



“The CLAAS data transfer system is extremely easy to use. We don’t have to do anything to get the yield and quality information from the forager to the office computer.”



James Faulkner, Essex, 2023

## FARM FACTS

Farm	Robert Davidson and Son Ltd, near Colchester, Essex
Farmed Area	1,497 ha
Cropping	Winter wheat 810 ha Forage maize 300 ha Grain maize 60 ha Forage rye 113 ha Grass for hay 80 ha 40 ha let for potatoes Stewardship schemes
Staff	James Faulkner, Victoria Cook, Ben Hull and David Hunt full-timer and up 12 others brought in for silage and arable harvest
CLAAS	JAGUAR 970

# Better for business

With a range of both forage crops and combinables spread across some 1,500 ha, the team at Robert Davidson and Son are making the most of the information delivered to them via yield mapping and crop quality monitoring.

Central to this are the QUANTIMETER and NIR sensor system fitted to the Essex firm’s CLAAS JAGUAR 970 forage-harvester. While the former records both fresh weights and dry matter tonnages in real-time, the Near Infrared (NIR) spectrometer fitted to the spout of the machine constantly analyses what’s going into the trailers to provide up-to-the-minute read-outs on dry-matter, protein, starch and other crop quality parameters.

## QUANTIMETER

“When we first started with the QUANTIMETER I wasn’t expecting it to be that accurate compared to the weighbridge. But actually we found that it was within 1-2% and we quickly learnt to trust it,” explains James.

“With the dry matter adjustment from the NIR sensor we can give our customers an early indication of how many tonnes they can expect in the clamp by the end of the day and plan accordingly.

“The other key thing it helps with is planning how we split our forage and grain maize harvests. If at the beginning of chopping it looks like it’s going to be a bumper season we can afford to put aside more for the combine. Conversely if it looks like it’s going to be tight for the AD plant and the growers contracted to supply it, we can plan to chop more of the total acreage.”



## NIR Sensor

“Being able to analyse the crop as we go along means we get thousands of data points from any given field, which provides a much more accurate average than a few spear samples out of the clamp.”

“For our livestock customers in particular that means they can see exactly how much protein and energy there is in the clamp and plan their rations accordingly.”

“But even simple dry matter monitoring helps in the harvesting process – at the start of each crop we go round a number of fields with the forager and chop a trailer load. That gives us an indication of where to go first and where to leave until last.”

“It helps even on the most basic level in minimising effluent. If it looks like it’s coming in too wet our customers can ask us to hold off or layer it in the clamp with drier material.”

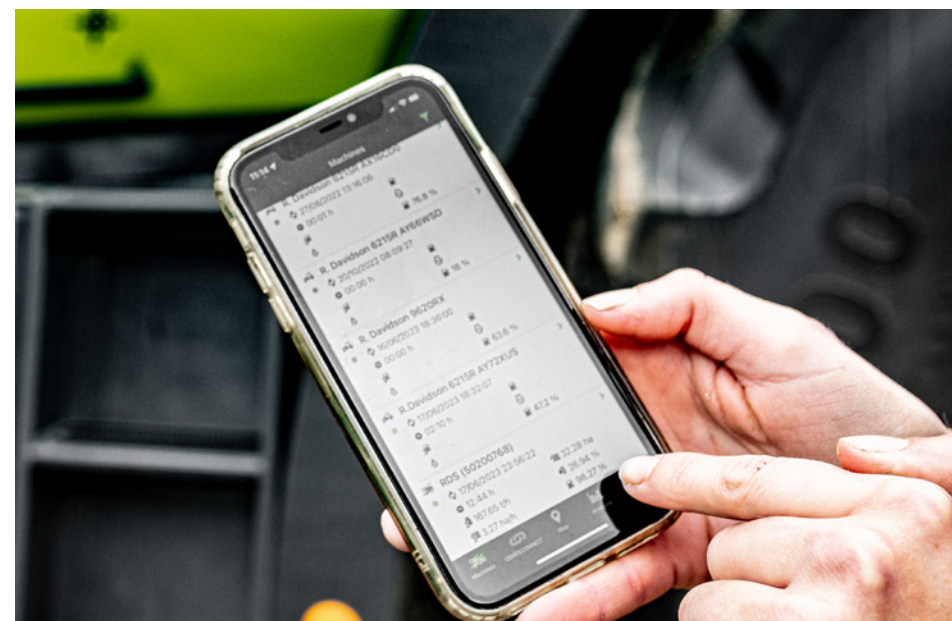
## TELEMATICS App

“During the working day we can all access the CLAAS TELEMATICS app on our phones to check average dry matter, tonnes harvested, chop lengths, etc... While this helps ensure we’re meeting the spec. required by the customer it also acts as a valuable aid in managing logistics, whether it’s how many trailers are required or when the forager is next going to need topping up with fuel.”

## Data transfer

“Getting all the yield and NIR information from the forager to the office computer couldn’t be easier. Once the field boundaries are set up from the office, our forager operator Victoria has nothing to do in the field, as the system then just automatically transfers it to the cloud.”

“Back at the office I can then see everything at my fingertips and create reports for different customers as required.”



“Critically the CLAAS system talks without glitches to other third party software and is set up to automatically transfer data to create maps for planning future fertiliser regimes, variable rate drilling, etc...”

“Yield recording and the NIR sensor are now incredibly important tools in our armoury that we rely on heavily. Because we do a lot of trials with different forage crop varieties, fungicide treatments and fertiliser regimes, it means we and the other growers we look after can accurately see how different approaches will influence not only tonnes per hectare, but also how each tonne breaks down in terms of its nutritional make-up.”

“By comparing all the information across our own crops and our customers’ we can make assessments of why certain areas have yielded better, or why they analyse differently, and make adjustments to how we treat our crops in the future.”

## The future?

“We’re still learning what information the AD plants and livestock producers need. The CLAAS TELEMATICS system is an impressive tool in the range of things it can measure but we still have a lot to learn.”

“Right now the most critical feature it provides is dry matter sensing but there’s so much more data available that we need to be making more use of it. Alongside or on-farm trials I can see us providing different areas of the field with bespoke disease control programmes and fertiliser regimes.”

“Our latest sprayer is capable of variable application rates through individual nozzles, so in theory we could be applying different quantities of chemical, fertiliser and even trace elements to each crop row.”

“TELEMATICS acts as a valuable aid in managing logistics, whether it’s how many trailers are required or when the forager is next going to need topping up with fuel.”







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## Operator's view

Having had experience of a number of different breeds of precision farming systems and interfaces, forager, combine and sprayer operator Victoria Cook is impressed by how well integrated the yield monitoring and NIR sensing functions are within the CLAAS CEBIS terminal.

"At any given time I can see how the crop is yielding and what the dry matter is as we're going along," she explains.

"That's critical particularly for the AD plants as they want to know how dry the crop is and what they can expect in the clamp at the end of the day. Meanwhile all that information is being recorded and sent to the farm office without me having to do a thing.

"The CEBIS touchscreen is very intuitive to operate and I like the way I can access the various settings screens via either the armrest paddle switches or the on-screen forager silhouette. It makes it incredibly quick and easy to make changes to things like chop length, header height, etc..

"AUTOFILL is another really useful feature that means every trailer is loaded to the brim, especially on the headlands. Generally I'll let it do its own thing until I take over to top the trailer off manually. Even then it helps me out, limiting spout swivel to ensure nothing spills over the sides.

"When we're opening up in maize with a trailer tucked in alongside the forager I can just concentrate on where we're going and not worry about where the spout's pointed."



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