

THE AB LINE

The in-depth magazine from RVT Precision Farming

Edition 3
Winter 2018



in this issue

Event: What can technology do for your business?

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RVT

Rea Valley Tractors

PRECISION FARMING & CROP CARE

LEADERS
IN OUR
FIELD



WELCOME

Welcome to RVT's latest edition of the 'AB Line' – keeping you up to date with all the latest developments in Precision Farming technology.

After a very busy year, we are noticing a trend that more of our customers are spending more time analysing their business model, looking at ways to save money and become more efficient. We are encouraged by those who are looking to develop their businesses and wanting more from the technology we are able to offer.

As an industry we are seeing an increased focus on automation in the cab, with new products and software frequently being released to assist with this, and our customers seem to be looking more at implement control rather than tractor steering.

We hope you enjoy reading the third edition of our magazine and you pick up some useful tips and gain insight as to what we can offer your business.

Tommy, Carl, Guy, Charlie and Chris
RVT Precision Farming Team



NEWS & EVENTS

NEW TEAM MEMBERS

Guy Blackshaw

We were pleased to welcome Guy Blackshaw to the Precision Farming team in the New Year. Guy will be a familiar face to many of you, as he has moved from a Service Technician role at our Newport depot.



Guy has been working for RVT for 18 years and is specialised in combines as well as being highly experienced in servicing and repairing problems on machines across our product range.

His new role of Precision Farming Technician will see him travel across our territory providing technical product support, installations and specialising in Active Implement Steering.

Guy has a degree in Ag Engineering, teamed with experience gained working at a John Deere dealership in the US and working on farms in the States he is well placed to bolster the Precision Farming team.

You can contact Guy on 07855 786561
guyblackshaw@reavalleytractors.com

Charlie Henderson

Charlie joined the team in November, as our new Sprayer Specialist. His role is to support users of sprayers and sprayer technology supplied by RVT. He will help in the selection of the correct machine or technology, assist with PDI & set-up, ensure correct delivery,



installation and operator training and continue to support machines throughout their life cycle including NSTS testing.

Charlie studied Agriculture at Rodbaston College and then went on to work for a local Ag Contractor. Since 2015 he has been a Senior Sprayer Operator for a local grower, using a variety of GreenStar controlled self propelled and trailed sprayers all using the latest technology.

Charlie will be heavily involved in demonstration and promotion of sprayers and technology. He will be supported by Guy from a service aspect and will have in-house access to Paul Delahay's wealth of JD Sprayer knowledge and enthusiasm.

You can contact Charlie on 07535 021535 charliehenderson@reavalleytractors.com

New website coming soon!

We are pleased to announce we will soon be launching a new website dedicated to Precision Farming and our Crop Care range. It will feature a dedicated customer area where you will be able to access tutorials and problem-solving videos, as well as details of all the latest machinery available from RVT.

PRECISION FARMING EVENT 6-8pm Tuesday 22nd January 2019 Harper Adams University, Newport. "What can technology do for your business?"

Covering topics such as MyJohnDeere Operations Centre, Harvest Lab, Rate Control and Liquid Fert, and Agronomics. There will also be a display of machines including sprayers, drills and fertiliser spreaders with the latest Precision Farming technology from John Deere and KUHN. Refreshments will be available. Keep an eye out on our website and social media for more details or register by emailing enquiries@reavalleytractors.com

NEW UPDATES

TECHNOLOGY UPDATES

Since the last edition of the AB Line, there have been lots of updates to John Deere Precision Farming Technology. In the following pages we summarise the key improvements:

AutoTrac Turn Automation

This feature automates every step of the headland turn including the steering on to the desired paths. As well as controlling the implement, the tractor will automatically steer to the next guidance line on the headland. It lines to the iTec on the tractor to perform a set of sequences at a nominated distance from the exterior boundary.



In Field Data Sharing

Guidance lines, coverage maps and as-applied maps are able to be shared between up to 6 machines when using in field data sharing. Data is shared when client farm field and product or crop type are the same.



NEW UPDATES

Tram Lines on Gen 4

The Gen 4 display now has the Tram Line feature. This provides the possibility to set up and edit certain guidance lines as Tram Lines, and allows the operation to return to the field with another implement using a different working width. Those lines will be highlighted in a separate colour in the guidance screen. Tram Lines are available for both Straight Track and AB Curve.

MyJobs

The new work description functionality in MyJobs allows users to create tags to better define their jobs. It can be used to better describe the job types which are available in the John Deere Operations Centre and mobile apps for job management.

Multiple Maps

View multiple maps layer or operations at the same time, giving better visibility. An example of this could be doing Variable Rate Application, where one map layer could be the prescription map and the other the as applied map, or if applying two products at the same time.

Third Party App Integration

We are seeing many third parties working with the Operations Centre to provide more detailed reporting and accounting. It can help with financial reporting, budgeting, data analysis and future planning for the farm business.

iGrade

iGrade offers the ability to generate a basic plane, grade, and perform distance-based tasks – all while automatically controlling the height of the scraper blade/trencher. iGrade has three main operating modes:

1. Plane Control

Plane control can create level, single-slope, and dual-slope land designs.

2. Grade Control

Grade control generates level-slope or single-slope land formations based on a set slope over a distance travelled.

3. Distance Trip

The distance trip functionality in iGrade allows producers to utilize many different hydraulic-controlled implements and control them based on a given distance.

The distance trip functionality can perform many different tasks. The most common tasks are:

- Mark the soil for planting trees in an orchard
- Create headland furrows in furrow irrigation applications



NEW PRODUCTS

Blue River Technology

John Deere have recently paid over \$300 million to acquire Blue River Technology, a company that designs and integrates computer vision technology which enables growers to reduce the use of herbicides by spraying only where weeds are present, optimising the use of inputs in farming.

Blue River's key technology is called "see and spray." It's a set of cameras that fix onto crop sprayers and use learning to identify plants. If it sees a weed, it will hit it with pesticide; if it sees a crop, it will drop some fertiliser. All these parameters can be customized by the grower, and Blue River claims it can save "up to 90%" of the volume of chemicals being sprayed, while also reducing labour costs.

area in the field a flag can be dropped and reviewed in the Operations Centre for further analysis. Flag shapes can be defined as a point, line or area.



Data Sync

Data Sync is used to automatically send work data to the Operations Centre every 30 seconds using the Modular Telematics Gateway (MTG). This gives the farm manager the ability to view work progress in near real time.



Flags

This is the ability to document import and export flags with a Gen4 display. These can be used in the Operations Centre. For example, if someone has a problematic

NEW PRODUCTS

There is a great selection of new products to the market, that may be worth considering for your business - we've highlighted some of the major launches:

MyOperations App

This new mobile app allows users to access the Operations Centre data in-field. Users can view application, tillage, seeding and harvest maps on their smart phone/tablet and it gives daily JDLink information such as fuel used, machine utilisation and fuel levels, as well as a summary of the days tasks.



Ultimate Activation

Ultimate Activation unlocks a display for all

NEW PRODUCTS

activations with some added activations for the 4600, 4640 displays:

4640 Display

Hot of the press and a new release for 2018 is the 4640 display, which is the new stand alone display to replace 2630 screen that has been in production since 2011. With tablet like swipe functionality, run pages, and if needed, it can support you with on screen and context based functions. Users are able to customise the layout on screen to suit their own preferences. With increased processing power we can now control up to 255 sections via ISOBUS.



4240 Display

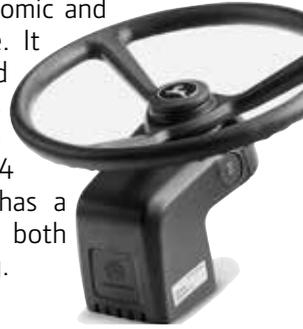
This smaller display launched in November 2018 provides the latest update and improved operating system for legacy John Deere machines and mixed fleet operators. It's loaded with the following benefits:

- Water and dust resistant
- Documentation and variable rate functionality included in base price of display
- Can be activated for section control, wireless data transfer and in-field data sharing.



ATU 300

This smaller wheel is set to reduce noise and be more ergonomic and comfortable to use. It can be easily moved between tractors and is compatible with all Gen 2/3/4 displays. It also has a resume button on both sides of the housing.



Gen 4 Extended Monitor

Provides a secondary monitor solution for those growers who want to be able to view both their ISOBUS implement and precision ag application on their 4600 Command Centre display.

Passive Implement Guidance

This new feature uses the tractor to navigate the implement to a specific GPS guidance line.

The tractor will move away from the guidance line to keep the implement in the correct place at all times. This is more critical in fields with banks and side slopes where the implement tends to drift. This can also be used with curved tracks and adaptive curves so when driving around corners the tractor will keep the implement in the right place at all times.



NEW PRODUCTS FOR VEGETABLE GROWERS

Autotrac Vision Camera for Tractors and Implements

This system involves two StarFire satellite receivers (one on the tractor and one on the implement), as well as an AutoTrac vision camera, allowing it to function in fields planted without a guidance system.

The combination, according to John Deere allows **“for high speed, high output weed control”** where plant rows are uneven or interrupted, as well as on slopes and around corners.

And while an operator can choose a maximum speed (with the system determining whether or not that is achievable given the conditions), John Deere believes units equipped with the system will be able to travel up to 16km/h without damaging crop. The high-capacity hoes are shifted through the tractor’s three-point linkage stabilizers, while



AutoTrac Vision Camera

NEW PRODUCTS

controlled active steering keeps the work between the rows and hydraulic coulters lowered into the ground to absorb side draft.

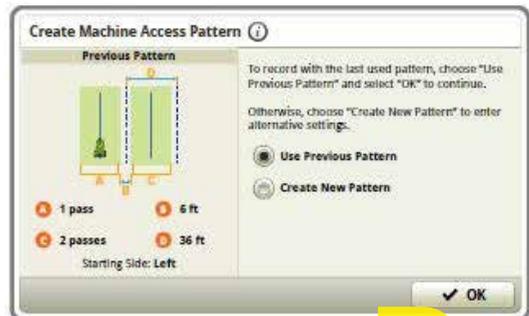
Machine Access Patterns

We can now create guidance lines at two different widths. This allows multi-crop users the ability to set up guidance lines that account for access paths between crop passes, and the ability to set up a pre-determined pattern of “field roads” which are inserted between a defined set of crop passes.

This feature, available for the Gen4 family of displays, walks the user through the set up process via display screen flow.



The system has the ability to reduce redundant set up by allowing the user to start with their most recently created access path. It can be created via Machine Access A+B, Machine Access A+ Heading and Machine Access Lat/Lon+ Heading. It’s ideal for speciality vegetable growers.



JOHN DEERE UPDATES

MYJOHNDEERE.COM UPDATES

Data Back-Up

Farmers are more reliant on capturing data to make business decisions and therefore it is more important to back up your data. We have seen a number of people lose their data and we recommend data back up happens at least once a month.

Options for transferring data:

- Mobile Data Transfer (uses USB to connect to the display)
- Wireless Data Transfer (used JD Link Connect)
- Good quality USB sticks such as SanDisk or similar.

New Field Analyser Beta

This update is a response to some highly demanded new features. The main advantage is that we can now overlay different maps to compare the effects of certain applications to yield performance. We can change the map legend to make it specific to the user. Additional map layers are also visible including elevation, fuel rate per hour, weather conditions and for those running SPFH's we also get inoculant dosing and length of cut maps.

MyJobs

Users are now able to automatically report their position any time and any where. Once a job is started by the operator via a mobile device, the mobile app sends the position every minute into the John Deere Operations Centre. The functionality enables users to monitor the location of non-JD Link machines regardless of brand, age or kind of machine in the Operations Centre.

Crop Planner

Farmers can plan cover crops, main crops and secondary main crops within the Operations Centre. The Crop Planner will visualise the area and resulting crop split as well as remaining on planned fields and area on the dashboard. Multiple current



and future seasons can be planned in advance.

HARVEST LAB & MANURE SENSING

John Deere first introduced HarvestLab technology to the market in 2008 on Forage Harvesters and more recently on slurry application equipment. Apart from a few hardware changes the design has been kept the same up until now.

HarvestLab 3000

Dry Matter
Moisture

MANURE SENSING

The new HarvestLab 3000 has had a complete design change and brings the ability to analyse more nutrients in the future. A new user interface has been introduced when doing stationary testing this includes being able to store analysis results and assign them individually i.e. to different clamps of forage, for review during the season. The table at the bottom of the page shows the different constituents that can be analysed.



a nutrient target and/or maximum rate in kg/ha, and even utilise site-specific prescription maps. The latest DLG test results have confirmed that the sensor works with comparable accuracy to certified laboratories using wet chemical methods.

“Usually there are differences in the ingredient content, once the test results from different laboratories are compared. However, the HarvestLab 3000 test results



The new user interface for Stationary Testing:

John Deere Manure Sensing

John Deere Manure Sensing is now DLG certified for all three main liquid organic fertiliser types - Cattle, Pig and biogas liquid digestate.

Manure Sensing uses the HarvestLab 3000 sensor's near-infrared (NIR) system to measure nutrient values during slurry application. The system allows farmers to apply N, P and K precisely based on

are within the determined laboratory range,” said DLG Test-Centre nutritionist and test engineer Dr Ulrich Rubenschuh. The system's continuous analysis, with over 4000 measurements per second, is a huge benefit, providing reliable statistical data on the move. It eliminates potential errors due to incorrect sample handling, temporary storage and time critical sample

HarvestLab 3000 + John Deere Constituent Sensing MAIZE bundle
Dry Matter
Moisture
Crude Protein (XP)
Starch (XS)
Neutral Detergent Fibre (NDF)
Acid Detergent Fibre (ADF)

HarvestLab 3000 + John Deere Constituent Sensing GRASS bundle
Dry Matter
Moisture
Crude Protein (XP)
Starch (XS)
Neutral Detergent Fibre (NDF)
Acid Detergent Fibre (ADF)
Crude Fibre (XF)
Crude Ash (XA)

HarvestLab 3000 + John Deere Constituent Sensing MANURE bundle
Dry Matter
Nitrogen(Ntot)
Ammonium (NH4)
Phosphorus (P2Os)
Potassium (K2O)
Volume

PRODUCT FOCUS

shipments. Moreover, laboratory test results are only available several days, if not weeks, after the job is done. By contrast, real-time results allow automatic in-field adjustments.

Since the analysis takes place in the field, the settlement of nutrients in the tanker is also completely accounted for. An official comparison conducted in the Netherlands with over 300 different manure samples proved that continuous, 100% measurement of each complete tank load with NIR could eliminate average standard deviation errors of 4.2% for nitrogen and 16.3% for phosphate, when compared to measuring only five samples per tanker load.

PRODUCT FOCUS: JOSKIN EUROLINER 24,000L Simon Heath, Stockton Heath, Newport

The Joskin Euroliner purchased by Simon Heath in Autumn 2018 is one of the first tankers in the country to be fitted with John Deere Manure Sensing.



Simon wanted to be able to analyse his cattle slurry and digestate to understand fully what has been applied to the field. From there he can adjust his fertiliser spreading rates to match the organic matter that has been applied. This can be done easily by the MyJohnDeere software.

As the Manure Sensing kit was fitted to a non-John Deere tractor, and rather than adjusting the forward speed of the tractor, the pump speeds up or slows down to match the current specification set by the operator. To enable GreenStar functionality on the tractor that only works with Manure Sensing, we fitted a SolSteer system which enables full ISOBUS functionality and GPS steering through the GreenStar display.

We installed a 4640 display with extended monitor so that multiple operations can be viewed at once. In the cab of the tractor, JD Link MTG has been fitted which links to

the display to enable wireless data transfer and remote display access; something that we think is critical when dealing with this advanced technology. RVT can remotely view the display from any location and all documentation data is sent back



automatically to the Operations Centre and viewable in the App.

As the tanker is moving back and to the field, and to ensure precise application and repeatability Simon is also using RVT RTK mobile network which covers his entire working area in Shropshire and Staffordshire.

PRODUCT FOCUS

JOHN DEERE 750A DRILL

John Billington, Adbaston Hall, Staffordshire

In 2018, John Billington purchased a new John Deere 750A drill with liquid fertiliser tank and John Deere rate controller for monitoring and documenting as applied fertiliser rates.



The 750A drill is available in 3, 4 and 6m versions. It has a field proven Accord air seeding system, and is designed with large clearances for no-till drilling

into stubble, working after minimum or conventional cultivations, and single pass operation for grassland and rough pasture renovation.

Single pass drilling offers several advantages over a conventional ploughing regime, including lower establishment costs, reduced

PRODUCT FOCUS

nitrate leaching and increased conservation of moisture within the soil. In addition, the 750A's minimal soil disturbance at the point of drilling offers huge benefits for the control of blackgrass.

With the help of Trevor Tappin of TT Engineering who fitted a 900L liquid fertiliser tank to the rear of the machine, John is benefiting from a true one pass machine, as it is applying liquid fertiliser next to the seed in the ground.

RVT Precision Farming fitted a rate controller that links with the pumps supplied with the liquid fertiliser tank, and provides a user interface on the display. John can enter specific target rate of litres per hectare for the system to apply. The rate controller brings additional functionality such as section control and being able to use variable rate prescriptions as well as documenting the as applied rate across the field. All this can be imported into MyJohnDeere for recording and analysis later in the year. This is also viewable on the my Operations App so when crop scouting the app can be used to see how much product was applied in certain areas.



CASE STUDIES

CASE STUDY: WOODHALL GROWERS, SHROPSHIRE

Woodhall Growers farm across Shropshire and Staffordshire, with some fields 90 miles apart. “We had previously run a New Holland RTK system that we ran through our lease hired New Holland tractor screens alongside a mobile base station which we used to carry from field to field and set up” says Manager Will Woodhall.

He continued “we made the decision to move away from New Holland tractors which meant that we would need to buy display screens, and at this point I started looking at the whole system to see if there was anything better on the market”.

“Because we hire all of our tractors, I’m never sure of which brand we will be running year to year, so the Ag Leader system being compatible with all tractor makes was a massive bonus. The RTK network that RVT provides covers all of our farming areas, meaning that we no longer have to carry a mobile base station, and year on year we can come back to the field



and use the exact same heading which is helping us move towards a controlled traffic system CTS”.

Will further explains how The AgLeader display screens are really user friendly and easy to set up. “The fact the lads can just park next to the office and the system will automatically link to the office WiFi and upload/download all of the latest recordings so that both tractors are running on the same A,B, lines is brilliant.

The set up saves us typically about 2 hours for every day that we go out with our triple bedformer compared with the old system. When you are dependent on the weather, especially in late February this really is a long time! It also gives us a lot more accuracy when precision drilling our vegetable crops. The fact that all of my workforce can now use the system gives me the flexibility to rotate staff when needed”.

He went on to say “the set up and support from the RVT

Precision Farming Team has been really good and there is always someone at the end of a phone or they will come out if needed. The installation and set up was quick and efficient, and the guys came out about four or five times over the first couple of weeks to help train me and the men in the field which was great.

The system itself has only let us down



twice; once was when there was a big RAF show locally and we think they had blocked the GPS signal and the second the RTK tower was down for maintenance but with one phone call they swapped us onto another tower and we were back up and running.

I'm so pleased with the system that next year I will be setting a third tractor up with the Ag Leader system."

CASE STUDY: DAVID AUSTIN ROSES, WOLVERHAMPTON

"After some extensive research of other systems I found GreenStar to be very user friendly and had the best coverage. It has done exactly what RVT said it would and has worked well with very little problems" says John Rasnall of David Austin Roses.



David Austin Roses

"Any problems that we have incurred were to user error and the support was good from the guys to sort it very quickly. I like the fact that it is very multifunctional and the more we use it the better it gets for us.

The benefits have been significant, ultimately for us it was the ability to have pin point accuracy with our planting, which is a must for work carried out throughout

the year. It will help with productivity and hopefully give us better yields."

John continued "With having no experience with any GPS system I could not of asked for more from the team at RVT, the support has been great. They are always willing to come out and sort out any issues we've had and they offer a very good service. For me, it was the great local support that really swung it to move to the John Deere system."

CASE STUDY: IAN ROBOTHAM, DEANERY FARM, BURTON ON TRENT

For 30 years, Ian ran a Vicon Wagtail Fertiliser spreader at 12m. This year, he upgraded to a Kuhn 40.2EMCW to increase accuracy and work rate. Now spreading at 24m, he needed a system to show where he had been and where to drive to. Ian admits, he is not the most computer savvy so he needed a simple system which was easy to use.



With advice from RVT, Ian bought an AgLeader Compass Kit which is a simple, touch screen display that can do parallel tracking, boundaries and can be upgraded for further functionality if needed in the future. Milking 100 cows with cereals and grassland, Ian



SPRAYER UPGRADES

thought the system was easy to follow, but admits it did get a bit of getting used to, but with the help of the Precision Farming department it didn't take him long to get to grips and make the most of his investment.

Ian commented how helpful it was to have the App on his phone rather than writing spreader set up information on paper, and the EMC weighing part of the Kuhn spreader has proven to be very accurate with the weigh cell in the hopper knowing exactly how much product remains.

SPRAYER UPGRADES

ISO Liquid

The team at RVT Precision Farming have recently completed a bespoke conversion for CAS (Chemical and Agricultural Services Ltd) on their Chafer MultiDrive. It now uses Guidance and a suitable spray



Chafer MultiDrive Sprayer

rate application system with density calculation that allows them to apply their Omex liquid suspension fertiliser with ultimate accuracy in terms of both placement and rate.

The team used an AgLeader InCommand 1200 Display with Section Control, ISO Liquid ISOBUS Spray Rate Control, GPS6500 position receiver and On-Tractor 3 assisted steering.

This complex fit required the integration of many different electronic systems including the existing Mueller hydraulic control, the Chafer can-bus E.Valve equipment and Chafer's own Contour boom height control system.

The results have been outstanding in terms of user friendliness for the operator, accuracy of the guidance and section control, suitability of the system for CAS's Specialist Omex application and the integration with the existing systems.

Sands Sprayer Upgrade

Another ISO liquid module has been fitted to this Sands sprayer to enable rate and section control. The customer already had GreenStar equipment so the ISO liquid module can be run and operated through the John Deere 2630 display. Previously there were three different screens inside the cab to operate the sprayer and this has been reduced to one, aiding simpler



SPRAYER UPDATES



Guy working on the Sands Upgrade

operation. The results have been excellent and we are now hoping to add an ATU wheel for automated steering.

Interested in upgrading your sprayer?

We offer Automatic Rate Control & ISOBUS conversions including density options for Liquid Fertiliser, Section Control and our own RVT RTK network.
ALL MAKE AND MODELS SUPPORTED.

Contact us for more details.

JOHN DEERE SPRAYER UPDATES

ISO AUX N Control

For those wishing to use a third party ISOBUS joystick or who want to operate their sprayer with a John Deere CommandPro armrest electric joystick, MY 2019 Horst sprayer software will include support for the ISO AUX N Control Protocol.

This enhancement allows operators to configure the various buttons, switches, and movements of an ISO AUX-N (New) compatible



joystick to control the various sprayer functions. Dedicated setup screens allow the assignment of individual functions to the joystick.

Twin select Auto Nozzle Control

This in-cab nozzle control allows immediate switching between two different nozzles automatically depending on the forward speed or application rate changes. It maintains spray quality giving output at varying speeds. Once set up with Auto mode the sprayer will automatically choose the right nozzle.

John Deere Terrain control

John Deere TerrainControl Pro and John Deere TerrainCommand Pro use a new type of ultrasonic boom position sensor designed specifically for use with spray boom controls. These sensors are able to identify the differences between the soil and standing crop. They can measure changes in height as small as 12.5 mm and can distinguish up to four different targets simultaneously.



PowrSpray

John Deere are constantly monitoring the changing needs of its operators and as a result have come up with a new concept in sprayer solution systems. The PowrSpray system features:

- Unique dual-circuit design

POTATO FOCUS

- Pump output for both filling and spraying is independent of tractor engine rpm
 - Fast filling speed of up to 1200 L/min
 - Unique active pause for fast and stress-free chemical filling
 - Selectable power agitation mode, for extreme solution mixing action
 - Highly reactive direct rate control for highest application accuracy
 - Moving parts reduced by 50% compared to conventional wet systems
 - Residual volume only 45% of similar conventional wet systems
 - No regular maintenance requirement
- PowrSpray is currently available for high specification R900i Series trailed sprayers available in tank sizes of 4400, 5200, and 6200 litres

DEMO JOHN DEERE M740

To test out the new boom levelling system and advanced automated functions for increased productivity and accuracy, contact us for a demonstration of our M740 Sprayer.

HOW TECHNOLOGY CAN HELP POTATO GROWERS:

Our top tips for potato growers:

- **Itec Pro** - this feature can be used to automate the headland sequence at a set distance away from the boundary for example when ridging. We can set the ridger to lift up and down at a pre-defined distance from the headland.
- **Rate Controllers** - if applying liquid fertiliser, we can fit rate controllers to apply the fertiliser in relation to the forward speed of the tractor as well as documenting as applied rates across the field or even working to a prescription map.
- **Documentation** - all varieties and seed rates can be documented on certain displays which can then be imported into farm management software such as MyJohnDeere.com which we can review later in the year when crop scouting or comparing performance across varieties.



John Deere M740
Sprayer

JOHN DEERE UPDATES

even less soil disturbance, more consistent seeding depth, better seed to soil contact and improved slot closure, and features only one grease point for minimal annual maintenance. In addition for 2019, John Deere will have new, fully ISOBUS compliant software available for both the 750A All-Till and 740A Min-Till drills.



ProSeries Opener

- **Yield Mapping** - we can now fit yield mapping systems to harvesters in order to assess variety and field performance across the planted area.
- **Section Control** - There are a number of systems available to growers to enable automatic Section Control on planters. It means that the planter will automatically turn on and off again at a pre-defined distance from the headland, reducing overlaps, bringing financial and agronomic benefits.

JOHN DEERE UPDATES

750a Pro Series Opener

Available from January 2019, John Deere's new ProSeries opener for the 750A All-Till drill can be retrofitted to existing machines. This replaces the 90 Series opener that has been a feature of the drill since its introduction in the mid-1990's.

The new opener is designed to provide

CommandPRO on all 6R's

The CommandPRO technology that was introduced with the 6250R tractor range is now available for all 6R models from 6110R up to the 6250R. It has eleven reconfigurable buttons which can be assigned to either tractor or ISOBUS implement functions. The Joystick can also be used to set target forward speeds as well as directional changes.



MACHINE UPDATES

4200 Display

The 4200 Command Centre provides a 21.3cm value spec solution for producers wanting a display that is AutoTrac™ guidance, Section Control, Data Sync, and ISOBUS documentation capable only.



4200 Display

It provides operators with an economical display, enabling core AMS functionality while maximizing visibility to operations outside the cab.

Field Connect & Pessl Instruments

John Deere is pleased to announce an allied supplier agreement with Pessl Instruments GmbH, located in Weiz, Austria. Pessl is a leader in agricultural weather stations, telemetry, crop modelling, soil mapping, high precision weather forecast and fertility.

Under this partnership RVT have access to the complete Pessl product range and are supported by the Pessl sales and service team. The agreement will also enable us to integrate Pessl components into John Deere's online Operations Centre.

For more details on the Pessl range visit www.pesslinstruments.com

KUHN UPDATES

Introducing the New Espro RC Drill



The new foldable ESPRO 6000 RC seed drill with 6m working width, divided hopper and combined fertilisation option is able to deliver fertiliser under root while seeding, and also enables mixing two seed

varieties or using the entire hopper for the main crop. Its global design includes, as the other ESPRO models, two rows of working discs followed by a packer roller and the CROSSFLEX coulter bar with press rollers.

Main Features:

- Two separate metering and

Pessl Instruments



The AXMAT Plus concept, which was awarded a gold medal at AGRITECHNICA in 2013, is now being officially launched in the UK. This novel fertiliser spread pattern controller is equipped with 54 radar sensors (27 on each spreading disc) which

are arranged in a horseshoe shaped layout underneath the twin spreading discs of the Axis H 50.2 EMC+W fertiliser spreader.

distribution systems. An additional row of single disc coulters behind the working discs delivers fertiliser or the second seed variety.

- Easy-to-pull seed drill owing to its unique packer roller design with wheels offset front to rear, which clearly reduces soil build-up in front of them.
- High speed, high quality seeding with the CROSSFLEX coulters bar: Two rows of offset double discs open the seed furrow and place the seed precisely. Each coulters arm is fixed via four polyurethane blocks on a cross-shaped sectional tube. This ensures constant coulters unit pressure and reactive ground following.
- Comfortable seeding management from the tractor cabin: ISOBUS ready, available with CCI 1200 or CCI 50 terminals.

This innovative use of radar technology actively scans the spreading pattern of fertiliser as it exits the spreading discs and uses intelligent software to analyse and optimise the spreading pattern in real time.

If the spread pattern deviates from the ideal configuration, the AXMAT Plus system automatically instructs the spreader's fast-activating SpeedServo

Automated Spread Pattern Controller Offers Improved Fertiliser Accuracy

KUHN UK have launched a radar-equipped, automatic spread pattern control system for its AXIS 50.2 twin-disc fertiliser spreader.



KUHN

actuators to adjust the fertiliser drop point on the left and right spreading discs every four seconds, thereby ensuring each granule or prill of fertiliser is applied as accurately as possible.

“The AXMAT Plus system radically improves the application accuracy of fertiliser, and enables the AXIS 50.2’s spreading pattern to be fine-tuned to compensate for varying environmental conditions and fertiliser quality and consistency,” explains Paul Gregory, KUHN’s Area Sales Manager.

“By continuously monitoring the spread pattern and controlling the left and right spreading discs independently, the AXMAT Plus makes it possible to apply a wide range of fertilisers more precisely across the spreader’s full working width. This enables improved spreading precision and reduces fertiliser wastage

as well as minimising the risk of fertiliser entering watercourses. It also enables accurate spreading to be achieved without the need for the spreading pattern to be tested manually.”

PRODUCT FOCUS: KUHN AERO

This 20 year old machine has undergone a technology transformation at the hands of RVT this autumn. We have turned it into a hydraulic folding machine and added the ability to do manual section control.

Hydraulic Folding

This was a challenge as the parts for this machine from Kuhn have become obsolete due to its age, this meant Guy Blackshaw had to design the pivot points and calculate hydraulic cylinder sizes required. The boom was two part folding which added to the challenge but now the operator can control the folding hydraulically from the cab.

Rate & Section Control

With the AgLeader products we have available to us, we have managed to convert the Kuhn Aero to rate and section





KUHN Aero Retro Fit

control with 2 sections either right or left, the metering unit is now related to the forward speed. This is using the Strip Till and Clutch Control module with an InCommand 800 display for operating the system.

We had to replace the manual metering control valve with one that is operated with an PWM valve which allows the strip till module to regulate oil flow to the metering unit. For turning off the



KUHN Wifi Module

right and left sections we have fitted two electric actuators which are controlled from in the cab using a switchbox which then documents on the display. The operator can enter what rate the system is to apply or work to a Variable Rate Prescription if required.

Kuhn WiFi Module

The new KUHN WiFi Module connects directly to a fertiliser spreader. You can then connect your phone to it and wirelessly send your fertiliser configuration settings to the display, filling out all the required fields automatically. The ISOBUS function of the spreader can also be assigned to the joystick.

Ag Leader®

Ag Leader Opt RX Crop Sensors

With the AgLeader OptRX you can easily meet crop needs with on- the-go variable rate application, reallocate where nitrogen is applied by putting on higher rates that will respond favourably to more Nitrogen and reducing rates that are Nitrogen rich.

The sensors measure your crop health as you drive through the field and apply the right prescription instantly. Opt RX shines light on crop canopy and then reads reflected light off the crop to determined plant health.

New Guidance and Steering Solutions Including Dual-Antenna Automated Steering

Ag Leader has unveiled new guidance and steering solutions including a dual-

AG LEADER

antenna automated steering system and the latest in GNSS technology to be added to its already high-end precision agriculture guidance and steering line.

SteerCommand® with DualTrac™ brings a dual-antenna offering to the market that provides RTK accuracy and meets

the needs of many farmers requiring high-accuracy automated steering at low speeds. New GNSS technology in the GPS 7500 was leveraged to make this possible and also adds new satellite and correction offerings including TerraStar-C Pro.



Operators can set a pre-defined application



Opti RX Crop Sensor

GET THIS DEAL WHILE IT LASTS!

SteerCommand with DualTrac

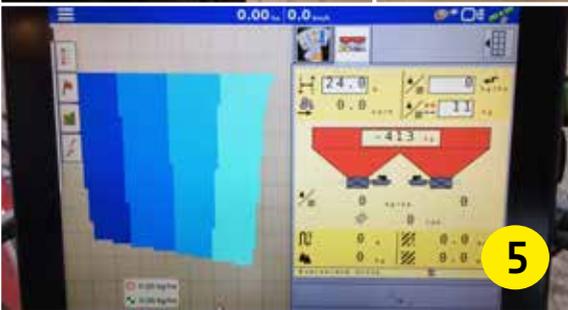
Trade up and receive up to £6,250* trade value off purchase

*Trade value will vary depending on current exchange rate. Offer ends

22 14th December 2018



Ag Leader®



AG LEADER INSTALLATIONS

1. InCommand 1200 on Fendt 936 using for steering on a Lemken Drill
2. ISO-Liquid running through the Fendt Vario Terminal
3. Case 110 with InCommand 1200 for Section Control through ISOBUS on a new Kuhn Spreader
4. RTK and Ontrac 3 added to a Bateman Sprayer
5. Split screen functionality - the ability to see the ISOBUS implement and VRA map at the same time



1



2



3



4



5

ALL MAKES GUIDANCE

RVT can fit John Deere precision farming products into model year 2018+ non John Deere machines easily and affordably, utilising the ISOBUS functions of the tractors. Here are some examples of this years installations;

1 & 2. 2018 Case Puma and New Holland with full Greenstar integration for GPS & ISOBUS functions

3. Fendt - Giving ISOBUS functionality to potato planters

4. A mixed fleet all given the GreenStar treatment

5. Greenstar and ATU wheel on a Fendt tractor running an Kuhn ISOBUS Fertiliser Spreader.

NEW AUTOTRAC UNIVERSAL 300 PACKAGE

AUTOMATED STEERING FOR MIXED FLEETS

Approved for over 600 models from
John Deere and other brands.

**AVAILABLE
FOR OVER
600
MODELS**



JOHN DEERE

NOTHING RUNS LIKE A DEERE

+ YOUR BENEFIT

- Premium guidance at very attractive fixed price
- Significant productivity increase
- Savings on fuel, fertilizer and chemicals
- Precise work results also in low visibility conditions
- Less operator stress



StarFire
6000 - SF1



Gen4 4240
Display with AutoTrac
Activation



AutoTrac Universal
300 Steering Kit



FERTILISER SPREADER TESTING

Are you getting the most out of your spreader?

- Initial inspection of the spreader including condition of discs and vanes
- Tray testing to confirm evenness of spread across the working width of the machine
- Adjustments made if required to achieve the best Coefficient of variation (CV) for each product

What are the effects?*

CV%	Yield t/ha**	Opt N kg/ha
0	10.08	202
5	10.08	202
10	10.06	201
15	10.03	199
20	10.00	197
25	9.95	195
30	9.89	192
35	9.82	188
40	9.75	184

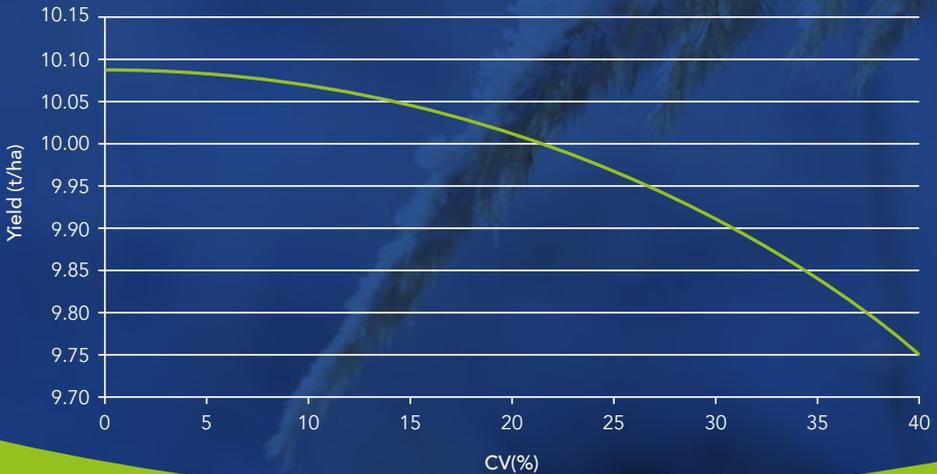
** at optimum N rate for CV=0%



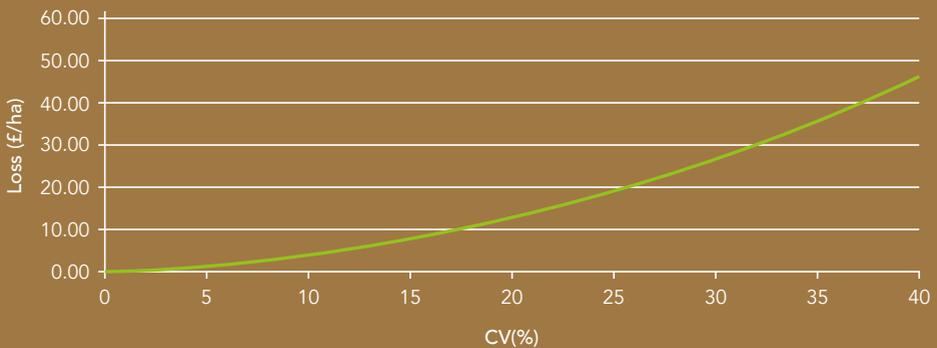
WINTER WHEAT

Nitrogen fertiliser 0.72p/kg N (£250/tonne AN)
Wheat £150/tonne

Crop yield at different CV*



Financial loss at different CV (Compared to CV=0)*



*Effect of uneven spreading calculator. FACTS and ECOPT, 2013

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