



“ We’re conscious that anything we do will cause compaction. ”

Tractors

Running on tracks

From minimised compaction to the ability to travel on wet ground earlier than their tyre counterparts, tracked tractors offer their own benefits. But as they’re usually fitted to only the most powerful machines, do they have a place on farm? CPM explores.

By Melanie Jenkins

Tracked tractors aren’t a common sight on UK farms and some might not see the benefits of running such large machines. But for those requiring north of 600hp or looking for marginal gains in efficiency, fuel use and output, there are only a small number of tractors available to buyers.

For David Rowe, tracks have had a place on his arable and potato operation since 1999, and having used them for 25 years, he says he wouldn’t be without them.

FW Rowe and Sons is based in south east Staffordshire but operates across Leicestershire, Warwickshire and Derbyshire. “We have about 1700ha of combinable crops, 57ha of potatoes and do some contracting work as well,” explains David.

“We still have around 324ha of oilseed rape, 445ha of winter barley and

810ha of winter wheat, and although we did grow a little spring barley and spring wheat this year, we usually aim to only grow winter crops and have everything established in the autumn.”

He says his soils are incredibly varied and range from heavy clay to light sandy land. “We sometimes have all of these types in one field, which makes it very difficult to roll out operations meaning we have to be flexible in what we do,” adds David.

Cultivations

Tillage is mostly without full inversion, but David explains they do still move a fair amount of the soil. “We use a Sumo Quatro and a Väderstad Topdown for primary cultivations and then either a Väderstad Rexius Twin Press or something like a Pöttinger Terradisc after. We then use a Väderstad NZ Aggressive before we drill.

“We’ve maintained carrying out more cultivations to support better establishment across fields. We do venture into direct drilling when we can, but found it worked in

some parts of fields and not in others. We don’t want to roll out different approaches across the farm and find in some places it’s compromised establishment, especially when establishment is everything.

“If crops establish well in the autumn, then from this point until harvest the process is pretty straightforward, meaning we can afford to apply sufficient inputs to hopefully get a good crop at the end.”

David’s first tracked machine was a John Deere 8400T, whereas he now has a 9RX 640 articulated quad track, an 11-year-old 9560T twin tracked machine and two 8RXs on four tracks which are front steered. The latter undertake a lot of drilling and top work, while the former two carry out most cultivation work.

Prior to 1999, the tractors had been run on dual wheels which required a lot of rubber on the ground. “We tried moving to singles but with wider tyres, however these never seemed to have any grip when on machines with more than 300-350hp, and the tractors would struggle to put



One of the key differences when FW Rowe and Sons switched to tracks was how the tractors were suddenly more capable of pulling everything while causing less compaction.

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► energy into the ground through the tyres.

“We know tyres have moved on since then but we’re still sceptical about how well they work with higher horsepower tractors and how kind they can be to the soil. But with tracks we can put the power down and have a minimised footprint.”

And while some might consider tracks to be more troublesome when it comes to road transport, David says machines all fold to 3m and can be moved fairly easily between the areas of his land which are more scattered. “However, we do run the machines slower than others might with tyres to preserve track life.”

David’s previous 9RX was purchased in 2016 and when he sold it, the machine went with its original tracks on, demonstrating that careful management can avoid heavy wearing. “It’s not often we have to change a set of tracks because we’ve been conscious of looking after them right, but this does mean travelling at 30km/h rather than 40km/h or below on roads to keep the temperature of the tracks down.”

One of the key differences David noticed when he switched to tracks was how the tractors were suddenly more capable of pulling everything he wanted them to. “We were able to travel across the ground a lot easier and there was a lot less compaction.

“We’re conscious that anything we do will cause compaction, so our combine also runs on tracks and our trailers are on wide tyres.

“We don’t operate a full controlled traffic farming (CTF) system but combines, spring tines, drills and rollers can adopt CTF at 13.3m.”

Harvest 2023 saw fairly wet ground conditions but David highlights that the tracked machines didn’t create further compaction because of their even weight distribution.

Additionally with the larger tractors, tracks negated the necessity to add, remove or change ballast weights every time a different piece of equipment was



Tracks have negated the necessity to add, remove or change ballast weights every time a different piece of equipment is used at FW Rowe and Sons.

being used. “When we put big kit onto smaller tractors, we’d have to add weight and then when we wanted to do lighter work, we’d be taking them back off.

“But with the large tracked machines, these can undertake both in land or on top work without adding weight, meaning we aren’t having to spend as much time setting up for different jobs.”

David admits that a degree of consciousness is necessary with tracks to ensure the machines are kept on top of firm land and not run in furrows which they’re not best suited to. “We avoid running this to maintain track life because running them through 60cm of mud, sludge and water has an impact.”

Loyal to JD

John Deere machines have had a place on the farm for a long time, with the latest tractors set up to be integrated with one another to optimise guidance equipment. “The tractors have performed well for us and the residual value is very good. We were the first farm in the UK to have the new 9RX demonstration in 2015 – maybe even in Europe – because we wanted John Deere to produce a tractor similar to the Case Quadtrac and when it did we jumped on it.”

Before this we ran a 9620 with H-Traks from 2007 to 2016, and before purchasing

the two 8RXs we had two 8345RT machines on twin tracks. “The only criticism of the twin tracks was that they scuffed the headlands a little, so moving to the 8RX was the natural progression.

“We purchased a wheeled 8R 370 last year to have more flexibility in wetter conditions and for more power on our bed tiller when planting potatoes. We originally felt that we wanted another RX machine but the 370 is mostly used on our 6m combination drill meaning it’s not as critical to have it on tracks all the time,” he explains.

“But the difference between how the RX and the 370 pulls is really noticeable. We have to put weights onto the 370 and let the tyres down and it still can’t pull anything like how the tracked machine can, it just runs out of grip.

“In the spring of 2024, we had a 12m Horsch Avatar direct drill on demonstration which we originally pulled with the 370R, there was noticeable soil disturbance behind the wheels, so we changed to the 8RX and we were surprised at how little soil disturbance there was.”

Tracked machines are also an established tool at J D Mee and Son. After owning a Fendt 943 MT for five years, Olly Mee upgraded to the larger Fendt 1162 MT following an increase in farmed hectareage and the requirement to cover fields with greater efficiency while reducing operating costs.

The farm has a long history of owning twin-track crawlers, previously Challenger models and now Fendt, with the latest tractor arriving in July 2024. Olly says the new machine has impressed during the first 350 hours, with the biggest advantage being the fuel saving thanks to the Vario transmission and Fendt’s TMS technology.

“The 1162 MT has averaged about 65 l/hour pulling our 5m Keeble cultivator at 11kph, which has already produced a saving on the previous machine and significant



Care is taken at FW Rowe and Sons to ensure the tracked machines are kept on top of firm land and not run in furrows which they’re not best suited to.



Olly Mee observes that although his new Fendt 1162 MT is wider than his previous tractor, the design means the weight is spread well.



The Fendt 1162 MT covers 600 hours per year with one of its main jobs pulling a 5m Keeble Progressive cultivator at J D Mee and Son.

reduction from the Challengers we've owned in the past, that averaged about 110 l/hour.

"The 943 MT would pull this cultivator using 90 l/hour and at a slower speed of 8kp/h, so we're covering the ground quicker and using less fuel to do so. The efficiency of the operation has improved considerably."

The 770ha farm based in Tillingham, Essex, is run by Olly, his dad Chris, and uncle Nick. It's flanked by the River Crouch and River Blackwater on each side, with land running to the North Sea coast. Most of the

land is heavy clay and requires moving each year via cultivating or rotational ploughing.

Twin-track machines have always been preferred by the farm as the main power source for this work and although the 1162 MT is wider than his previous tractor, Olly says the design means the weight is spread well.

"The tracks offer a longer footprint and they're set wider than the previous crawler, so although it's heavier and has significantly more power, the overall impact on the ground is similar. It also doesn't seem to rock as much as the smaller model and feels sturdier in comparison – it has an extra track idle wheel on the Smartride suspension which makes a difference."

The 1162 MT covers 600 hours per

year with its main job pulling a 5m Keeble Progressive cultivator alongside drilling using an 8m Väderstad Rapid. When deciding what to replace the 943 MT with after it had reached 5000 hours, Olly chose the 1162 MT for several reasons.

"I liked that it had the MAN engine and I wanted to go down this route for reliability. We demo-ed a twin-tracked John Deere, and a Case Quadtrac which I'd had experience with before I worked at home. I like the differential option on these but the largest model we could get the stepless transmission in was 540hp, so only 100hp more than our old model.

"The larger engine in our new crawler allows us to achieve greater fuel savings that we couldn't have achieved in



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Tractors

▶ another machine. It'll operate at 1400rpm when pulling the Keeble cultivator, with all the subsoiler legs at 36cm deep, J-tines, discs and a packer working. The bigger 1320-litre fuel tank allows us to go for longer between fill ups."

The farm grows wheat, winter barley, winter beans, peas and lucerne and has two other Fendt tractors – an 828 and a 724 – that all run Trimble guidance from the farm's own RTK base station. With three operators and additional staff at harvest, keeping the same cab interfaces and brands help when switching between machines.

"I really like the Fendts as they're easily customisable and we can save operator profiles that can be loaded as soon as you get into the cab. This also helps as we only learn one system and can get the best out of it.

"Once we're set up, it's just one button at the start and end of each run. As we are owner operators, running Fendt tractors offers us a good mix of comfort, low cost of ownership and ease of use," adds Olly.

He says the 1162 MT has excellent visibility and doesn't feel like a 618hp tractor from the seat. "From the outside the exhaust looks huge, but it's been designed to fit behind the cab's pillar, so you don't notice it."

Another benefit is that the GPS domes and controllers are built into the roof which means they're less likely to be stolen as it isn't as quick to unplug.

Part of the reason for investing in the Fendt 1162 MT was the relationship and support the farm receives from local dealer, Crawfords. "The support is exemplary. Back up to any farm is immensely important so having trust in a dealer to support us when required is the peace of mind we require.

"If anything goes wrong, Crawfords are out to sort it. This allows us to



One of the key benefits of using the Case IH Quadtrac 540 has been improved weight distribution, says Matthew Addison.

fix costs during a five-year period and I think the service contract is very reasonable for what it covers. I wouldn't be without them," says Olly.

Minimising compaction

For arable farm manager Matthew Addison, tracks are the solution to minimising soil compaction. The Sir Richard Sutton estate Matthew manages is situated in Lincolnshire, covering 3200ha, with 2355ha cropped. "We've a mixture of soils on this estate, including free draining chalk on the Wolds and heavy clay situated near the Humber bank, which requires careful management."

The estate operates a six-year rotation growing feed and milling wheat, winter barley for feed, spring barley for malting and usually grows oilseed rape – none has been drilling this year – as well as spring

beans, vining peas and sugar beet.

"The estate has operated tracked machinery for many years," says Matthew. "We've tried high horsepower wheeled machinery in the past but due to the topography of the Wolds we struggle with putting the power down compared with tracked machinery."

The estate runs two primary tracked machines: a Case IH Quadtrac and a John Deere 8RX 410, with a third supporting tracked Caterpillar in the background to assist with secondary cultivations. "A couple of years ago we made the decision to go to a managed wheelings system because a jump straight to a Controlled Traffic System would be initially quite costly," explains Matthew.

The Quadtrac is used to pull a 12m Horsch Sprinter, a 7m Simba SL700 and a 12m Väderstad Carrier which joined the

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Packing the power

John Deere recently announced a power expansion at the top end of its tractor range, with three new 9RX models introduced. The 9RX 640, 710 and 830 sit above the three existing models (490, 540, 590) and have had a significant makeover inside and out.

According to John Deere's Michael Mueller, the tractor will fit into operations covering more than 2000ha, particularly those working heavy soils or which have to travel in difficult conditions. "As well as the step up in power, comfort and ease of maintenance have been fundamental to the design of these three models," he says.

Under the hood is the JDx18 engine which has no AdBlue requirement and can deliver

913hp and up to 4234Nm of torque.

The e21 PowerShift gearbox is engineered to harness the high power and torque. Its purely mechanical drive keeps power losses low and the 21 gears feature close spacing so operators can set the right speed for the work they're doing.

Operators will notice the design of the new cab which has 15% more floor space and 20% more glass, offering greater visibility to the field ahead or the rear hitch. Carplay and Android Auto, 65° of seat swivel and a G5 Plus display come as standard, as well as suspension borrowed from the 8RX.

A 9RX 830 configured to suit a typical UK or Irish farm has a list price of around £917,000.



John Deere recently announced a power expansion at the top end of its tractor range, with three new 9RX models introduced.

fleet last year to aid with trash management. "Because we've now also embarked on a more min-till approach we've found residue management to be an issue."

One of the key benefits of using tracked tractors has been improved weight distribution, says Matthew. "The machines can weigh up to 24t which can be very damaging to soil structure if not properly

distributed. To try and minimise compaction we've retrofitted a tyre inflation kit to our 12m drill allowing us to drop the tyre pressure on the seed cart, while all combine wheelings are lifted with a low disturbance subsoiler."

Aside from reduced compaction with tracks, the Quadtrac has proven its worth through its track life. "It's only on its second set of tracks within its 6200

hours of use, which we feel is cost-effective when compared with wheels."

According to Matthew, the estate will always stick with tracks on its primary machines. "Utilising high horsepower machinery with better traction helps to optimise efficiency and so will always have a place in our system on the Lincolnshire estate." ■

Here's an idea

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