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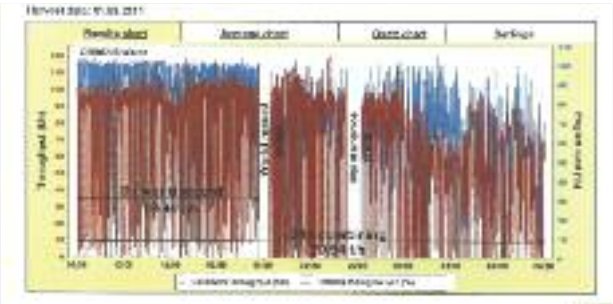
LEXION 770TT sets 85.5 t/hr World Harvesting record

During an endurance performance test conducted in Lincolnshire on September 1st and 2nd, a CLAAS LEXION 770TT established a new Combine Harvesting World Record for wheat of 675.84 tonnes harvested. This it achieved by maintaining an average harvesting rate of 85.5 tonnes/hour over an eight hour period. This new record is some 22.5% higher than the previous record established in 2008 by a competing 591hp machine.

The record was set as part of the endurance performance test during which the LEXION 770TT harvested over 1400 tonnes of wheat in 20 working hours, a feat made possible by the APS HYBRID threshing & separation system which allows for continued high output in damp conditions.



The combine was a standard 586hp LEXION 770TT, equipped with TERRA TRAC rubber tracks and a 12 meter VARIO cutterbar and APS HYBRID threshing system. It was driven by CLAAS combine demonstrators Jens Broer and Christian Mecmann, supported by a team of five tractors and trailers driven by staff from CLAAS UK and the local CLAAS dealer Marsh.

The endurance test was conducted on four fields of wheat totalling 183ha at Haugh, near Louth in eastern England. Cropping was split between two varieties, Conqueror and

Duxford, which between them averaged 9.7t/ha with a peak yield of 13t/ha, and moisture contents averaging 15.9%.

The endurance test was overseen by ex-ADAS machinery consultant Bill Basford, with the new World Record confirmed by Guinness World Records adjudicator Jack Brockbank. The crop was harvested to a height determined by the farmer, all the straw was chopped and the tonnage recorded over a neighbouring public weighbridge.

The endurance test was being conducted to assess the ability of the APS HYBRID threshing system on the LEXION 770TT to allow farmers to start harvesting earlier and finish later than is possible with rotary type combines.

After 15 minutes spent setting the combine and calibrating the on-board yield monitoring equipment to the weighbridge figure, the record attempt started at 9.45am. With good harvesting conditions and the LEXION 770TT maintaining average throughputs of 84.48 t/hr with losses of just 0.31%, and peaks in excess of 100t/hr during the day, it soon became apparent that the eight hour World Record would be comfortably beaten, and at 5.45pm the new World Record figure of 674.84 tonnes was confirmed.

During this time, the combine cleared 69.7 ha of crop, but only used 11.21 litres/hectare, or 1.15 litres/tonne, of fuel, which was some 3.75 litres/ha less than was used by the record breaking LEXION 580TT in 2008, and 10.8% less than the previous world record.

Such is the capacity of the LEXION 770TT, working at this World Record breaking rate of 85.5 tonnes/hour and at a feed wheat price of £171/tonne (the September 8th average HGCA for November), the LEXION 770TT would have paid for itself in under 34 hours.

World Record breakers: left to right - Jack Brockbank (Guinness World Records); Jens Broer; Christian Mecmann and Bill Basford (independent machinery consultant)

After a short break, the LEXION then continued its endurance test, working into the night. With dawn having broken, the combine was finally shut down at 6.30am, by which time it had spent 20 hours harvesting, had cleared 129.36ha and threshed over 1360 tonnes of wheat, stopping only for two short servicing and refuelling breaks.

Despite working through the night, overall the LEXION 770TT still maintained an average throughput of 70.94 tonnes/hour during the 20 harvesting hours it worked, which in itself was 4.0 tonnes/hour higher than the LEXION 580's eight hour average in 2008.

The fact that the LEXION 770TT could maintain this high harvesting rate over such a long harvesting period, and through the night , answered the objective of the endurance test and demonstrated the effectiveness of the APS HYBRID threshing system in allowing the combine to work longer hours when other threshing systems would struggle to cope.

AXION 900 reaches new power level

The introduction of the new AXION 900 range, with power outputs from 320hp up to 410hp, marks CLAAS' entry into a completely new market sector. The AXION 900 is a totally new design which complements the CLAAS range of high horsepower tractors.

Design

In common with all CLAAS tractors, the AXION 900 has a long wheelbase (3.15 metres) for optimum weight distribution and traction, with a compact overall length of 5.56 metres.

The AXION 900 is built around a fully integral frame that incorporates a self-supporting crankcase and embedded sump. This robust design provides the possibility to fit a 6.8t front linkage without the need for any additional bracing, so maintaining maximum manoeuvrability.

Operators benefit from a brand new four pillar cab design with a new specifically developed four-point mechanical cab suspension system, or the new highly advanced Z-ACTIV cab suspension which utilises a combination of mechanical, pneumatic and intelligent damping systems, providing the ultimate in comfort, and adjustable at the touch of a button from the seat. There is also the option of three different suspension seats – including one with automatic ventilation, plus front and rear linkage vibration damping and the PROACTIV front axle suspension.

Built into the right-hand armrest are all the main controls needed to operate the tractor. The main functions are controlled using the CMOTION control which fits comfortably in the right hand.

In front of this is the CEBIS terminal with 21cm screen and an ELECTROPILOT joystick for the hydraulic controls. CEBIS is quickly and easily accessed and used via a push/turn dial and an ESC key. In addition there is direct access to the spool valves, speed ranges, Cruise Control and function keys.

The cab has been mounted forward of the rear axle, which provides benefits in terms of comfort, but also enhanced visibility over wide implements. The B pillars are mounted slightly forwards thus further improving all round visibility. The cab also features a one piece windscreen.

Engines

A total of four AXION 900 models are available, all of which are powered by FPT Cursor 9, 8.7 litre 6-cylinder 24-valve engines with SCR technology that have maximum power outputs of 320hp, 350hp, 380hp and 410hp.

The engine is managed by an advanced CLAAS engine electronic management system, which is designed to provide optimum fuel economy with maximum performance and torque.

To ensure that forward visibility is not compromised, all the SCR components are located in protected positions. The catalytic converter is integrated under the bonnet whilst the 60 litre Ad Blue tank® has been incorporated into the 700 litre fuel tank. This makes filling extremely convenient and easy, but also serves to insulate the tank, which is also heated by the engine coolant.

Transmission

In order to maximise outputs and so reduce fuel consumption per hour, the AXION 900 uses a split-power, ZF ECCOM 3.0 transmission that has four automatically engaged mechanical ranges to ensure the maximum amount of power is transferred to the rear axle.

The AXION 900 is fitted with a GIMA rear axle that has been exclusively designed for CLAAS and can be fitted with 2.15m diameter tyres, whilst the PROACTIV front axle can take tyres of 1.70m diameter.

The transmission is controlled using the CLAAS CMATIC intelligent transmission management system as used on the AXION 800 and is designed to ensure a high

transferrence of power to both the rear axle and the PTO, with minimal fuel consumption. Speed range as standard is from 0.05kph up to 50kph, which makes the transmission ideal for a wide range of field and transport operations.

The main transmission control functions are operated using the new CMOTION control unit. Using a button on the main control panel, the driver also has the option of selecting three operating modes, Automotive; CMOTION or Manual, which can be selected whilst the tractor is moving.

The driver also has the option of three speed range driving modes, which can be set-up and stored using CEBIS, then activated on the move and can be used in both forward and reverse. In addition, a Cruise Control facility allows the operator to select a preset speed in each of the three ranges, which will be useful where a precise speed has to be maintained or at the headland.

The CMATIC transmission control also incorporates three speed reducing modes. In Normal, as the accelerator is released, the engine braking will slow the tractor. If the CMOTION lever is pushed forwards when the throttle is released then engine braking is reduced and 4-wheel drive is not activated providing more of a rolling stop. Enhanced deceleration can be achieved by pulling the CMOTION lever back when the pedal is released, with the result that engine braking is increased and 4-wheel drive engaged.

PTO, hydraulics and linkage

To accommodate the wide range of operations that the AXION 900 is likely to handle, three different PTO shaft speed packages can be specified, 1000, 1000+540 Eco and 1000+1000 Eco.

The factory fitted front linkage and PTO is fully integrated into the tractor frame and runs at 1000rpm at an engine speed of 2000rpm and has a maximum power output of 204hp, making this ideal for implements such as a front mower.

The AXION 900 has a 150l/min or 220l/min load sensing hydraulic system and up to six spool valves can be fitted at the rear and two at the front. For maximum convenience, the spools can be operated using either rocker switches on the armrest, via the ELECTROPILOT joystick or they can be allocated function buttons on the CMOTION control, and all can be individually adjusted.

The rear linkage on the AXION 900 has a maximum lift capacity of 11 tonnes. This is set-up using a panel on the 'B' pillar alongside the driver's seat, and can be controlled either from this panel or via a raise/lower button on the CMOTION.

A front linkage with capacity of 3.3 tonnes or 6.8 tonnes is available, which is fully integrated into the frame and so requires no further reinforcement.

Standard Specification

As standard, the AXION 900 is equipped to a high specification to ensure optimum driver comfort and convenience over the long hours that a tractor of this size is likely to work.

In the cab there is a wide range of connection options, including ISOBUS, to ensure that all types of terminal can be easily utilised. The cab also features full air-conditioning and optional automatic climate control, plus a refrigerator box is located under the passenger seat.

An extensive lighting package is available with up to 20 work lights for 360° illumination and includes step lighting, memory function for the last configuration and a time delay.

CMOTION Multifunction Control Lever

Using the new CMOTION Multifuction Control Lever, all the main controls for the AXION 900 can be operated using just three fingers.

- Forward/Reverse
- Rear Linkage
- GPS steering
- Change driving range
- Cruise Control
- Front Linkage & ISO F7/F8 function buttons
- CSM Headland management
- ISO F5/F6 toggle switches

EASY and TELEMATICS

The AXION 900 is ready for use with the full range of CLAAS EASY (Efficient Agriculture Systems) steering and electronic management tools.

The AXION 900 can also be specified with the CLAAS TELEMATICS performance monitoring system. All aspects of the tractor's performance, settings and position are automatically uploaded to a web server. This allows output data to be analysed and compared to ensure optimum output, and if need be the tractor can also be accessed by the dealer for remote diagnosis.

XERION packs 524hp punch

The new XERION 4500 and XERION 5000, which have maximum power outputs of 483hp and 524hp respectively, have been brought fully to market.

Like the smaller XERION range, these two new models offer a number of distinct benefits over similar powered articulated or tracked tractors, making the XERION far more flexible and suitable for all-year round use.

The XERION 5000 and 4500 are the only tractors in this power segment to have a CVT transmission, which provides far greater flexibility than the Full Powershift transmissions normally found on tractors this size.

The XERION is also the first tractor this size to have a maximum travel speed of 50kph, and for road and field work the four equal sized wheel design provides a far greater level of operator comfort and handling than has been seen before in tractors in this horsepower class. Four-wheel steering also allows for compact headland turns without scuffing and provides excellent and safe handling on the road.

As with the existing XERION, the new design also allows for a number of weighting options, anything from 13,400kg to 24,000kg, providing the ultimate flexibility depending on individual requirement.

The XERION 4500 and XERION 5000 have a full frame chassis, from which the major components are suspended and allows the XERION to absorb far greater weights than a conventional tractor.

The new XERION 5000 and 4500 offer six different steering modes, including crab steering, in order to ensure soil compaction is kept to a minimum. Both are powered by Caterpillar, 12.5 litre engines with charge-air cooling that meets TIER 3 emission standards. This is controlled by a CLAAS designed engine management system to ensure optimum fuel economy and performance. Drive to the two steered axles is through a well proven, heavy duty, 50kph ZF Eccom constantly variable transmission (CVT).

To handle the electrical demands placed on a tractor of this size, the XERION 5000 and 4500 feature both a 12-volt plus a 24-volt electrical system that is used to start the engine and power the work lights.

For powered implements, there is the option of a 1000rpm PTO, which is driven at an engine speed of just 1730rpm, which is far lower than on other comparable sized tractors.

All the main operating functions are controlled using the new CMOTION multifunction control lever, which can be moved forwards/backwards and sideways to change speed and wheel angle, for instance when crab steering. There are a number of programmable driving modes, including cruise control to maintain a constant forward speed with optimum fuel efficiency.

Each of the new XERIONs will be available with the option of either a central fixed or the unique rotating cab, which makes the XERION ideal for use with triple mowers or specialist applications, such as forestry equipment.

As standard, the XERION is equipped with a 205 l/min hydraulic circuit operating at up to 200 bar, with flow rates of up to 105 l/min available for each spool valve, and up to six rear spools can be fitted. If required, a Power Hydraulic system with a maximum flow rate of 235 l/min can be fitted for use with equipment such as swan neck slurry tankers.

As with all the main operating systems on the XERION, the electronic linkage on the XERION 4500 and XERION 5000 is easily set-up using CEBIS and operated via the CMOTION control. The rear linkage has a maximum lift capacity of 10 tonnes, whilst the front linkage has an 8.1 tonne capacity.

EASY and TELEMATICS

Both the XERION 5000 and 4500 are ready for use with the full range of CLAAS EASY (Efficient Agriculture Systems) electronic management tools and steering systems, including GPS PILOT. They can also be specified with the TELEMATICS performance monitoring system.

New clean cutting CORTO F

Whilst the demand in the UK is mainly for disc mowers, there is still a market for those with drums. To provide these users with some of the advances that have been made in the DISCO front mower range, CLAAS has introduced the CORTO 3200 F PROFIL which has a working width of 3.20m.

The PROFIL kinematics system is centred around the principle that to avoid scalping and an uneven cut, it should be the ground that guides the mower and not the tractor.

To achieve this, the new CORTO 3200F PROFIL is designed so that the pivot point is kept as low to the ground as possible in order to achieve optimum longitudinal and lateral movement.

The mower can also be fitted with the optional CLAAS ACTIVE FLOAT hydro-pneumatic suspension system, which as the ground conditions vary enables the operator to adjust the suspension and ground pressure from the cab.

The combination of the PROFIL kinematics and built in suspension systems therefore provides three-dimensional adaptation to the ground undulations, enabling the CORTO 3200F to accurately follow the ground contours, so leaving a clean swath and even stubble for reduced crop contamination and fuel consumption.

Other features on the CORTO 3200F include the new FLEXGUARD collision protection system on the side protection frames, which are mounted on springs. This allows the frames to move sideways, so avoiding potential damage should an obstacle be hit. Each of the drums is also fitted as standard with a quick blade change system and a blade box is provided for spare blades.

18m into one with new DISCO Autoswather

To provide greater flexibility, the new Autoswather version of the 9.10m wide DISCO 9100 C triple 'Butterfly' mower combination, enables up to 18m of grass to be put into a single swath.

Autoswather units fitted to the two outer mower units on the new DISCO 9100 C provide the operator with a wide choice of options depending on crop conditions and the following operation. The introduction of this new addition to the CLAAS triple mower range follows an extensive testing programme, including heavy crops in Ireland during the past two years.

Using the CLAAS COMMUNICATOR or any other ISOBUS compatible control terminal, each of the Autoswather units can be individually engaged and controlled, and the required settings can then also be activated via the tractor's headland management system.

Whilst potentially in heavy crops both the Autoswather units can be lifted out the way to allow the crop to be evenly spread across the full 9.1m mowing width for maximum wilting, the ability to engage either one or both units provides a wide range of options as to how the crop is left for subsequent rowing up. One particularly useful application is the ability to move grass away from the headland to make it easier for rowing up. Also, in two consecutive passes the outside grouper can be activated to allow the 12.2m LINER 3500 to gather 18m of grass into a single swath

As with all CLAAS DISCO triple mowers, each mowing unit is equipped with the P-CUT cutterbar that is designed to provide an extremely even and clean cut, with optimum contour following.

The outer units feature an automatic breakback system which due to the 15 degree mounting of the pivot arm, means that when an obstruction is hit, the whole mower unit swings back and lifts to avoid potential damage.

Each of the mowing units is fitted with the CLAAS ACTIVE FLOAT hydro-pneumatic suspension system, which as ground conditions vary enables the operator to adjust the suspension and ground pressure from the cab, in order to ensure a clean cut and minimise the risk of soil contamination.

New high performance LINER rakes

CLAAS LINER rakes are renowned for their high output and the clean finish they leave behind, making them a popular choice with farmers and contractors alike.

For 2012, CLAAS has introduced three new single rotor rakes and added an additional wider working model to its trailed twin rotor rake range.

New 10.0m twin rotor LINER

The new CLAAS LINER 3100 is designed to meet the needs of those who want the wide raking width of a four-rotor rake, but with the compact dimensions of a two-rotor rake for ease of transport.

The new two-rotor LINER 3100 is therefore ideal in this respect and with a working width that can be infinitely adjusted from 8.70m up to 10m, the ability to put four 3.00m swaths into one makes this ideal for those running QUADRANT balers or medium size JAGUAR foragers.

Each of the rotors incorporates a constantly lubricated hub and is fitted with 14 tine arms, that are secured using the PROFIX quick change system for easy removal for transport or in the event of an arm being damaged.

To ensure accurate ground contour following for a clean finish, each of the rotors has Cardan suspension and is carried on a six-wheel chassis, with the wheels positioned as close to the tines as possible, so that the rotor can quickly adapt to ground undulations.

The rotors are mounted so that when they are lifted, they stay parallel to the ground, and the lift height is adjustable up to 90cm. Individual rotor lifting is available as an option, as is electrohydraulic adjustment of the raking height.

For transport, in order to stay below 4.00m, it is necessary to remove just three tine arms, which are then securely carried on the main frame for easy access. In addition, as they are lifted the rotors are dropped hydraulically and secured by a mechanical locking device. In addition, integrated wheel weights are fitted as standard to ensure optimum transport stability and to also allow the LINER 3200 to be transported at up to 50km/h.

New single rotor rakes

For next season, CLAAS will be offering three new single rotor rakes. The new LINER 450, 420 and 370 provide working widths ranging from 3.50m up to 4.50m and are all three-point linkage mounted.

These new single rotor models incorporate many of the well-proven and reliable features found on larger LINER models such as the cast cam track, the sealed and lifetime-lubricated rotor hub and the 20-spline PROFIX tine mounting system for the 11 tine arms on each rotor, each of which are fitted with four double tines.

To ensure accurate ground contour following, each of the rotors is mounted on a tandem axle with the wheels located as close to the tines as possible. To further prevent the rake grounding, each of the new LINERs is fitted with the CLAAS Power Drawbar (CKL), which helps reduce strain on the drawbar during transport, plus an additional guide wheel is also optionally available.

For greater ease of use, each of the new LINERs can be specified with hydraulic rotor height adjustment as an option.

New high density QUADRANT 3300

With the introduction of the new QUADRANT 3300, CLAAS now offers six different models, with 17 variants, ensuring there is a model in the range to meet the widely differing needs of farmers, contractors and merchants.

The QUADRANT 3300 produces a 120cm x 90cm bale, making it ideal for transport, and fills the gap in the CLAAS range between the QUADRANT 3400 (120 x 100cm bale) and the QUADRANT 3200 (120 x 70cm). Average bale weight in wheat is at least 430kg, though average weights of 492kg have already been achieved in UK barley straw.

To ensure high output and enable the baler to comfortably handle the largest swaths, the QUADRANT 3300 is equipped with a 2.35m wide pick-up with roller crop press.

The stars on the 500mm diameter Roto Feed rotor positioned behind the pick-up, which revolves at 160rpm, feature a new arrangement in order to ensure that high quantities of material can be quickly and efficiently cleared from the pick-up into the pre-chamber.

The pre-chamber has also been redesigned and can be controlled either automatically or manually. In automatic mode the plunger, which is controlled by a cam on the main transmission, makes two feeder cycles prior to each full stroke when the material is passed into the main chamber. In manual mode, using the COMMUNICATOR control unit, the operator has the option of three different settings, so ensuring the pre-chamber is evenly filled for perfect, high density results in all conditions.

The main bale chamber itself is 3.00m long and a high plunger speed of 46 strokes per minute with a maximum chamber pressure of 200 bar, ensures high density bales can be consistently produced.

The QUADRANT 3300 is fitted with six knotters, each of which is kept clean by the TURBO FAN system that maintains an air flow of 140 km/h. Each knotter is able to swivel to ensure the twine is cleanly gripped and is powered in and out of the bale to give faster tying time and ensure optimum timing with the plunger.

As on other high capacity QUADRANTs, the QUADRANT 3300 is available with either a single, tandem or a steered tandem axle, all fitted with floatation tyres. Options include a bale discharge indicator and a moisture indicator.

New heavy duty ROLLANT 300 models

Two new models have been added to the ROLLANT 300 range that are designed specifically to cope with the kind of crop conditions typically found in the UK and Ireland.

The new ROLLANT 374 and ROLLANT 375 take many of the best elements of the existing well proven ROLLANT 300 models, but add to this features such as a heavy duty drive line and a drop floor system on PRO models for optimum reliability and output in the toughest of conditions.

The balers have a 2.10m wide pick-up with an effective gathering width of 1.90m. To ensure that material from even the largest swaths can be quickly and efficiently gathered, the pick-up is fitted with a double-roller crop press and two side augers ensure a well shaped bale.

Material is initially fed into the baling chamber via a Roto Feed (RF) star rotor, comprising a four star double helix rotor with 8mm thick tines. Roto Cut (RC) models feature 16 spring loaded, hardened steel blades mounted on a rotor that rotates at 125rpm to achieve 8000 chops a minute, giving a theoretical chop length of 70mm to ensure optimum silage quality and density.

To allow the operator to safely push the baler to its maximum capacity without the risk of a blockage, the new ROLLANT Pro models incorporate a drop floor below the chamber. Sensors determine when a blockage is starting to form, allowing the operator to ease back, and in the event of a blockage the floor can be lowered via the tractor's double acting spool valve. The operator can then re-engage the drive to allow the blockage to pass through into the main chamber, before closing the floor and recommencing baling.

The baling chamber on all models features 16 heavy duty, reinforced rollers and the ROLLANT 375 also features the new unique MPS II pivoting roller system that applies pressure to the bale during the early stages of formation, resulting in a 20% increase in bale density.

The ROLLANT 374 and ROLLANT 375 come as standard with the new generation II CMT control unit.

The addition of these two new models means that CLAAS now offers a total of eight ROLLANT 300 RF or RC series balers, plus a further three ROLLANT 400 series models.

New multi-power JAGUAR

CLAAS has developed a unique new engine output control system for its top-end JAGUAR forage harvesters that enables the engine to automatically change between 10 different power output levels depending on the load.

The development of the new DYNAMIC POWER engine control system for the JAGUAR 980 and JAGUAR 970 is a result of the move to having just a single engine, instead of two as previously, in order to comply with the latest emissions regulations.

One of the big advantages of the twin engine system on these two JAGUAR models was the ability if required to run on just one engine for road transport or in light crops in order to save fuel, and only engage the second engine when full power was required.

The new DYNAMIC POWER engine control system has been designed to take this a stage further by allowing a single engine to operate at 10 different power outputs, so enabling even greater efficiencies whilst still maintaining maximum output from the forage harvester.

Instead of the twin engines previously used on these two models, the range topping JAGUAR 980 will now be powered by a single MAN V12 engine whilst the JAGUAR 970 utilises a MAN V8, both of which achieve optimum engine load at 1800rpm.

Using DYNAMIC POWER, as the load on the engine varies, for instance when working in lighter crops, or in lower yielding parts of a field and on the road, the control system automatically recognises this and will alter the engine power output accordingly over 10 power steps.

On the JAGUAR 980, the power output ranges from 333hp up to the maximum of 884hp in 10 steps, whilst on the JAGUAR 970 the 10 steps are over a range from 322hp up to 775hp.

By being able to automatically change power output as the load on the engine changes, this ensures that the engine can maintain its optimum engine load of 1800rpm, when it will be at its most economical, so saving a considerable amount of fuel.

Also when combined with the GPS steering, automatic spout control and cruise control systems that are also available for JAGUAR forage harvesters, this not only reduces that operational stress imposed on the operator, but ensures that the whole harvesting team can maintain optimum output efficiency.

Tougher corn cracking

For 2012 CLAAS has developed a new larger diameter MULTI CROP CRACKER that is designed to comfortably handle the high throughputs that can be achieved with top-of-the-range JAGAUAR forager harvesters. Compared to current corn crackers, in order to handle higher throughputs the new MULTI CROP CRACKER features a more rugged design, with twin bearings throughout and double springs on the front roller. In addition the design allows the rollers to be quickly and easily changed, for instance to those with a different profile for more aggressive cracking.

12-row harvesting

CLAAS has introduced a new 12-row, 9.00m wide row-independent ORBIS maize harvesting header that features a mechanical drive system with low start-up torque and can be engaged or reversed at full load.

The ORBIS 900, and all other ORBIS headers, will also for 2012 be fitted as standard with a new twin speed gearbox, which for lighter crops allows the rotation speed to be increased by 13%.

Attached using a swivel-mounted frame, the ORBIS 900 features automatic AUTO CONTOUR lateral ground following that is controlled using sensor skids located on the underside of the header.

For transport, the two outer sections fold in on top of each other and to both support the header and allow it to be safely transported at speeds of up to 40km/h, the ORBIS 900 features a transport trolley that is easily attached and automatically locks in place.

New 'Smart Handling' prevents SCORPION overload

In order to comply with the EN15000 longitudinal stability technical standard, as from October 2011 all CLAAS SCORPION telescopic handlers will feature as standard the new Smart Handling overload control system.

Unlike some Longitudinal Load Moment Control (LLMC) overload systems that rely on the boom hydraulics locking out when safe limits are reached, the new "Smart Handling" overload system on the SCORPION limits boom extension automatically as the safe load limit is reached. Whilst further extension may be limited, retraction, lifting or lowering are all still possible provided it is safe to do so, making the whole system far less restrictive to the operator.

EN15000 requires that telescopic handlers should be fitted with an LLMC to ensure that a machine can safely reach forward without tipping-up. However, this does have drawbacks where a machine is being used for agricultural work, for instance to push up grain or muck, or for digging, where a temporary overload results in the hydraulics being locked-out impairing performance.

How does "Smart Handling" work?

The Smart Handling system is far more than just an overload protection system. CLAAS has taken the opportunity to extend the functionality of the system, so that it can be used to automate certain work sequences and hence actually benefit the operator.

Using a rocker switch on the dashboard, Smart Handling can be used in either 'Bucket' or 'Forklift' mode.

Bucket mode

As the telescoped boom is lowered, the extended boom will automatically retract, regardless of the load situation, so saving time and enabling the operator to concentrate on manoeuvring. If required, the operator can simply override the automatic retraction using the boom out function, up to the overload limit at which point the boom telescoping will halt automatically.

When the boom is fully retracted, Smart Handling is automatically deactivated, so allowing the full tear-out force and lift capacity of the SCORPION to be used for pushing-up or digging.

Forklift mode

As the boom is lowered it will only retract when the overload limit is reached, and once a safe position is reached the boom will stop retracting. In addition, where the boom is at an angle of more than 40° the speed at which the boom is lowered is reduced to help maintain stability.

Below 40°, the range in which most forklift handling jobs are carried out, full boom retraction speed is maintained, so ensuring that quick cycle times can be achieved. Where it is safe to do so, the Smart Handling overload system can be temporarily bypassed, but it will be automatically re-activated after 60 seconds.

On the SCORPION 6030CP model, when in 'Forklift' mode and the boom is beyond 40°, whilst being lowered, as in 'Bucket' mode the boom will also automatically retract, but can be over-ridden up to the safety limit by using the boom out function.

Below 40° the boom will stay extended as it is lowered until the overload limit is reached, when again it will automatically retract to a safe limit.

With the new Smart Handling overload system for the SCORPION telescopic handler, CLAAS has developed a system that fully meets the requirements of the EN15000 standard, but is also practical in agricultural working environments and actually provides operator benefits.

TELEMATICS Combine League
Fact not Fiction

LEXION 770 breaks 60tph harvest average

The CLAAS TELEMATICS web based combine monitoring and performance system provides users with a unique and accurate over-view of not only their own combine, but via the Combine League feature they can also see how other operators are performing. By analysing overall averages and other machines, TELEMATICS provides a more accurate indication of combine performance and so a far better indication of overall performance throughout a season than would be achieved by looking at just one machine in one particular field.

LEXION 770 11% ahead of LEXION 600

This year for the first time a LEXION 770 has broken the 60 tonnes per hour average for the whole of the wheat harvest, with two other LEXIONs hard on its heels at 59 tph. Considering that these are overall averages for every hour the combine is working, so include opening fields and clearing headlands, in addition to cutting the main body of the field, these impressive throughputs highlight the high performance potential of the latest LEXION's, and the World Record beating LEXION 770 in particular.

Comparing the top five machines in the Average Throughput Combine League tables for the whole of the wheat harvest, the increased output of the new LEXION 770 and the LEXION 760 is clear, with output increases of 11% and 6% respectively over the LEXION 600 and LEXION 580.

LEXION 770 wheat campaign

Ranking	Average throughput t (t/h)	Driver
1	61.26	C5900231
2	59.86	GB-24
3	59.24	C5900246
4	57.77	Neil 25
5	55.83	

Average 58.792

LEXION 600 wheat campaign

Ranking	Average throughput t (t/h)	Driver
1	56.44	Gary 643
2	54.31	Gregor-766
3	51.74	Sutton 146
4	51.56	1145
5	50.06	Sutton 911

Average 52.822

LEXION 760 wheat campaign

Ranking	Average throughput t (t/h)	Driver
1	52.50	Martin 138
2	51.57	Dave C56-27
3	50.05	C5600201
4	45.27	Andrew C5600100
5	44.33	C5600180

Average 48.744

LEXION 580 wheat campaign

Ranking	Average throughput t (t/h)	Driver
1	47.71	Tom 2348
2	46.80	Robin
3	45.35	Anthony Slade
4	44.79	Charles 2131
5	44.67	Ashley 2574

Average 45.864

TELEMATICS on Implement (TONI)

The unique CLAAS TELEMATICS output monitoring and information system is unprecedented in the amount of management data it is able to provide.

Until now the system has only been able to provide operational information on the individual tractor, but CLAAS has now taken TELEMATICS a stage further with the development of TELEMATICS on IMPLEMENT (TONI) which is able to also gather data from the implement being used behind the tractor.

Currently undergoing final pre-series trials, TONI will be fully available next autumn, but has already been awarded a Silver Medal at this year's Agritechnica show.

In an era where farming businesses are having to record and store an increasing amount of agronomic and field data for regulatory purposes, TONI will be invaluable in helping gather all the field data necessary. In addition, it will also help simplify invoicing and provide greater real time information.

However, one of the most useful features will be the ease with which information such as spray, fertiliser or slurry application data can be gathered, stored and retrieved in order to meet regulatory requirements.

Using TONI, the need for manual record keeping is eliminated. As the tractor enters the field, if the field is already recorded on the TELEMATICS system, for instance from yield mapping, then the system will automatically recognise the field and will start to upload the latest application data to that field file. If there is no previous field record, the field boundary and application data will still be gathered, and this can then be subsequently allocated a field name or identity for future use.

To access this information, TONI uses an Open System to communicate and gather data from the implement via ISOBUS. This data is then uploaded every 15 minutes via the GPRS mobile phone network to the server along with the tractor output data. This can then be accessed from the office PC or hand held web enabled device, where both sets of information are displayed as one working unit and if required can be used to create spray records, application maps, etc.

Whilst in the future TONI will be able to gather data from any ISOBUS compatible machine, in the first instance TONI will be available for QUADRANT 3200, 3300 and 3400 balers, plus implements from OEM partners Amazone, Horsch, Lemkin, SGT, Kaweco and Zunhammer.

Apprenticeship Engineering success

A record 27 students have joined this year's CLAAS Agricultural Technician Apprenticeship intake which is shared between Reaseheath in Cheshire and Barony College near Dumfries. Also joining the scheme for the first time are students from both northern and southern Ireland.

The success of the CLAAS Agricultural Technician Apprenticeship and the acknowledgement of the high level of training and the ongoing opportunities that CLAAS provides is evident in the high numbers of applicants for a place on the course.

In addition to the course based at Reaseheath College in Cheshire, which is acknowledged as the UK's leading college for agricultural engineering, CLAAS is the only landbased engineering company to offer a manufacturer's apprenticeship within Scotland.

The Barony course was launched in 2008, in order to provide CLAAS dealers in Scotland and the north of England with the same opportunity as southern dealers have to train and develop the skilled technicians they need for the future.

The students at both Reaseheath and Barony College study for a National Diploma in Land Based Technology, which is seen as a practical hands-on alternative to Highers or 'A' Levels. One of the main benefits of the Diploma, in addition to higher technical credibility, is that upon qualification, the successful candidate will receive a Pass, Merit or Distinction grade. This will enable them to better demonstrate and gain recognition for their ability and their potential to progress to higher level qualifications.

During the four-year apprenticeship programme, students spend three years studying the National Diploma, in which time they have the opportunity to train at CLAAS UK headquarters at Bury St Edmunds, and subsequently the Group headquarters at Harsewinkel in Germany.

The 2011 Reaseheath intake: Jack Last (Manns, Saxham), Daniel Poole (Manns, Braintree), Joseph Anson (Southern Harvesters, Hampshire), Samuel Bowles (Southern Harvesters, Sussex), Andrew Fry (Vaughan Agri, Dorchester), Tom Holloway (Vaughan Agri, Frome), Alex Wilding (Morris Corfield, Tarvin), Tom Powell (Morris Corfield, Craven Arms) and Tom Durrant (Olivers, Luton).

The 2011 Barony intake: Ronan Atkinson (Rickerby, Berwick Upon Tweed), Colin McKinnon (Gordons, Dumfries), Simon Hall (Erwins, Northern Ireland), Lewis Thomson (Sellars, Perth), Jack Best (Erwins, Northern Ireland), Steven Robertson (Sellars, Old Meldrum), Craig Geals (Sellars, Old Meldrum), Ian Grieve (Rickerby, Hexham), Daniel Butterworth (Rickerby, Carlisle), Jake Green (Rickerby, Bowburn), Kyle Sutherland (Sellars, Forres), Ross Janoch (Sellars, Letham), Robbie Johnstone (Sellars, Cupermuir), Jamie Clark (Gordons, Berryhill), Jamie Tait (Rickerby, Dunbar), Conor Bolger (Leinster Farm Machinery, Republic of Ireland).

New CEO for CLAAS UK

Trevor Tyrrell

CLAAS UK Limited has appointed Trevor Tyrrell as its new Chief Executive Officer for UK and Ireland.

Trevor, who is 44, has worked for CLAAS since graduating from Silsoe College in 1989 and has held various senior roles, most recently Regional Director for UK, Ireland, Benelux and Baltics, as well as serving as a Director of CLAAS UK.

Trevor replaces Clive Last who has served as CEO for the past 25 years. Clive is staying with CLAAS in a part-time role as Chairman of UK Operations with some additional responsibilities within the CLAAS Group.

Also joining the Board of Directors for CLAAS UK is Richard Vaughan who joined the CLAAS Group in 1992 when the Somerset dealership he had formed and developed was acquired by CLAAS. Richard, who is 47, will be responsible for the ongoing development of the Dealer operations directly owned by CLAAS UK and which now total 22 branches.

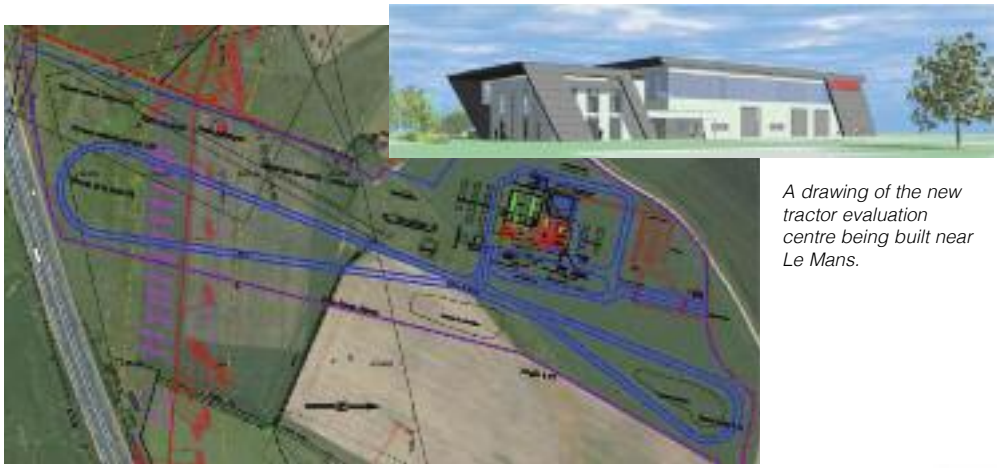
Richard Vaughan

The other member of the CLAAS UK Board is Alastair Tulloch who is 62 and in his 40th year with CLAAS. Alastair has been a Director since 2000 and has specific responsibility for the complete After Sales Business (Service, Parts and Training) in the UK and Ireland.

Outgoing CEO Clive Last commented "it is great to see this orderly and CLAAS like succession planning taking place. As someone lucky enough to be part of a significant period of business growth, I am happy to be handing over to Trevor and his team of experienced colleagues. They are all well qualified to take CLAAS forward in the next stage of its ongoing development".

Committed to tractors

The launch of the new AXION 900 range at Agritechnica marks the culmination of an unprecedented eight year development programme during which time the CLAAS tractor division has completely replaced and expanded the entire conventional tractor range. At the same time the factory at Le Mans has also seen a complete overhaul and investment has included the creation of a new cab production line and one of the most advanced paint plants in Europe. As a result production capacity is now nearly double what it was when CLAAS took over Renault in 2003.



A drawing of the new tractor evaluation centre being built near Le Mans.

As a statement of intent about its commitment to the European tractor market, the level of product and manufacturing investment CLAAS has allocated to its tractor division is unparalleled, especially considering that this is in addition to the investment that has been made in other CLAAS product ranges, such as the introduction of the new LEXION 600 and 700 combines last year.

And it doesn't stop there. This autumn work started on a completely new tractor design and evaluation centre that is being built near to Le Mans.

Look out for details of this year's tractor campaign that starts this November!

What do YOU say

CLAAS UK has entered the online publishing age with the launch of a new electronic magazine that brings together customers' thoughts, opinions and use of CLAAS tractors from around Great Britain.

The 'What do YOU say' Tractorbook can be accessed via the CLAAS UK homepage at www.claas.co.uk and will be regularly updated throughout the year with new customer stories.

How do you like your engine - EGR or SCR?

The need to meet increasingly stringent emissions regulations has forced engine manufacturers to adopt increasingly complex engine management systems to meet the requirements.

In an effort to curb air pollution, regulators in both the EU and USA have required engine manufacturers to incorporate new technology in order to reduce nitrous oxide (NOx) and other harmful emissions. Known as Stages in the EU or TIER in the US, each level provides a more stringent standard that has to be reached, and will ultimately culminate in higher powered engines of between 175-760hp having to meet Stage IV/TIER 4 Final in 2014, which will then stay in force for the next 15 years.

To date, in order to initially meet the required emission regulation stages, engine manufacturers have been able to achieve this by the use of 'inner-engine' technology such as common rail fuel injection, exhaust gas recirculation, turbo chargers and inter coolers.

However, it is to meet the final Stage IV/TIER 4 Final emissions hurdle that engine manufacturers have had to make the choice as to whether they invest further in current inner-engine technology, by going down the Exhaust Gas Recirculation (EGR) and Diesel Particulate Filter (DPF) route, or if they look to additional 'out-of-engine' technology, Selective Catalytic Reduction (SCR), both of which have positives and negatives when it comes to performance and running cost.

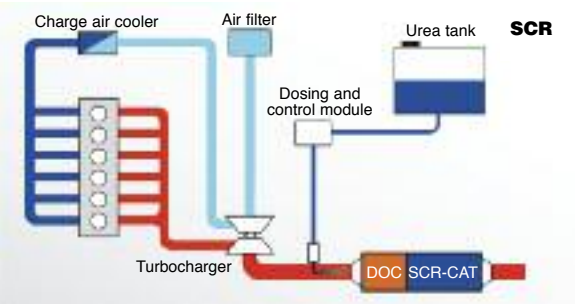
Selective Catalytic Reduction (SCR)

Selective Catalytic Reduction relies on the injection of a synthetically produced diluted urea solution (AdBlue®) into the exhaust system which is stored in a separate tank on the tractor.

To enable this, in addition to the diesel oxidation catalytic converter (DOC) the exhaust system on the tractor also incorporates an SCR catalytic converter (SCR-CAT).

The AdBlue® is injected into the exhaust gas flow just ahead of the DOC at variable rates that are electronically controlled using a NOx sensor, and can vary between 3-7% of diesel volume. As it is injected, the high temperatures in the exhaust system result in the urea being converted into ammonia, which in the SCT-CAT will then react with and break down the NOx particles to create nitrogen and water.

The biggest benefit of SCR is that because there is no exhaust gas regeneration system in the engine, fuel consumption is lower, plus the engine runs cooler and it requires less maintenance. However, whilst fuel costs will be reduced, this has to be balanced with the additional cost for the AdBlue®, but should compensate for this.

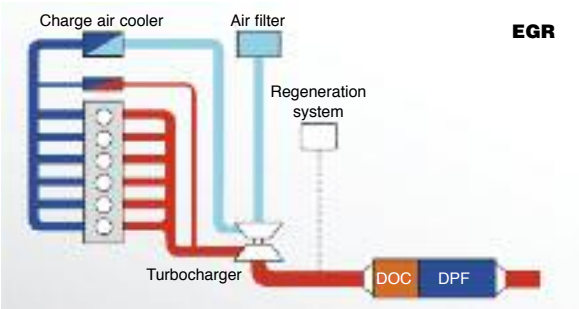


Exhaust Gas Recirculation (EGR)

With Exhaust Gas Recirculation (EGR), a proportion of the exhaust gasses are mixed with air. This reduces the speed of engine combustion and hence the temperatures generated, with the result that NOx accumulations are largely eliminated. However, in order to meet the required soot thresholds, this can only be achieved by incorporating a Diesel Particulate Filter (DPF) into the exhaust system.

Compared to SCR, whilst EGR is well proven, is a simpler system, has fewer components and no additional costs, fuel consumption and hence cost will be higher due to the power needed to force air continuously through the DPF.

As to which system is better or worse, it is too early to say. Both systems work well and have their individual strengths and weaknesses. However, what is clear is that the engine is only part of the machine, and it is the relationship between the linked components, how engine power is distributed and how the components in turn utilise that power that determine overall efficiency of the machine as a whole.



CLAAS Power Systems

So where do CLAAS stand as regards which technology to adopt? Unlike equipment manufacturers that also have engine divisions, and so have their hands tied as to which technology they use, CLAAS is free to assess and use whichever engine and system it considers best suits the machine and its potential use.

To enable this decision, CLAAS has established CLAAS Power Systems (CPS). This brings together experts from the different divisions within CLAAS to share information and ideas in order to develop products that best meet customer expectations in terms of performance, reliability and running cost, and also regulatory and environmental requirements.

As part of the product development programme, the CPS team take into account all practical aspects of the machine, such as application, transmission, hydraulics and power transmission.

From there, they will consider and test the strengths and weaknesses of the individual components available to assess their suitability and how they inter-react with each other, in order to achieve an optimum match between all components.

For further information on engine emission systems, CPS and the work CLAAS is doing can be found at www.kraftintelligenz.com

Photo: Mark Mackenzie/FW

Charlie Russell celebrates his win with Jane King (editor Farmers Weekly), Caroline Spelman (DEFRA Secretary) and Matt Baker (Presenter)

Farmer and Farm Manager of the Year 2011

Congratulations to Charlie Russell who having won the 'Farm Manager of the Year' award at this year's Farmers Weekly Awards, then went on to win the prestigious overall 'Farmer of the Year' title.

This is the second time in three years that the winner of the CLAAS sponsored 'Farm Manager of the Year' title has been judged the most outstanding of the 16 individual award winners, in the opinion of the eminent judging panel that includes Peter Kendall (NFU President), Mark Skipworth (managing editor of the Telegraph), Jane King (Farmers Weekly editor) and last year's winner John Hoskin,

Charlie is manager of the Earl of Inchcape's Glenapp Estate in Ayrshire, where he has been for the last 10 years. Having studied agriculture at Aberdeen University and then rural business management at the Scottish Agricultural College, Charlie was just 24 when he applied for the job, but was originally employed as farm foreman as the estate's board felt he was too young for the job, but he quickly proved them wrong.

Over the past 10 years he has transformed the 5,072ha mainly upland estate. In addition to improving productivity and profitability from the established sheep and suckler beef herds, the most recent development has been to start from scratch a new dairy unit, milking 350 Jersey x New Zealand Friesians that are already averaging 18 l/day.

Alongside the farming operation, he is keenly involved in conservation and environmental work on the estate and developing tourist opportunities, including holiday accommodation and the creation of a coastal walk.

"Farming needs entrepreneurs and visionaries like Charlie. He's bringing energy and new insights into the challenging environment of upland farming," said Jane King.

Charlie's fellow finalists for the 'Farm Manager of the Year' Award were Andrew Nottage and Simon Thompson. Andrew manages Russell Smith Farm near Cambridge where he has successfully integrated both organic and conventional high value root crops into the farm. Managing the Sotterly Estate in Suffolk, Simon has overseen a 25% increase in the area farmed and boosted profits by changing the cropping, whilst integrating HLS and an SSSI.

Congratulations also to the other category winners:

Colin McGregor - Arable Farmer of the Year
Sam Chesney – Beef Farmer of the Year
Chris Awdry – Contractor of the Year
Chris Dowse – Countryside Farmer of the Year
Gavin Fowler – Dairy Farmer of the Year
John & Rosemary Barnes – Diversification Farmer of the Year
Liliya Kucher – Farmworker of the Year
Neil Gourlay – Green Energy Farmer of the Year
James Miles-Hobbs – Farm Advisor of the Year
Will Simkin – Local Food Farmer of the Year
Stuart Bosworth – Pig Farmer of the Year
Nigel Joice – Poultry Farmer of the Year
Simon Stott – Sheep Farmer of the Year
James Down – Young Farmer of the Year
James Chapman – Farming Champion of the Year

Finance

CLAAS Finance for Ireland

CLAAS Ireland is now able to offer customers tailor-made finance for machinery purchases through its dealers, following the launch of CLAAS Finance in Ireland.

CLAAS Finance has been operating in the UK for over 20 years, and is funded by the French bank BNP Paribas. A particular feature of CLAAS Finance is its flexibility, allowing finance deals to be tailor made to best suit the customer's needs. Also, CLAAS Finance is also not just restricted to the purchase of new CLAAS products, but funding can be arranged for the purchase of used machinery.

CLAAS Finance offers funding solutions for mowers through to the flagship LEXION 770 combine, providing a range of finance solutions including Hire Purchase, Lease and Contract hire with maintenance.

Clearly with 20 years experience they understand that no two farms are the same and that agricultural businesses have times of the year when it is better to make repayments. CLAAS Finance therefore offers cashflow matched solutions to ensure that payments are made when the business can best afford it.

To support CLAAS Finance in Ireland, Michael King has been appointed the finance representative for the area to the south of the Dublin/Galway line. Michael joins CLAAS Finance from Permanent TSB Agri Finance where he has worked for the past four years. A second representative to cover the area to the north of this line is currently being recruited.

UK tax relief deadline looming

A reminder that as from the 6th of April 2012 (1st April 2012 for Limited Companies) the Capital Allowance rules will change in the UK, and the current Annual Investment Allowance of £100,000 for plant and equipment is set to be reduced to £25,000. If capital purchases are planned for this period then consideration needs to be given as to timing the purchase in order that the maximum relief may be claimed.

In addition, currently any writing down allowances not covered by the AIA or previously held in a capital allowances pool will reduce from 20% to 18% from 6th of April 2012 (1st April 2012 for Limited Companies). When the two are added together this will have a significant impact in terms of potential tax paid.

Any assets placed on a Hire Purchase agreement with Claas Finance are eligible for relief in the same way as using cash. There are, however, rules surrounding when relief may be claimed and advice should be sought from your accountant prior to committing to a purchase.

Post April 2012 is clearly going to be a lot less attractive in terms of purchasing machinery in terms of reliefs. When the two are added together this will have a significant impact in terms of potential tax paid. It is vital that agricultural businesses take a long term view in terms of capital expenditure and plan now to maximise tax reliefs that are available and ensure that the timing gives the maximum benefit.

International News

CLAAS expand central European network

CLAAS has recently opened a number of Regional Support Centres in order to meet the service and support demands of the rapidly expanding agricultural machinery markets in central and eastern Europe.

A good example is Romania, which in terms of the county's usable agricultural area is the fourth largest market in Europe. In order to efficiently support the increased demand for tractors and agricultural machinery from farmers and contractors in this expanding market, CLAAS has established a new Regional Support Centre near Bucharest, and is developing the dealer network throughout the country.

Another Regional Support Centre has also been opened recently in Austria near Vienna. In addition to providing sales, service and parts support to CLAAS dealerships within Austria, the centre will also provide support services to the expanding dealer network in Slovenia, Croatia and Bosnia-Herzegovina.

Since 2009, CLAAS has been represented in the Czech Republic by importer Agrall. They have now expanded their operation to cover neighbouring Slovakia with the opening of a new base at Bajč in southern Slovakia.

League leader tops 61t/hr for harvest

Not only has a LEXION 770 smashed the World Record by 22% but for the first time the TELEMATICs Combine League has shown a LEXION 770 maintaining an average harvesting rate of over 60t/hr for the whole wheat season.

The league leading LEXION 770TT is owned by Barton & Co (Farmers) Ltd, and topped the combine league with an overall wheat harvest average of 61.25t/hr, whilst on 300ha of high fertile land where yields average between 12-14 tonnes, the LEXION maintained an average throughput of 71.57t/hr.

Based at Saundby near Gainsborough in the Trent valley, the Bartons farm 1300ha of which 60% is wheat and the rest mainly oilseed rape. When it came to changing their old LEXION 580+TT for the new LEXION 770TT, which was bought from local dealer **Marsh**, because of the high yields they opted for the smaller 10.5 VARIO cutterbar instead of the wider 12m version, making the average throughput even more impressive.

"The key to maintaining high outputs is to keep the combine moving and having the logistics in place to ensure it never stops to wait for a trailer," explains William Barton. "Our largest field is three-quarters of a mile long and with our high yields, we felt that the quantity of grain from the larger 12m cutterbar would have been more difficult to handle."

On shorter runs, the 26 tonne capacity chaser bin is supported by a high speed tractor, but for distances over a mile an articulated lorry is used and a second trailer is always left in the field, so that the chaser bin always has something to empty into should there be any delays.

This is the first time that the Bartons have had TELEMATICS fitted to their combine, and whilst they say it may not have shown them much they didn't already know about managing the combine, it has certainly helped with other decisions.

"TELEMATICS have shown that there is not a lot else that the operator Shaun Needham can do in order to increase output, which was reassuring. Harvesting time was at 76%; the only figure that did surprise us was the 10% turning time, but that can be worked on," explains Harry Barton. "However it has certainly provided us with a lot of other information on which to base daily decisions."

Harry Barton

"Historically we have always chopped straw, but TELEMATICS has shown us exactly what it is costing in fuel to chop straw, especially as the blades start becoming blunt. It raises so many questions and whilst new blades may be expensive, should we replace them more often as the cost will soon be covered by the fuel saving."

On a day-to-day basis, he adds that the email report provides them with a good overview of what was achieved the previous day and the total tonnages handled.

"We have a lot of confidence in Shaun and how he operates the combine, which leaves us free to concentrate on everything else that needs to be done to keep him going. Using TELEMATICS we can instantly see what's going on and get some idea of yield, which has helped with grain store management. For instance if we harvested 900 tonnes yesterday and are likely to do the same again today, we can make an informed decision on how we handle that and what space will be needed."

"When you start with an empty 1000 tonne store in the morning and its full that night, you know you've had a good day," states William. "The output from the LEXION 770 is unbelievable – it's gone really well and output was about 20% higher than our old combine."

Ivor Gerry

Greater output improves timeliness

The arrival of a new LEXION 630 revolutionised this year's harvest for Ivor Gerry, enabling him to comfortably clear up to 75ha a day at outputs of over 40 tonnes/hour in wheat.

The new LEXION 630, which has a 6.0m VARIO cutterbar, replaced an 11-year old, 5.4m LEXION 430 with the aim that it would provide greater output so that Ivor, who runs Aldous & Partners' farm at Bildeston in Suffolk by himself with the help of his two sons and one of their partner's at harvest, could finish harvest quicker. This would give him time to create a stale seedbed for a good blackgrass kill and still gain improved drilling timeliness.

"We have always had CLAAS combines on the farm and I have never seen any reason to change, as the reliability and service support from **Manns** at Saxham is superb," explains Ivor.

With 310ha of cereals, of which 200ha is wheat, split 50/50 between milling and feed, and the remainder down to winter barley and oilseed rape, the objective was that Ivor should be able to harvest the wheat area in 10 working days.

The new LEXION has more than achieved this, as whilst the old LEXION 430 used to run at about 25-30 t/hr and clear around 20ha in a day, the new 339hp LEXION 630 has comfortably averaged over 40t/hr, rising to 58t/hr when pushed hard, and was cutting up to 75ha a day.

"Comparing the LEXION 630 with the old 430, whilst the drum and sieve area is the same, so in theory performance should be similar, this was certainly not the case," states Ivor. "The biggest difference is power. The old LEXION 430 really struggled at times on our hills but the Cat engine on the new LEXION 630 is superb. There is plenty of power and it never batted an eyelid about unloading on hills where you would certainly have known about it on the old machine. Also the improved hydraulic reaction speed is extremely noticeable and the cutterbar reaction speed far faster, so that you can confidently push the combine on."

Whilst the drum and straw walker area is the same, despite going for a larger 6.0m wide cutterbar, the threshing system was more than able to cope with the increased throughput.

"We started off working at about 4.0-5.0km/h, which was where the old LEXION was comfortable, but initially we really struggled to get a good sample. We tweaked everything, but it made no difference until we finally found the solution, which was to increase the forward speed so as to fill the drum more, until we were going at 7.0km/h and getting an excellent sample with no losses."

"The increased power does make a difference and allows us to push the LEXION 630 on more, but because the APS drum takes out so much grain and we are getting a cleaner sample due to the more powerful fans and (MSS) agitator, this means that the secondary threshing system has less to do, so has the capacity to handle the greater output."

In line with the LEXION's ability to provide this high level of throughput, the ease with which the combine settings can be altered on the move using CEBIS, and features such as having the unloading spout controls on the joystick, the larger grain tank and the higher offloading speed all contribute towards realising the combine's ability.

In addition, not having had LASER PILOT before, whilst Ivor's son William who mainly drives the combine was initially sceptical, he quickly changed his mind when he found how much easier it made the job and the time it gave to concentrate on getting the best out of the combine.

"It also means he stayed in a straight line which made unloading far easier!" quips his father. "There are four of us who drive the combine, so it is important that the controls are easy to use and not overly complex. Also the cab is a great place to be; there's plenty of space, visibility is excellent, it's quiet and the fridge is greatly appreciated."

Other features such as the electronic grain tank lids, large window into the grain tank and the ease with which the returns can be checked, also come in for Ivor's praise, as does the hydrostatic drive to the reel and the quality of chop from the Special Cut II straw chopper.

"The output from the new LEXION 630 certainly caught us on the hop when it came to handling the grain," says Ivor. "The capacity is superb, on the final day with rain forecast, we really pushed it and having started at 8.30am we cleared the final 23ha by 3.00pm, having harvested 220 tonnes and at one stage had the combine running at 58t/hr. In general we don't work late, but the new LEXION 630 has meant that having had a good day's harvesting, we can comfortably be in the pub by 9.00pm!"

A sound investment

Farming just on the border of counties Laois and Kildare about an hour southwest of Dublin is tillage farmer Jeremy Odlum, who farms literally across the road from where the National Ploughing Championships has been held for the last number of years, which attracts around 180,000 visitors.

Jeremy farms 217ha split between his main farm at Athy and the remainder located at Blackchurch, on the outskirts of Dublin. Growing conditions are very different at both locations, explains Jeremy, “Down here in Athy it is loam over Limestone while up in Blackchurch it’s a silty clay. When it gets wet in Blackchurch it takes a long time to dry.”

These conditions dictate what crop is sown where and so, all of the winter crops are planted in the silty clay of Blackchurch. These include 66 hectares of winter wheat, 24 hectares of Oil Seed Rape and 28 hectares of winter barley. Back at Athy spring barley for malting is exclusively grown on 80 hectares.

With cereal production being the main enterprise, Jeremy took delivery of a new CLAAS TUCANO 440 with 6.0m C600 header in time for the 2011 harvest. The TUCANO replaced a CLAAS 208 MEGA, which had faithfully served the farm for 15 years. According to Jeremy the CLAAS TUCANO 440 was the most suitable replacement,

“It’s pretty much what I had before in terms of capacity with the 208 MEGA, it has basically the same threshing (APS) system with the same diameter drum and straw walker area but with a little more LEXION electronics in it.”

It is the electronic control of the separation process that Jeremy really likes, “Probably the most useful of which is the electric sieve adjustment. You can adjust and fine tune the sieves on the move and instantly see the results on the CEBIS screen.”

Jeremy also opted for the CLAAS 3D sieve levelling system which can cope with side slopes of up to 20%, “Having the 3D system on the TUCANO certainly makes a difference. Whilst the land at Athy is mainly flat, Blackchurch is a lot hillier.”

Jeremy Odlum with driver Stefan Hancsiki

Both Jeremy and his driver Stefan Hancsiki agree that there is more information on the CEBIS dash about what is going on in the combine compared with the old machine and both like the VISTA II cab as well.

“The cab is nice and certainly more comfortable, plus quieter with the engine behind the grain tank. There is also a great view of the header,” Jeremy states. “Autocontour works very well and all the pre-sets are nice. You can pre-set your reel speed and Autocontour header height and have two overall settings. One say for the headland and one for in the field, so it can operate a little higher on the headland and then drop down again out in the field.”

Both also like the way the header can be attached and removed, “Attaching the header is very easy which the old system wasn’t. It’s very quick and simple; it doesn’t matter what way the ground is (for level) which was a problem with the old one. The connection for the electric’s and hydraulics is very straightforward, just one connection with the Multicoupler, one pto and then pull across the lever for locking the header.”

For Jeremy the higher unloading auger is a big plus over the old machine, “Up at Blackchurch, because it is a bit of a draw the grain merchant leaves a step-frame artic truck trailer on site which we ‘stationary’ fill. We have a lot of room up over the trailer for the auger; with the old combine we had to be quite careful. Unloading speed is pretty quick as well, especially in comparison to the old combine.”

With the second farm so far away Jeremy says, “Though the TUCANO 440 is quite compact for its size, we try to make this journey just once a year, harvesting the winter crops up at Blackchurch and then moving back to Athy.”

The combine has plenty of capacity for the acreage but as Jeremy points out, “It has spare capacity but I prefer to have the extra insurance of increased capacity because of our weather here. The number of harvesting days can be few and far between, we might only get a day a week during the harvest sometimes so we need a good bit of insurance in extra capacity.”

If he gets any problems, looking after service is Fergus Cullen from CLAAS dealer **Kelly’s** of Borris, in Borris, Co. Carlow. “If there is ever a problem, we give Fergus a ring, he is always available.”

Already thinking to the future, Jeremy believes the TUCANO 440 is a sound investment, “CLAAS combines seem to hold their value well and I see the TUCANO as a more re-saleable machine second hand because it’s less complex than a LEXION. It’s a very straight forward combine,” Jeremy states, adding, “It all fits together well.”

High output, timely drilling

The arrival of a pre-series 524hp XERION 5000 for this autumn has helped Beaty & Sons achieve better timeliness and reduce risk of delays, aside from providing them with a more versatile high horsepower tractor that can be used throughout the year.

From their base near Market Harborough, between their own land and the land they contract farm for 13 different clients, the Beatys cover a total of 2000ha, split evenly between wheat and oilseed rape, on soils that range from sandy ironstone through to heavy clay.

"We see ourselves very much as farmers and not contractors," states Richard Beaty. "Whilst we need large machinery to cover the ground efficiently, attention to detail is important and we farm farms as individual units, not on a blocked crop basis."

Until this season, a single 600hp tracked tractor had been responsible for all the primary and secondary cultivations with two smaller wheeled tractors used for drilling. But with drilling windows narrowing and wanting to ensure that optimum drilling dates can be achieved by keeping cultivations as close behind their LEXION 770 combine as possible, the decision was made to invest in a second high powered cultivations tractor.

"We did consider an articulated tracked machine, but this was far more expensive than another of our existing tracked machine, and we have had issues in the wet with tracks on headlands," says Richard. "It was **Kirby's** who steered us in the direction of the big XERION and we have been extremely pleased with it."

"One of the great advantages of the XERION is the flexibility it offers. Previously we have had two tracked tractors parked in a barn all winter. Now we have the flexibility for the XERION to be used for other jobs right the way through the year."

During the autumn, during which time it clocked up 520 hours, the XERION 5000 was mainly used with a 6.0m TopDown, a 10m Cultipress and 8.0m Vaderstad 800C Rapid combination drill. The XERION 5000 currently runs on 710/85 tyres, but the Beaty's are planning to change to 900 wide tyres, and is ballasted with 1.8 tonnes on the front linkage with up to a further seven wafer weights used on the back depending on the operation, the aim being to achieve 50/50 weight distribution. It is also equipped with RTK steering using GPS Pilot receiving a signal from the Beaty's own mast.

"Rather than minimal cultivations we are looking at non-inversion in order to achieve a good mix and avoid consolidation," says Richard. "To achieve this the tines on the 6.0m TopDown are set to a maximum of 25cm. Because it had previously been used with the 600hp tractor we were initially concerned whether the XERION 5000 would be powerful enough, but it's handled it with no problems at all."

For operator Matt Abbott, whilst the XERION's various operating features initially took a bit of getting used to, he found it easy to operate and has been extremely pleased with the way the tractor has performed.

"It's certainly very noticeable that Matt's output never slowed down as the season progressed," says Sid Beaty. "After working long hours over the summer you often find output is affected towards the end, but the edge never came off his performance and his work rate remained consistent, which speaks volumes for the XERION and how easy and comfortable it is."

For drilling, the aim is to cover 80ha a day in oilseed rape running at 12km/hr, rising to 100ha a day for wheat, working at up to 17km/hr. Following work that the Beatys have done on plant nutrient uptake with their agronomist Robert Ding and soil scientist Neil Fuller, by using a combination drill this allows them to place phosphate in the root zone at drilling.

"For drilling, using Cruise Pilot I run the XERION at 1600rpm and using CEBIS I can then set the individual fan speeds for each hopper," explains Matt. "Because oilseed rape goes in at a low rate and the phosphate at a high rate, priority can be given to the fertiliser hopper fan, whilst for wheat it will be the other way round, with priority to the seed because it's at a higher rate."

"The CVT transmission works very well and it is certainly far more comfortable on the road. Setting the tractor up is fairly self-explanatory and by being able to set it so that I can slow down using the foot pedal rather than the hand throttle, means that there is less for the hands to do when turning. Then it's just a case of engaging Cruise Pilot and let the tractor look after itself."

"The XERION has done everything we wanted it to do," adds Richard. "CLAAS is the only manufacturer we would consider having a pre-series machine from, because we have great confidence in the service that Kirby and CLAAS offer and we know that if there are any issues, they will be sorted quickly."

A force to be reckoned with

Compared to traditional vegetable growing areas, such as Lincolnshire, Cornwall's mild winter climate makes it ideal for all-year round vegetable production, but this does place a high workload on tractors.

Based near Hayle, not far from Land's End, in the space of 15 years Southern England Farms Ltd (SEF) have grown to become one of the largest vegetable growers in the south west, looking after 3,200ha of crops spread between Land's End and Padstow.

Brassicas account for the majority of cropping, with summer Calibrese (800ha), Cauliflower (320ha), winter Cauliflower (720ha) and winter and spring greens (360ha and 80ha respectively) accounting for the bulk of the acreage, which are supplied to Tesco, Sainsbury and Morrison's.

Greville Richards

However, capitalising on the mild climate recent additions to the cropping range include 120ha of courgettes, which is set to double next year, and 200ha of asparagus have also just been planted as part of a five-year project, plus the company will also be growing garden peas and runner beans next year.

"Our greatest strength is our climate," explains managing director Greville Richards. "Whilst during the summer the supermarkets can source from all over the UK, our mild climate means that we can continue to supply well into the winter. As a result our winter Cauliflower can be found in Inverness, and even Norway or Sweden."

"Similarly, because we are able to supply courgettes a month earlier and a month later than other areas, we have already become the largest grower in the UK and we are looking to double the acreage next year and growing all-year round."

The drawback to this is the high workload that is placed on tractors, and mainline tractors will easily do over 2,000 hours a year, making reliability an important consideration.

This is one of the main reasons by SEF rely on CLAAS ARION tractors for the bulk of the tractor fleet, all of which are sourced through **Hambly's**. The first CLAAS tractor was bought three years ago, and currently they run 18 ARIONs that are mainly used for field-work and harvesting rigs, whilst ARION 610Cs are hired in on a seasonal basis for haulage work.

"Reliability has been a problem in the past, but with the ARIONs it has just not been an issue. There is nothing worse than a broken down tractor in a field, especially if its fully loaded with cut vegetables as once harvested, the crop needs to get back to the farms for chilling as soon as possible, otherwise they start to deteriorate and become unmarketable. Any problems we have just been small niggly things and the service from Hambly's has been fantastic. I can't praise them enough and they are a credit to the industry."

"We don't need anything fancy so a tractor such as the ARION C is ideal. Because we are harvesting seven days a week and double shifting during the summer, the tractors get a high turnover of drivers, some of whom are more experienced than others, but the ARIONs stand up to it very well."

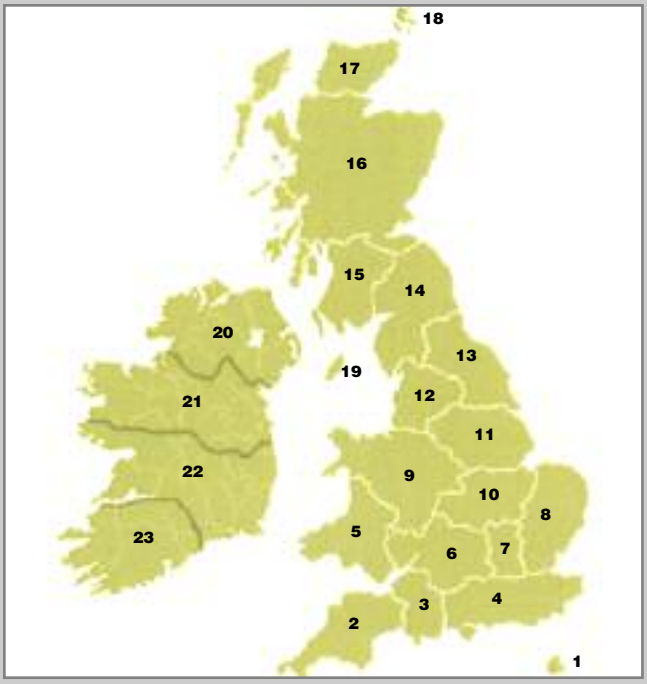
As insurance against breakdowns and to fix costs, all the tractors are taken with a full MAXI CARE service and maintenance package. In addition the policy is that fieldwork tractors are replaced every two years, and rig tractors every three.

"For fieldwork the ARION is excellent and the fuel consumption noticeably better than previous tractors. During the winter it can be very wet and muddy, and whilst we do ballast the tractors, their good power to weight ratio means they have plenty of grip and we don't have to tow out nearly as often. The drivers all like them - we have one tractor, an ARION 640, which ploughs for 50 weeks of the year using a 5-furrow reversible, and it goes all over Cornwall, but the driver absolutely loves it."

"The whole package, from the tractors themselves to the support we get from the dealer is superb. We just don't get any issues and I definitely think that CLAAS tractors are a force to be reckoned with."

One of the ARIONs harvesting courgettes.

CLAAS UK Dealers



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