptance of modern agriculture, and must respond by coming up with accepted and acceptable solutions. A key approach to this dialogue with society is provided by the innovations in agricultural technology: these provide the means to farm in an altogether more efficient manner, one that conserves the environment as well as natural resources. In support of this, the farmers must enter into a more intensive dialogue with society at large. Agritechnica, with its superlative range of information, is a valuable platform – and we are expecting about 400,000 visitors at the trade fair this year.

FARMFORUM: Dr. Grandke, many thanks for this discussion.

COMPETENCE: CANNOT BE SUBSTITUTED BY ANYTHING OTHER THAN EVEN GREATER COMPETENCE

THERE ARE GOOD REASONS WHY CASE IH IS KNOWN AS 'LEADER OF THE TRACK', THE SPECIALIST FOR TRACKED VEHICLES THAT TREAT THE SOIL THEY DRIVE ACROSS WITH DUE CARE AND CONSIDERATION. WITH THE FIRST PROTOTYPE IT UNVEILED BACK IN 1992, THROUGH THE PRACTICAL LAUNCH OF THE QUADTRAC IN 1997 AND THE ENSUING INTEGRATION OF TRACKED DRIVES IN OTHER VEHICLES, THE COMPANY HAS ACQUIRED A PEERLESS LEVEL OF COMPETENCE AND EXPERIENCE - LONG BEFORE AND WELL ABOVE AND BEYOND THE INTERNATIONAL YEAR OF THE SOIL 2015.

There have always been considerations about the use of tracked drives on agricultural vehicles, and manufacturers are to this day still striving to develop tracked drives that improve soil protection as well as traction. The most brilliant chess move from Case IH was first made by engineers over 20 years ago. Unlike conventional tracked drives, they sought to combine the benefits of two axles and four points of contact with the ground in conjunction with tracked drives. The Quadtrac prototype from 1992 was therefore a pioneer of what is now an impressive range of Case IH agricultural vehicles with the 'integrated soil protection and traction benefit'.

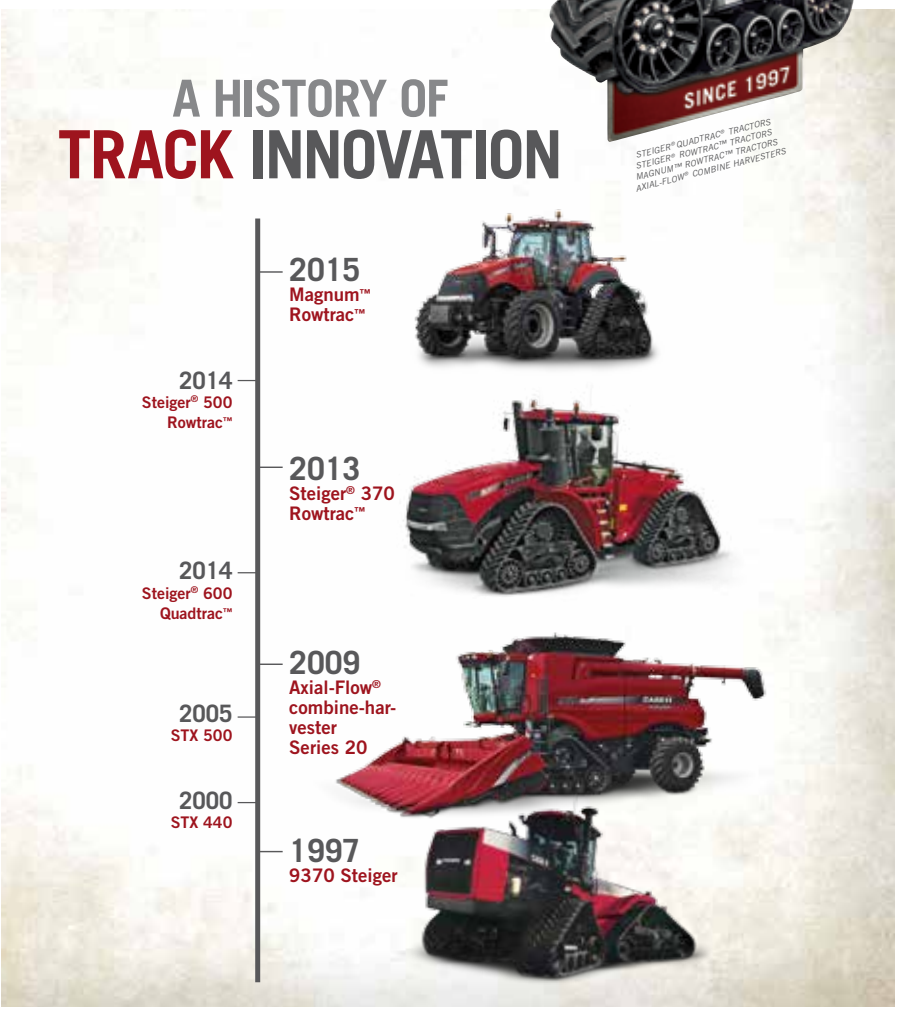
QUADTRAC, AXIAL-FLOW AND MAGNUM ROWTRAC

The light-footed Quadtrac with its powerful traction was followed in 2009 by the big Axial-Flow® combine harvester; with optional tracked drives on front axle and tyres on the rear axle; these offer optimum weight distribution, a large ground-contact surface area or 'footprint', enormous traction and very good manoeuvrability. With the Magnum Rowtrac unveiled back in 2014, development engineers at Case IH delivered their next brilliant move on the proverbial chessboard. A standard tractor on which the rear tyres were completely replaced by tracked drives that were incorporated in the design of the vehicle. Here too, the effects known and valued from its big brother, the Quadtrac, came into play: reduced ground pressure, greater traction and, in cases of doubt, longer time windows for soil-protecting operations during peak work periods.

PROVEN PRINCIPLE

With its tried and tested five-axle principle, the Case IH tracked drives not only deliver optimum pressure distribution across the entire contact surface area, but also provide superlative handling and gentle, comfortable ride characteristics in the field and on the road. True to the motto 'Only trust the original', two decades of Case IH experience make the company into the clear market and expertise leader with this powerful and soil-protecting technology.

STEIGER® QUADTRAC® TRACTORS
STEIGER® ROWTRAC™ TRACTORS
MAGNUM™ ROWTRAC™ TRACTORS
AXIAL-FLOW® COMBINE HARVESTERS



EFFICIENCY BOOST FOR THE CASE IH QUADTRAC IN THE NEW MODEL YEAR

SUBSTANTIAL ADDED-VALUE FOR THE ORIGINAL

PROVEN IN PRACTICAL OPERATIONS SINCE 1997 AND DESTINED TO BE EVEN BETTER IN MODEL YEAR 2016: SINCE THE LAUNCH OF THE FIRST PROTOTYPE BACK IN 1992, THE TRIED AND TESTED CONCEPT OF THE CASE IH QUADTRAC ACHIEVES A NEW HIGH POINT WITH THE PRESENTATION OF THE LATEST GENERATION.

A shuttle shift that is 40% faster than the 2015 model year delivers a 'flying start' to the 2016 model year. "Without a doubt, this convincing high-performance tractor with its four independent points of contact and their large surface area is being given a further efficiency boost with improvements in model year 2016. For example, if the Quadtrac is equipped with front-mounted hydraulics and a silo blade to compress silage, the faster response time from its shuttle shift enables it to make up to 130 more transits to the silo within a 12-hour period – which for our customers delivers a tangible gain in time and efficiency", explained the product manager responsible, Mr. Ulrich Sommer.

REVISED 16-SPEED POWERSHIFT TRANSMISSION

Thanks to changes to the transmission made for 2016 models, it has been possible to improve the transmission efficiency rating, depending on operating point, by between 2-5%. These improvements are achieved through the use of a new feedback control valve, new controller software and by revised transmission hydraulics. The improvements to the transmission hydraulics include new oil baffle plates to prevent churning losses, a new and more economical tandem transmission oil pump and the new routing of a PTO output shaft. These enhancements to the transmission give customers a 2-5% increase in traction while retaining the same low level of diesel consumption. "Furthermore, in approximate terms, the adapted transmission achieves a 20% increase in the speed of upshifts from 1st to 16th gear - regardless of whether the driver is changing gear manually or with APM, the Automatic Productivity Management system. For farmers whose farms require them to drive extended distances on public roads to get from one field to another, this is a welcome time saving".

The shuttle shift is now much faster and the action is also gentler, further enhancing the value of the Quadtrac in model year 2016: Substantially faster braking to a standstill, faster changes in direction and a corresponding increase in the speed of acceleration: all of these factors characterise the new shuttle function, almost 40% faster than

its predecessor. "If you translate that into an average time saving of two minutes on trips to the silo with the new shuttle shift system, then in the course of one 12-hour working day, this improvement permits up to 130 additional journeys to be made to the silo. This greatly improves productivity at the silo and also delivers faster turning manoeuvres for all other work", concludes Ulrich Sommer.

FRONT AND REAR WORKING SPACE 'IN LED RAMP LIGHT' WITH UP TO 44.000 LUMEN

With the new and optionally available LED lighting packages, no wishes are left unanswered. As well as the standard lighting package with 14 halogen headlights, an optional LED lighting package is also available. This comprises 6 HID-xenon lamps in the radiator grille, 4 LED lamps in the cab roof at the back and 4 LED lamps on the rear of the vehicle. As a second option, there is the LED 360° package that also includes an additional 4 LED lamps on one side of the cab roof. When the LED package and the LED 360° package are combined, a total of 6 HID xenon and 12 LED lamps are available, delivering total lighting power of 44,000 lumen. This is sufficient to illuminate up to 35 metres to left and right sides of the vehicle, and up to 40 metres to the rear; all to the brightness level of natural daylight.

NEW STEERING SYSTEM

Customers and their employees tend to spend long and productive working days in the cabs of their Quadtracs. To further enhance workplace comfort, the 2016 Quadtracs with be equipped with a new electronic steering system. "Here, during field operations, only four complete turns of the steering wheel are need to move from full lock on the left to full lock on the right. Furthermore substantially less power needs to be applied. Compared to the six complete turns of the steering wheel required in the past, this is clearly a beneficial development. At speeds in excess of 35 km/h, the steering system switches automatically from field to road mode; this changeover appears on the screen display in the A-pillar and results in greater steering resistance and in a less direct steering ratio. This prevents oversteer and, when driving on-road, it assures even safer and more pleasant steering response characteristics", according to Case IH.

AUTOMATIC LOCKING DIFFERENTIALS ON FRONT AND REAR AXLES

A core tenet of the Case IH brand philosophy is that all tractor models should share the same operating concepts and functionalities; this gives customers the greatest possible amount of flexibility and confidence when using the different series and models of tractor. The locking differentials of the 2016 Quadtrac models are now identical in functional terms to the familiar, tried and tested system in the Magnum, and now feature among the standard equipment of these vehicles. Once engaged, the system remains in operation and assures optimum propulsion, even in difficult areas of the field, until either the service brake is actuated, the vehicle speed rises above 25 km/h or an excessively high control pressure or tight steering lock is recorded.

"The system works proactively and identifies severe slip in the field, in which case it remains activated. This new functionality increases the beneficial action of the locking differentials and strengthens the advantages of the 4-track concept, particularly under arduous conditions", explained Ulrich Sommer as he described the advantages of the new automatic locking differentials.

IDEAL FOR 'LOOKING BACK' AND FOR STAYING PRECISELY ON COURSE

The 2016 model also sees the Quadtrac series equipped with split and electrically adjustable wide-angle mirrors. That not only means that the driver keeps the rear end of the tractor perfectly in sight, but it also makes road journeys towing large implements a much more relaxed and safer proposition. The upper part of the mirror can be adjusted electronically from the driver's seat while the lower segments, the wide-angle mirrors, provide a very large field of view, one that even extends to the tracks left behind the Quadtrac.

Finally, another innovation with the Quadtrac 2016 model relates to the AccuGuide™ track management system. With new software, after a headland turn, the new track can be engaged upon faster and more precisely than in the past. This means that the tight turning radius of the Quadtrac (which throws up no mounds in the process) can be utilised even better, or can reduce the extent of ground ignored or overlooked during headland turns. "In overall terms, this not only leads to greater efficiency and to the optimisation of potential revenues, but also increases the convenience of working with this vehicle", stated Ulrich Sommer in conclusion.

NOT YET IN EVERYDAY USE

PLANTING POTATOES WITHOUT HARMING THE GROUND - QUADTRAC CAN DO IT!

THE FACT THAT THE CASE IH QUADTRAC IS PRIMARILY INTENDED AS THE IDEAL TRACTOR CONCEPT FOR LARGE FARMS IS UNDISPUTED IN THE SECTOR. ESPECIALLY FOR THE EFFICIENT WAY IT HANDLES THE CULTIVATION OF STUBBLE AND THE PREPARATION OF SOWING BEDS. AT THE AMTSHOF IN HADMERSLEBEN IN THE MAGDEBURGER BÖRDE REGION, A QUADTRAC IS USED FOR YET ANOTHER SPECIALIST TASK, LAYING THE GROUNDWORK FOR A NEW AREA OF APPLICATION, GREATER UTILISATION LEVELS FOR THE VEHICLE AND, ABOVE ALL, TOP-QUALITY WORK RESULTS.

For the last two years, Urban Jülich, owner of the Amtshof Farm and Benedikt Hessling, responsible for plant production on this property, have been using the Quadtrac for sowing potatoes. "Our aim is to increase efficiency in all operations, and to reduce work completion costs. That is why, when planting potatoes, we are committed to an all-in-one procedure, which means that all the important steps, from loosening up the soil to a reasonable depth to full-field harvesting, including sowing and dam-building, can be conducted in a single operation", reports Benedikt Hessling.

"However, previous conventional wheeled tractors rapidly reached their operational limits when driving a system of this kind, due primarily to our heavy soils, by which I mean that their towing power, traction and soil compression targets were soon compromised".

It is quite a different story with the Quadtrac. It proved its capabilities right from day one with this application profile. Only the rotary hoe needed to be optimised for use with the Quadtrac and its high powerflow.

Urban Jülich, owner of the Amtshof farm and Benedikt Hessling, responsible for plant production

Since that time, the Grimme all-in-one combination has been running perfectly on the heavy soil of the Magdeburger Börde region. "This has created an additional area of application for our Quadtrac, one that accounts for about 200 operating hours each year during a time when no alternative uses exist for the Quadtrac. This in turn reduces the machine costs per hectare while, on the other side of the coin, the advantages of the Quadtrac drive really come into their own when planting potatoes", sums up Hessling, a farmer with a keen mind for numbers.

MORE TUBERS PER PLANT

This is because previous wheeled tractors tend to compress soil severely, especially in their tracks. "Thanks to the Quadtrac running gear and the optimum weight distribution of the vehicle - that by the way is being used without ballast – we are able to establish substantial increases in tuber formation. We sow in 4 rows and we can already detect 1.5 to 2 tubers more on each plant. Soil compression levels under the dam are reduced substantially. This means that the system not only delivers an improvement in efficiency but also constitutes progress in terms of arable farming techniques.

For ride comfort and a precise work outcome, the Quadtrac is equipped with a steering system that assures driving precision of two centimetres thanks to an additional RTK signal.

MODERN ARABLE FARM WITH MANY UNUSUAL FEATURES

The deeply traditional Amtshof farm in Hadmersleben, located on the western boundaries of the Magdeburger Börde region, currently has more than 1260 hectares of viable agricultural land and Jülich cultivates this with a range of crop rotations. These centre around winter grains, with other crops being corn, sugar beet and potatoes. The natural characteristics of the Magdeburger Börde region provide good conditions for modern arable farming. Three different types of soil - alluvial soils beside streams and rivers, to loam and black earth with up to 65 to 100 ground points - combine to deliver top-quality growing conditions.

"Despite the ideal natural factors of this location, we are in the rain shadow zone of the Harz mountains. For intensive crop rotation cycles, we need to provide irrigation and therefore about half of our cultivated land receives irrigation. Furthermore, and to an increasing extent, we are obliged to make optimum use of the 'work windows' available to us", states Urban Jülich as he describes the challenges facing them as arable farmers The grain-growing surface area of the farm is therefore mostly involved in producing seed stock for a local seed breeding and production company.

Nor is the fertiliser concept an everyday phenomenon. The farm buys in almost no fertiliser at all. From its in-house livestock production operation - the farm is also home to a modern pig-breeding facility – and its own bio-refinery, all nutrition for the soil is obtained entirely from digestate.

"AS YOU SOW, SO ALSO SHALL YOU REAP!"

CASE IH QUADTRAC PROVIDES HIGH PERFORMANCE COMBINED WITH MAXIMUM SOIL PROTECTION / TRACTION AND MANOEUVRABILITY OF THE QUADTRAC DELIVER HIGH SURFACE AREA CULTIVATION / CASE IH AFS WITH XFILL RANGEPOINT AUTO-CORRECTION SIGNAL DELIVERS BENEFITS.

Norbert Claassen,
Director of AG Rhinquelle

"As you sow, so also shall you reap" – with this ancient arable farming principle, Norbert Claassen, a director of Bäuerliche AG Rhinquelle in Breitenworbis, explains the main reason for using the Quadtrac. The farm now has its second generation of Quadtrac, a 535, which is one of its key vehicles.

Bäuerliche AG Rhinquelle farms an area of land extending over more than 1700 hectares. "The cultivation of market crops with a clear emphasis on quality is the great opportunity of our location. To accomplish this, however, we need to focus on high levels of operational efficiency and low unit costs", reports Norbert Claassen. We view ourselves as an agricultural raw materials producer with quality-compliant and sustainable production, making us a dependable market partner for food processing businesses. The crop rotation cycle features rapeseed, winter wheat and winter barley. In the winter wheat / winter barley crop rotation, we have wheat stubble production of about 50%.

A high proportion of our land is farmed without ploughing. The plough only gets used before barley and stubble wheat crops, which means that we plough about 30% of our total surface area.

Despite having the very latest production technology, Norbert Claassen names two challenges for himself and his team. "For our farm, there are two clear disadvantages to our location. The first of these is our geographical location and field structure, coupled with the ever narrowing cultivation windows", reports Norbert Claassen.

A high proportion of the parcels of land - parcels ranging in size from 6 to 80 hectares – are located on slopes, typical of the region around

Eichsfeld, and characterised by great variation in soil properties, with average ratings ranging from 20 to 60 soil points. When you also take account of the climatic conditions, we have extremely short cultivation windows during which we can use the most favourable times for arable work – often less than twenty days for autumn planting for example", reports Norbert Claassen. Given this background, it rapidly becomes clear that optimum efficiency is essential between stubble cultivation and the ensuing preparation for sowing operations. This is true not only of surface area cultivation but also in respect of the short changeover and set-up times from one parcel of land to another. "Here we have examined a vast array of different drive concepts. The Quadtrac has thus far proven to be superior in terms of traction or towing power, especially on slopes. Through efficient use of tracked drives, we can cultivate large widths at once, enabling us to cultivate large surface areas within a short space of time", stated the farm manager, with a firm grasp of the numbers involved.

The Quadtrac spends more than 90 percent of its working time on stubble cultivation, seed bed preparation and deep-soil tilling and cultivation. To accomplish this, and depending on weather conditions and the condition of the soil, three different tools are employed: There is the 6-metre wide Tiger AS, used primarily for deep soil cultivation, an 8-beam Köckerling Vario with a working width of 7.5 metres, and a Horsch Joker short disc plough.

Many properties combine to make the Quadtrac unique. As well as its legendary reliability - the Quadtrac has proven its capabilities worldwide in every conceivable arable farming context - the drive system not only delivers maximum traction but also an optimum level of soil protection. Added to this, and we never cease to be amazed, is the fabulous manoeuvrability of this extremely large vehicle. This is an important contributing factor to short retooling times, not only for fast headland turns but also when driving on public roads.

OPTIMUM ALL-ROUND VISIBILITY

One aspect that becomes ever more important for Norbert Claassen is that of the pleasure of driving. "It is becoming harder to get suitable personnel. Comfortable working environments are essential in attracting the right people. The Quadtrac cab delivers precisely that, with all-round visibility, ergonomics and air-conditioning – that does the job for us.

IN OPERATION IN BREITENWORBIS:

CASE IH RANGEPOINT RTX – IDEAL FOR SOIL CULTIVATION

RangePoint RTX constitutes an innovative and very reliable correction signal for Case IH tractors and combine harvesters, delivering a maximum track-to-track deviation of less than 10 centimetres and repeatability precision of 50 centimetres. That makes the correction signal ideal for automatic track guidance systems and for applications with large working widths. A key benefit in practice is that the full precision level can be achieved within less than five minutes. If the correction signal is ever lost, two minutes later, AFS systems continue to operate automatically with RangePoint RTX. That facilitates continuous work on arable land.

To relieve the strain on drivers and to boost efficiency, the Quadtrac 535 at AG Rhinquelle is also equipped with the very latest track guidance technology. The factory-fitted AFS steering system AccuGuide drives using the latest correction signals. xFill RangePoint assures not only high quality reception but also reception stability.

DRIVING MORE SAFELY WITH CASE IH XFILL

Case IH xFill is a new service for all users of the Case IH Advanced Farming System (AFS). With it, RTK positional data are provided for several minutes, even if the flow of RTK correction data is not available.

With the new xFill technology, RTK standard signals are supported during periods of connection outage, for example those caused by network overloads in relation to GSM correction date, or to the interruption of RTK signals.

This new xFill function is available with immediate effect, as soon as the RTK radio signal is disrupted. There is no delay at this point, meaning that the system can continue to be used without any interruption. For this, the system uses the signals of satellite service RTX, making it possible in practice to compensate for any outages of wireless and Internet connections, primary causes of lost RTK correction data.

FAR MORE THAN 'JUST UPDATES'...

THE MODEL YEAR 2016 CASE IH AXIAL-FLOW SERIES 140 AND 240 COMBINE HARVESTERS FEATURE A HOST OF INGENIOUS INNOVATIONS. FOR THE 140 MODELS, THESE INNOVATIONS INCLUDE NEW THRESHING BASKETS, NEW ENGINE, FURTHER IMPROVEMENTS IN STRAW QUALITY AND, IN PARTICULAR, THE OPTIONAL CROSS-FLOW CLEANING SYSTEM. THESE HAVE A VERY POSITIVE IMPACT ON THE OVERALL PERFORMANCE CAPABILITIES OF THE VEHICLE, AND ALSO MAKE MAINTENANCE WORK A GREAT DEAL EASIER.

The secret to more than three decades of the Case IH success story with the Axial-Flow combine harvester lies in a commitment to take what is already good and to make it even better: The further improvements to Series 140 and 240 vehicles in model year 2016 bear testimony to the impressive way that the Axial-Flow is rightly seen as the visually most appealing and most efficient threshing system on the market. Key features of both model series: The engines comply with the exhaust emission specifications for Level IV – and many wishes and views expressed by customers have been considered and implemented effectively. "Many of the innovations can be summarised under the heading of "greater productivity, more comfort, even greater reliability", states August von Eckardstein, product manager of harvesting technology at Case IH. "With a maximum power rating of 312, 400 and 449 hp respectively on models 5140, 6140 and 7140, there is always plenty of power in reserve for high-yield crops and for damp straw. Here, the new and optional Cross-Flow cleaning system, available from model year 2016, reliably ensures that neither side of the screen is overloaded, even on slopes with gradients of up to 12%. This automatic compensation increases the throughput of the complete cleaning cycle - without the need for intervention from the driver. However, in the interests of maximum efficiency, the system is only activated when it is really needed", states von Eckardstein.

LOTS OF CLEVER DETAILS IN THE 140 SERIES

The smaller and therefore lighter threshing baskets are easy to replace, the delivery screw in the grain hopper can be opened easily for cleaning with the help of a readily accessible flap at

its bottom end, while the swapped positions of delivery screw and transfer unit provide ease of access on the right-hand side to the rotor and to the adjustable outfeed from the hopper discharge tube, all of which takes the stress out of filling transport vehicles. "In addition, other detailed enhancements not only improve the straw quality in each sheaf but also deliver better chopping quality and distribution in situations where the straw is left lying on the field", explains von Eckardstein.

MAXIMUM PERFORMANCE LEVELS IN THE 'PREMIER LEAGUE'

Models 7240, 8240 and 9240 feature convincing maximum engine power ratings of 498, 571 and 634 hp respectively. The 8240 and the 9240 are factory-fitted with a 14,400 litre grain hopper while the 7240 model has the option, rather than its standard 11,100 litre hopper, of being fitted with the 14,400 litre hopper. "On all three models, it is now also possible with the standard hopper discharge system to choose an adjustable outlet. This makes it easier to fill the transfer vehicle. Furthermore, for high-yield locations and the most demanding of customer requirements, Case IH can provide a two-stage field chopper system in which the integrated chopper is combined with an X-Tra-Chop field chopper. This satisfies every conceivable wish", states August von Eckardstein.

Waste water supervisor Patrick Schuh

The Farmlift 525 has an impressive turning circle of just 3.4 metres.

FARMLIFT IN MUNICIPAL USE

A MANOEUVRABLE LOGISTICS SPECIALIST

A CASE IH FARMLIFT 525 IS PLAYING A CENTRAL ROLE IN THE CONCEPT FOR A NEW SEWAGE TREATMENT PLANT IN THE WESTERWALD REGION OF GERMANY.

The sewage treatment plant sub-group of the local municipal authority, the Verbandsgemeindewerke Puderbach - Betriebszweig Abwasserwerk - based at the northern perimeter of the Westerwald region, is currently building a modern sewage treatment plant which will serve to purify municipal sewage and waste water efficiently, these by-products also being sourced from local industry, including a large paper mill. Here is what makes this one special: Instead of a new-build in a greenfield site, the decision was taken to update the existing location progressively until it complies with state-of-the-art standards. This construction work is scheduled to last for 6 to 8 years. At present, an impressive digester tower is being constructed on the building site.

A Case IH Farmlift 525 is playing a central role in this concept. "This construction site is setting us new logistical challenges, for example with the on-site transport of compressed sewage slurry", reports Patrick Schuh, Waste Water Supervisor at the Hölzches Mühle sewage treatment plant. The technical specification for the purchase of a vehicle emphasised the importance of manoeuvrability combined with high carrying capacity", explained Thomas Seitz from Seitz Gerätetechnik, the regional Case IH dealership. The Farmlift 525 was a perfect match for this requirements profile. In particular, because the vehicle is relatively low - measuring just 1.99 metres in height with a track width of 1.50 metres – combined with an impressive lifting capacity of 2.5 tons and a lifting height of 5.70 metres.

THE SUM TOTAL OF A GREAT MANY DETAILS

"A broad range of detailed features make this a much valued key vehicle at this sewage treatment plant and on the construction site", reported Patrick Schuh as he looked back over about six months of experience with this Farmlift vehicle "The flat-roof cab combined with the low overall height, enables the vehicle to pass through low gates but also provides great all-round visibility, for example in the upper working area. The people from Puderbach are also very satisfied with its ability to get the job done efficiently. The entire operation - lifting, lowering, driving in - is accomplished very quickly, in less than 27 seconds. This is achieved through powerful hydraulics and a proportional control system which enable two operations to be performed in parallel. The drive concept also deserves praise The electrohydraulic shuttle CVT transmission enables the vehicle to accelerate seamlessly up to 26 km/h, the maximum speed of the vehicle The hydrostatic drive enables manoeuvring and turning work to be performed efficiently and comfortably by the driver.

Although this is a very compact vehicle the cab provides a spacious working environment, not just in terms of the central control lever, designed as a single-lever joystick. On the right-hand side, all the important display instruments are positioned perfectly, e.g. the load torque indicator. The air-conditioning unit provides ideal working conditions, even during the hot summers for which the Westerwald region is renowned. The Farmlift is equipped with a reversible shovel and a pallet forklift. Thanks to its quick-change fixture, it can be used for a versatile range of transport tasks in the sewage treatment plant and on the construction site "The fully-rated towbar coupling has proven to be very practical. This enables us to use it even more universally for transport duties on this site". Patrick Schuh also considers the integrated vibration damping system to deliver a substantial improvement in terms of comfort and safety

"It can be switched on during normal operation using a toggle switch. During stacking work, we usually have this unit turned off. On the other hand, it really comes into its own during loading or basket work because it protects the load and the driver from sudden impacts and all load movements can be completed smoothly. As an option, the tool attachments can be guided continuously and parallel to the ground. The driver is not required to make corrections all the time. This improves safety and work operations can be accelerated. In overall terms, we get the impression that the Farmlift is a very robust unit despite is compact dimensions", Schuh goes on to explain.

This is without doubt due to more than simply the low centre of gravity and the uniform weight distribution on the side-mounted engine concept. Optimum ballasting is also made possible by the mounting point for the telescopic arm, right at the back of the vehicle.

"INAUGURAL VISIT"

FOLLOWING THE RESTRUCTURING OF A COMPETITOR'S DEALER NETWORK, MAZZA NINO S.R.L. JOINED THE CASE IH TEAM AT THE BEGINNING OF 2014 AS NEW DEALER IN THE PARMA REGION, ITALY. THANKS TO HIS EXCELLENT NETWORK IN REGIONAL AGRICULTURE, MAZZA HAS SINCE BOOSTED CASE IH SALES THERE, BRINGING QUITE A FEW NEW CUSTOMERS TO 'RED POWER'. THAT IS WHY A PUMA 200 CVX ALSO PAID A FIRST VISIT TO THE AZIENDA AGRICOLA BERTINELLI, A HIGHLY INNOVATIVE AND DIVERSE BUSINESS NEAR PARMA IN APRIL THIS YEAR.

Azienda Agricola Bertinelli started its dairy operation in 1895. Today, 350 dairy cows plus offspring are kept and fed from forage grown on 170 hectares of land. A total of about 4,000 farms produce milk for Parmigiano Reggiano, but the Bertinelli business is one of only three that keep the whole production cycle in their hands. Growing of the fodder, production of the milk, as well as making, storage and marketing of the cheese remain in the hands of the business – thus ensuring quality and traceability throughout all steps. As a result, because the necessary rules are strictly adhered to and processes are constantly monitored, Azienda Agricola Bertinelli's Parmigiano Reggiano is certified and marketed as a kosher product – a truly unique feature of this farm!

MILK, CHEESE AND A RESTAURANT

The business has three further branches, all contributing to economic results during the ripening of the cheese – i.e. at times when otherwise no income is generated. Nicola Bertinelli, son of the owner Gianni Bertinelli, took over responsibility as CEO in 2002 and started the process of diversification that led to the present four segments: dairy farm and cheese production, restaurant and food service, 24/7 entertainment and events, as well as three retail shops. "Our farm is an "azienda innovativa", and we produce a very special product which indeed deserves appreciation for what it is in terms of quality and uniqueness", highlights Gianni Bertinelli.

START OF THE „RED ERA"

As long-term customer of the Mazza, Nino S.R.L. dealership in Parma, the Bertinellis are currently considering the acquisition of at least one new tractor – and that might well be a Case IH. That is why Guiseppe Mazza took a Puma CVX 200 to the Azienda Agricola Bertinelli for an 'inaugural visit'. "Our business is innovative and we are thus looking for innovative agricultural machines: powerful and high performance tractors with suspended front axle, CVT transmission, excellent reliability, as well as equally easy and comfortable operation. We have an excellent relationship with Mazza, our dealer for many years, and we appreciate having the Puma CVX 200 pay us a first visit – it might well indicate the onset of a new 'red era' for our farm", says Gianni Bertinelli.

Guiseppe Mazza (left) and Gianni Bertinelli talk shop during the Puma's inaurugal visit' to the Azienda Agricola Bertinelli

IN DISCUSSION WITH ANDREAS KLAUSER

THE MARKET REWARDS TOP-LEVEL PERFORMANCE

Andreas Klauser
Brand President Case IH

FARMFORUM: Mr. Klauser, morale in the agricultural technology sector is not particularly high at present - one senses a general lack of enthusiasm. How do you assess the situation for Case IH?

ANDREAS KLAUSER: The market environment is indeed a challenging one at this time. Among the farmers who engaged in big investments back in 2013, one can sense genuine reticence about further capital expenditure. Nonetheless, we are set up really well, with innovative solutions that offer our customers clear advantages on an everyday basis. Consider the further improvements to the Axial-Flow combine harvesters - minimal grain losses, ultra-gentle threshing - and therefore more efficient and more economical than combine harvesters with shakers. Think about soil conservation: Here too, we are setting standards with our tracked vehicles, on the big combine harvesters, with the Quadtrac and now also with the Magnum Rowtrac. Furthermore, we are trendsetters in customer-oriented solutions for engine and exhaust technology, for CVX drives or our Advanced Farming Systems.

FARMFORUM: To phrase the question more directly - what are the prospects for new registrations of tractors in the important German market?

ANDREAS KLAUSER: The situation can be summarised in a single sentence: the market rewards top-level performance. In 2014, we achieved overall sales growth of 2.2% with tractors over the previous year. The segment for tractors with power ratings above 50 hp rose by 2.6%, so performed even better. This means that we have extended our position as a 'strong third' on the league table. In the segment above 50 hp, we are now in second place in terms of new registrations.

FARMFORUM: What role do synergies have to play within CNH Industrial for the development of Case IH?

ANDREAS KLAUSER: The impact of the successful positioning of CNH Industrial as a technology business with a wide range of areas of competence must not be underestimated. The powerful and efficient engines from FPT Industrial used in our agricultural vehicles benefit to a very large extent from experience we have gathered in various fields, including the logistics and construction vehicle sectors. Telematics and vehicle navigation are other examples that showcase the transfer of knowledge and experience within our corporation. As a result, we are able today to offer end-to-end logistics and fleet solutions – from trucks specifically equipped for high-speed agricultural transport duties to wheel loaders for use on the farm to small vans for direct marketing businesses.

FARMFORUM: When categorising companies, one question often arises: 'Generalist or Specialist?' – where are CNH Industrial and Case IH situated in this context?

ANDREAS KLAUSER: We are actually both - one could describe us as highly specialised generalists! We not only have a broader range of skills and products than ever before, which establishes our credentials as a strong generalist, but we also set innovative trends time and again in our individual sectors. In so doing, we emulate what successful specialists do in their respective segments – except that we do this in parallel fashion across a great many different sectors. I am proud that this is not only true at a general level of our agricultural technology, construction vehicles and transport vehicles, engines and transmissions, of our RTK network, telematics and precision farming systems, but also that we deliver financing services, Parts & Service and above all our own network of dealerships, strong and dependable partners well established on location – and therefore able repeatedly to make important contributions to the improvement of productivity and efficiency of the operations of our customers.

FARMFORUM: Many thanks for these insights.

ULTIMATE PERFORMANCE THROUGH TEAMWORK!

WCM
WORLD CLASS MANUFACTURING

JUST SEVEN YEARS AFTER THE LAUNCH OF THE WORLD CLASS MANUFACTURING PROGRAMME (WCM) AT THE ST. VALENTIN SITE, THE PLANT WAS AWARDED SILVER STATUS. ST. VALENTIN IS THEREFORE THE FIRST PRODUCTION FACILITY FOR AGRICULTURAL TECHNOLOGY AND CONSTRUCTION VEHICLES OPERATED BY CNH INDUSTRIAL IN EUROPE, THE MIDDLE EAST AND AFRICA (EMEA) TO RECEIVE THIS COVETED AWARD.

'Total Quality Control', applied to production and product quality, is one of the key target parameters of WCM, the World Class Manufacturing programme. In this programme, the level of the entire logistics and production cycle of a company is evaluated on the basis of the methods it employs and of the results it achieves. "In the past, the plant in St. Valentin had already acquired a great reputation for its production quality and for the efficiency of its workplace operations. Nonetheless, we were of course really delighted to have this officially recognised and certificated", states Plant Manager Andreas Kampenhuber.

St. Valentin is one of 34 production facilities operated by CNH Industrial in the EMEA region. Roughly 600 employees work here on the development and manufacture of tractors in the segment up to 300 hp. "This silver status is a great way to acknowledge the great efforts of the entire workforce and it honours their competence, hard work and commitment, because an outcome like this can only be achieved through teamwork: Every single individual has contributed towards making St. Valentin one of the best production facilities of CNH Industrial anywhere in the world", stated Kampenhuber.

SILVER
ST. VALENTIN

WORLDWIDE PROGRAMME

The widespread implementation of WCM across the CNH Industrial conglomerate, with approximately 69,000 employees in 190 countries, constitutes the basis for a shared production culture and acts as a signpost for efficient, quality-oriented processes. The key to it is to avoid losses of any kind: Zero injuries to employees, zero quality faults and defects, zero waste, reduced inventories and absolutely punctual delivery of incoming and outgoing goods are all elements of this programme. A total of 59 CNH Industrial plants around the world are participating in WCM, 20 of which have already achieved Bronze status while 10 plants have achieved Silver status.

The auditing of the St. Valentin plant took place on 27 and 28 May 2015 and was performed by independent and appropriately qualified inspectors. "During this auditing process, our employees not only delivered conviction in respect of their workplace performance levels and outcomes, but also through their knowledge and understanding of the basic principles of the WCM programme. This is particularly true - and I am very delighted to be able to relate this to you - of the employees who work directly in production. This closes the circuit to our customers, whose everyday work using our vehicles and equipment entitles them to expect the highest standards of quality and reliability from us", concluded Kampenhuber.

A REGION SEES RED

AXIAL-FLOW INCREASINGLY POPULAR AMONG THRESHING CONTRACTORS

CUSTOMERS OF FARMER AND AGRICULTURAL CONTRACTOR HEINER DUENSING FROM NEUSTADT AM RÜBENBERGE REALLY APPRECIATE THE HIGH PERFORMANCE LEVEL, THE GREAT STRAW DISTRIBUTION AND THE EXTREMELY LOW LOSSES.

"In particular, the great threshing performance, the extremely low losses and the very simple operating principle have convinced us", summarised farmer and agricultural contractor Heiner Duensing from Neustadt am Rübenberge as he drew together the most important arguments for his purchase of a new Axial-Flow 6130 and explains an important aspect of practical experience. "The Axial-Flow system with single rotor provides very efficient and virtually loss-free threshing work. Even straw distribution is perfect. Our customers frequently save on an operation in this way. The low level of grain loss during the threshing process really does pay rich dividends. Even in this, the first year of harvesting work, I have been receiving substantially more enquiries for operation of our combine harvester. This demonstrates that the threshing system is well received by an increasing number of farmers".

THE HARVESTING CONDITIONS ARE CHANGING

Since 1999, Heiner Duensing has been offering his services to other farms in the region. As well

GREAT EXPERIENCES WITH ADVANCED FARMING SYSTEMS

The Axial-Flow 6130 from Heiner Duensing is equipped with the Case IH Advanced Farming System. Its focal point is a GPS-controlled AFS steering system that controls the location of the combine harvester to within a precision of 2 centimetres using the GPS correction signal. In practice, a system of this kind delivers numerous advantages, as Heiner Duensing goes on to report. "It delivers optimum vehicle utilisation and that in turn delivers a rapid harvesting operation. Overlapping areas can be avoided altogether. Furthermore, this makes the driver's job a great deal easier. For customers, this saves diesel and labour costs. The data are documented precisely and can when needed be scanned into reference card index systems".

"We frequently find almost no grain losses on the field, and that is of course a very powerful sales argument to put to my customers. It would even be hard to find grain husks - an important argument, especially in respect of seed cultivation farms"

as work as a threshing contractor, he also sprays herbicide and performs soil management operations. "With grain threshing, we were previously committed to conventional shaker machines. However, it was becoming evident that, to an increasing extent, shakers, are reaching the limits of their operational capabilities. There are many reasons for this. Modern kinds of grain deliver a new ratio of straw and corn, weather conditions are changing and the time windows for harvesting are getting smaller. With tangential stock flow, threshing and separating elements are operating right at their limits, especially when harvesting conditions are heavy. This is often compensated for through the use of powerful engines. In these extreme situations, grain losses rise sharply, frequently above five percent, and this can later be detected by green fields of waste grain crops. The value lost in this way could often actually pay for a threshing operation, summarises Duensing.

ON THE SEARCH FOR THE RIGHT CONCEPT

At Agritechnica, we worked for the first time with the Axial-Flow system from Case IH and were enthused by the simplicity of its design. In the ensuing harvest, we looked at the work of a Case IH AF rotor combine harvester in practice and were able to reach a decision rapidly.

Since that time, Heiner Duensing has used an Axial-Flow 6130 with a 10,570 litre grain hopper, a 387 hp engine and a 7.6 metre wide cutter bar. The combine harvester is equipped with a Case IH FPT 8.7 litre engine with HI-eSCR exhaust gas cleaning.

All elements of the entire combine harvester can be driven by a central transmission. "To avoid performance losses, this is mounted directly on the engine. All important power transmission functions are performed entirely without belts. This eliminates belt slip, means less wear and, of course, less need for maintenance. Nor is it necessary to replace belts".

ONE CONCEPT IS IN THE ASCENDANCY

After harvesting about 500 hectares, positive experience confirms it. "The 6130 is an all-round success story as a combine harvester. It starts back at the workplace. Spacious cab, powerful air-conditioning unit, many storage options, optimum all-round visibility - ideal for long working days. However, and above all, we are impressed by the threshing performance. "With the new Axial-Flow models, engine power has been increased once again. This ensures optimum and, at the same time, low diesel consumption.

Heiner Duensing is also very satisfied with straw management. "The changeover between swath storage and field chopping involves just a few simple manual operations. In my view, the chopping quality has been improved yet again with the very latest generations of combine harvester. Straw distribution is very uniform and reliable and involves a simple plate distributor. This yields a very uniform pattern and our customers appreciate the speed with which straw can start to rot."

CONQUERING RESIDUAL HUMIDITY AND CROP YIELD FLUCTUATIONS

WITH THE CASE IH FIELDLEVEL SYSTEM ARABLE SURFACES CAN BE LEVELLED EFFICIENTLY AND RESIDUAL HUMIDITY CAN THEREFORE BE AVOIDED THROUGH BETTER WATER EFFICIENCY.

Sören Gimmini from Kronprinzenkoog in Schleswig-Holstein is one of the first people in Europe to use the new FieldLevel system from Case IH.
Since 1996, Sören Gimmini has been farming an arable farm where the focus is on vegetable growing, up on the North Sea cost in the Dithmarschen farming region. The main problem faced by crop farmers in this region is the high level of rainfall. During wet years, this can give rise to yield losses in cabbage planting of up to 20 percent, due to residual humidity, i.e. excessive amounts of water on the land. Gimmini is employing the FieldLevel system from Case IH to counteract this problem. Together with the Case IH dealer Meifort, Gimmini has established this system successfully on his farm.
The water management system makes it possible to level his arable land to the nearest centimetre. This involves removing raised areas of land, and filling depressions, achieving a uniform level of soakaway and thereby preventing the build-up of residual humidity. Surplus water is directed off the field with the help of a slight gradient, and this extends the driveability of these surface areas. These measures make it possible to achieve higher yields and better standards of quality. Higher levels of quality also translate into fewer cleaning losses in the cooling house.
First of all, the areas of land are mapped out and sub-divided into parcels, each with its required gradient. "Our levelling blade settings are adapted by means of signals from two antennas, and the axles are controlled independently to adapt the vehicle position to suit the physical relief of the land", explains Gimmini. The surplus water is evacuated from the field parcel by parcel. "As soon as I encounter problems with drainage channels, it becomes easier to level the entire surface area. On smaller surface areas, all I need to do is simply to sub-divide the land into parcels". These areas are all levelled before being cultivated, and details are transmitted to the FM 1.00 computer with the help of a Multiplain file.

NO DOWNTIME FOR LAND CULTIVATION

"As soon as the harvesting operation is finished, and the soil is dust-dry, that is the right time to perform the levelling operation". Optimisation of water management on his arable land does not involve any downtime for land cultivation. In the small time window after the harvest and before sowing fresh seed, Gimmini levels his land. "It's not just the soil that needs to be as dry as dust: there must not be any coarse-grained crop residue left on the field", adds Gimmini. For this reason, he converted his field cultivator or 'grubber' from a narrow blade to a broad-blade unit. "I have to be able to retrieve as much soil as possible to the surface, then I avoid having any problems during the levelling operation", explains Gimmini.
At the present time, he has optimised two thirds of the entire surface area of the farm and virtually all vegetable-growing land, and has this to say, with evident satisfaction: "The additional cost of the work is absolutely worthwhile to me. I record lower fluctuations in yield during wet years, and on average I am able to spend longer on my arable land".
With the FieldLevel system from Case IH, it is possible at some future date to rework the levelled areas of land. As well as extolling the virtues of the versatile application options of the GPS system, Gimmini goes on to say this: "One of the reasons why I prefer the FieldLevel system to a laser system is that, once I've finished cultivating my field, it is an easy matter for me to correct harvesting errors and any tracks left where a vehicle might have got bogged down". The practical experience of Sören Gimmini shows that a good water management system makes it possible to increase the yield achieved with arable farming.

In Europe, Sören Gimmini is one of the first people to use the new FieldLevel system from Case IH

The active stationary control has proven to be very practical. When required, it can hold tractor and trailer load on any gradient - even without actuating the brakes - while stationary. This is a great bonus in terms of safety.

The power-to-weight ratio of the Puma, with 30 kilograms per horsepower, permits ballast to be added for challenging towing work. However, even without additional weights, the Puma is ideally equipped for all-round work, and is therefore a versatile workhorse in agricultural contracting businesses.

FIVE PUMA CVX TRACTORS ON THE GO AT ONCE

IDEAL TRACTORS FOR AGRICULTURAL CONTRACTORS

"At present, the Puma CVX is one of the tractors best suited for work in agricultural contracting businesses!" These are the words used by Thorsten Mensching, CEO of Mensching Dienstleistungs-GmbH in Sachsenhagen/Nienbrügge to explain his purchase decision.

Just a few weeks ago, his company put five new Puma CVX 230 tractors into service, thereby extending the vehicle fleet with high-tech: "We decided to purchase fully-equipped tractors. That includes a front PTO shaft, suspension of cab and front axle, as well as complete GPS equipment, and even a reversible fan", the CEO went on to explain.

This makes the Puma CVX perfectly equipped for the wide range of applications tackled by agricultural contractors. In particular for transport journeys, the spreading of slurry and manure, the driving of presses and in terms of its comprehensive ordering programme, the Puma CVX stands out as the optimum tractor concept. "It is very economical and its ultra-modern FPT engines make it a very fuel-efficient vehicle. The FPT engines deliver performance, they are economical and they have powerful torque ratings. Engine performance management and Power Boost during PTO and transport work also ensure that they always retain an adequate power reserve. We are also pleased that the engine achieves its top speed at just 1550 rpm - this makes for smooth running and low fuel consumption. Mensching believes that the DKT double-clutch technology in the Puma CVX also delivers good ride and operational comfort. "The DKT ensures that the driver is almost completely unaware of the interruptions to traction that would otherwise occur during ratio and gear changes. The benefits of this are felt most when accelerating, when traction is not interrupted at all", stated this experienced agricultural contractor. "Moreover, we are convinced of the strength of this vehicle's many detailed solutions, including more than ten tons of lifting power at the back, and hydraulic performance levels in excess of 170 litres per minute.

Mensching Dienstleistungs-GmbH began life as a farming business owned by the Mensching family and has evolved into a top-of-the-range service provider for the farming sector, also handling municipal tasks in the region. As well as classic farm contracting work, e.g. combine-harvesting, corn chopping or straw harvesting, Torsten Mensching and his team, more than 30 in number, also handle the complete operation from sowing to soil preparation, and the spreading of fertiliser and herbicides. Another key area for them is the spreading of muck and substrate. The company now even operates its own biogas plant. Its extensive portfolio of operations at municipal level includes path building, earth-moving, forestry and excavator work. As a fourth string to its bow, this farming business also trades in crop seed, fertiliser and wearing parts, a service that an increasing number of farmers in the region are now pleased to call upon. The company now has a fleet of more than 30 tractors.

Thorsten Mensching,
CEO, Mensching Dienstleistung-GmbH

Back in 2010, we purchased our first Puma CVX and rapidly gained very good experience with the tractor concept. This in turn prompted us two years later to purchase three more Pumas.

QUADTRAC AT WORK ON ARABLE LAND

PEERLESS TRACTION AND EFFICIENCY

EICHSFELD, TO THE NORTH-WEST OF THURINGIA AND LOCATED BETWEEN THE HARZ MOUNTAINS AND WERRA, HAS OVER THE LAST TWO DECADES GROWN INTO A REGION KNOWN TO BE HOME TO A LARGE NUMBER OF TOP-CALIBRE ARABLE FARMS.

Despite the fact that the landscape does not appear to favour arable farming – with about three quarters of the surface area on hill slopes between two and four hundred metres above sea level, with extremely short vegetation windows and variable soils – the farms have identified an opportunity for themselves in the crop rotation market on which they capitalise extremely professionally with remarkably low work completion costs and correspondingly low unit costs. One of these local businesses is the agricultural cooperative trading as Am Dün mbH with its head office in Wingerode. The company name is derived from 'Dün', a calciferous plateau extending to a height of about 450 metres with parcels of land clinging to its steep-sided slopes.

About 2300 hectares are farmed by this agricultural cooperative employing the crop rotation cycle favoured in this region of the Eichsfeld. The cycle comprises winter wheat, barley and rapeseed. With the aim of reducing work completion and unit costs, very little use is made of the plough: it only goes into service before the barley, mostly for reasons of arable land hygiene. "A decisive phase in our arable farming concepts therefore involves working on the soil quality. This is driven not least by the ever shortening vegetation windows we have to operate within. Emphasis is placed on powerful stubble cutting followed by preparations for sowing", reports Andreas Dietrich, a member of the planting team from the Am Dün agricultural business.

"We are now on our second generation of Quadtrac from Case IH. For us, there is no alternative to this vehicle - it is that good! Immediately after the millennium we started with a K700 for these tasks, then we switched to a conventional tracked vehicle. While this may no doubt work fine when the soil conditions are constant, and when the ground is entirely level, with our site conditions and topography, the concept is virtually no use at all. We therefore decided in favour of the Quadtrac from Case IH. At present, this takes the form of a Quadtrac 600 with a maximum power rating of 670 hp.

Depending on the soil situation, this unit is used with a Väderstad TopDown or a Kverneland Grubber with a working width of nine metres. With this combination we can cultivate a surface area of twelve hectares within a defined period of time". This is our 'antidote' to any further structural disadvantages of the Eichsfeld region". Since parcels of land are small, and since roads are narrow, a lot of manoeuvring and hitching/unhitching of towed implements is required, all of which pushes up the retooling costs. The Quadtrac helps to offset those drawbacks with its great working efficiency on arable land and its manoeuvrability when performing transport duties", states Dietrich.

The hallmark feature of the Quadtrac is its set of four tracked drives. This enables it to deliver its enormous engine power as traction while also being kind to the soil. The unladen weight of 25 tons is distributed across a contact surface area of 5.6 m^2 – 60% at the front, 40% at the back. No additional ballast is required. The Full-Powershift transmission provides 16 forward and two reverse gear ratios. With its 710 mm wide tracks, the Quadtrac has an external width of 2.99 metres. That entitles it to drive on public roads. It has a maximum speed of 37 km/h.

Andreas Dietrich,
Planting specialist in the agricultural business Am Dün

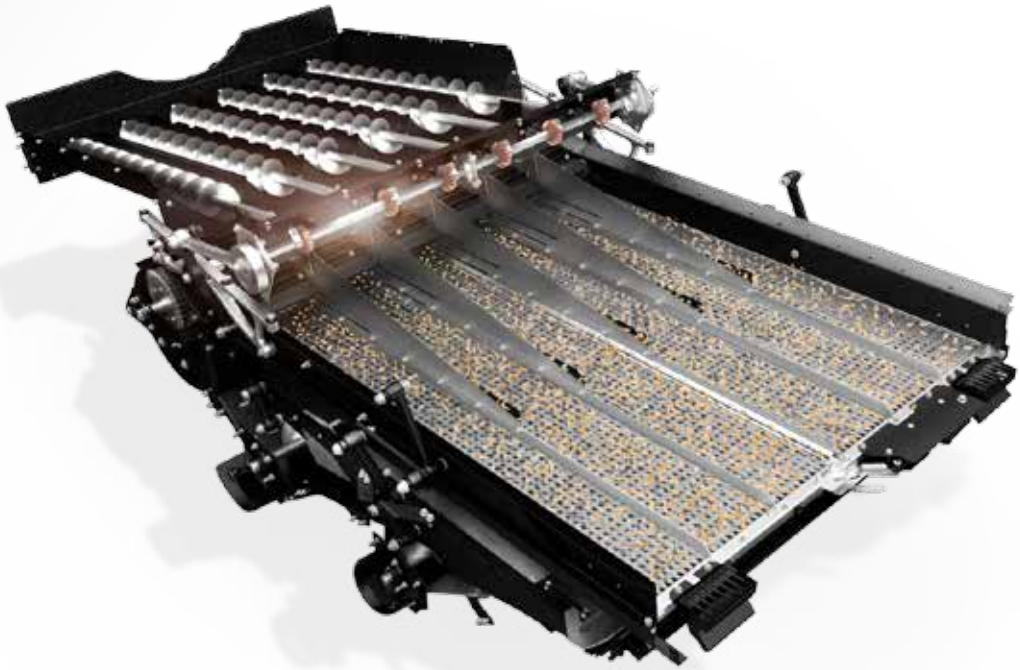
COMFORTABLE WORKPLACE

However, it is not only the traction and towing power that are appreciated. "Naturally, as a driver, ride comfort also has an extremely important role to play. In this respect too the Quadtrac is unique. Cab size, equipment and all-round visibility are all in a class of their own. Even just the comfortable seat position, the 'relax pedals' on the steering column and integration of all functions in the armrest make this vehicle unique in terms of comfort. The 16x2 full-load transmission takes all the shift impacts out of gear changes, and when I take it onto public roads, I can reach speeds in excess of 35 km/h".

To further boost efficiency, the Quadtrac operated by agricultural company Am Dün is equipped with the AFS AccuGuide track guidance system. This delivers a substantial improvement in ride comfort, makes work more relaxing and, of course, boosts efficiency because overlapping tracks can be prevented altogether", assesses Dietrich, and he really appreciates the excellent reception capability of the antenna. "Even beside forestry and down in valleys, we still get great reception. The AFS 700 Pro Monitor gives me an excellent overview of all relevant farm data."

His summary: The Quadtrac is certainly the professional solution when efficient soil cultivation is required. "The system has been in a mature condition for years, and it has a proven track record. In more than ten years of experience with the Quadtrac I have only once had a problem with a running gear roller, and that was simply the result of a failed bearing", stated Andreas Dietrich in conclusion.

Andreas Dietrich feels that the positioning of the cab is a brilliant design coup. "The driver is seated midway between the two main units of the Quadtrac. That not only gives him great all-round visibility but also assures vibration-free positioning. For me, these are important arguments. You have to remember that I spend something like 800 hours a year in this workplace". The new cab suspension smooths out bumps in and at right angles to the direction of travel and therefore greatly improves ride comfort.



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