



“When you watch the Xerion at work, it just seems weighted right for draft tasks.”

# Wheel switch suits soil challenges

## Machinery On Farm Opinion

Difficulties with slippage and maintaining traction when using a differentially-steered twin-track crawler on slopes and clay soils led a Rutland farm business to reassess its primary tillage tractor options. The result was a move to an equal-wheeled four-wheel steer machine.

By Martin Rickatson

Immediately west of Peterborough and the fenland that forms some of the flattest land in the UK, the topography changes almost instantly into the rolling hills around Rutland. England's smallest county might lie close to the capital of the Fens, but the countryside around it couldn't be any more different.

It's for this reason that Tyler Farms has recently changed away from a tracked tractor as its main workhorse to a wheeled one. Hilly land and clay soils which require only a little wetting on top to become difficult for a twin-track crawler to gain traction on have been the primary driver behind the move back to wheels. Reliability issues with the business' previous twin-track machine, and the desire for a more flexible tractor, gave

added impetus to the decision to change.

The business practises a mix of conventional and minimum tillage, a system which is used alongside a recently widened rotation to aid volunteer and grassweed control. Following a long period of using a two wheats and oilseed rape rotation, both winter and spring barley and spring beans have more recently been incorporated into the farm's cropping.

“We don't have a big blackgrass problem, but it's present and we're trying to keep it contained,” explains Charles Tyler, who farms 1200ha of land, spanning brash to heavy clay, in partnership with his brother Richard.

### Rotational ploughing

“Reintroducing spring cropping has given us more chance to tackle this, as has the use of rotational ploughing, which we practise before second wheats, winter barleys and in the autumn before overwintering ahead of spring beans, giving us the opportunity to minimise both volunteer and weed establishment. But we've also had added benefits — although not grown with malting in mind, our spring barley met malt specifications when marketed as part of a pool last year, the second season we've grown it.

“We've also taken the opportunity to use cover cropping ahead of spring barley, with a black oat-based mix designed to suppress weeds and maintain soil structure over winter.”

Most of the land not ploughed is worked shallowly with a Horsch Terrano FM tined cultivator, which has largely replaced a Simba SLD. The exception is where OSR is being established, and here the seed is placed down behind the SLD legs, working at around 250mm deep.

“The Terrano is something we use in a number of different ways, and in many situations where we were previously using the SLD we've found it much more suited to working shallower and creating a seedbed often in a single pass, particularly after OSR and beans,” explains Charles.

“It also consolidates without packing the soil down too tight, so conserves moisture without recompacting the ground. We've found it equally good for creating a tilth ahead of cover crop establishment, and for



The Xerion's performance has outweighed that of the farm's previous tracked tractor when working on damp soil surfaces, says Charles Tyler.



*The 524hp tractor's tasks span a range from ploughing and primary cultivations to secondary tillage and drilling, with weight packs changed accordingly.*

► working down ploughed ground, where it fills in between furrows and levels the land, leaving behind conditions we can work straight onto in the spring.”

Until recently, the farm's primary tractor for working with these implements had been a 320hp twin-track machine, the third in a succession of models of the same type that had been run by the business.

“But while we got on well with each of them, unfortunately reliability was becoming an issue as the models progressed, becoming a significant problem on the most recent version.

“In addition, depending on the year and the conditions, we were finding that, while they performed very well on dry soils, just a small amount of rain could be enough to reduce traction. That was especially true on our hills, of which we have quite a few, the land here being quite rolling.”

With the twin-track crawler coming due for renewal, three years ago the opportunity was taken to reassess the possible options for replacement, and a number of demonstrations were organised to see how

well the alternatives worked with the farm's implements and conditions.

“We initially looked at a four-tracked articulated tractor, which impressed us with the way it handled our hills and equipment,” says Charles.

### Another option

“However, it seemed bigger than we wanted in terms of size and weight, and with the figures we were given we couldn't make the purchase or operating costs work for us.”

The development of new tractor and tyre designs since the business had first moved to a crawler meant another option was to reassess what was available in wheeled tractors.

“We've been running Claas combines for 25 years, and currently have a Lexion 770, plus two Claas Scorpion telehandlers, but we weren't so familiar with its tractors. A friend, though, was running a Xerion 5000, and we were persuaded by our local dealer to try one on demonstration.”

The Tylers were initially sceptical of the equal-wheeled, four-wheel steer tractor's

ability to put its 524hp to the ground, but flexibility with weighting was one of the plus points that became apparent during the demo.

“Some of the larger tracked machines on the market do a good job on primary tillage because they have a lot of track on the ground and the weight to make it work, but because of that weight they're limited in what they can do.

“The appeal of the Xerion was that it's possible to use weights on the front and on the rear deck to ballast it to 24t when required during primary tillage, and then remove them quickly with a telehandler to bring it down to 16t for lighter tasks such as drilling and roadwork.

“When added to the wider versatility and flexibility of a wheeled machine, and the fact the price was lower than the alternatives, the Xerion was an attractive prospect.”

The result was that an order was placed, the farm taking delivery of a Xerion 5000, supported by a five-year Claas Maxi Care service contract. About to enter its third season on the farm, the Xerion 5000 has an output 200hp greater than the farm's previous flagship, but the plan was to also help reduce the workload of the business's main existing wheeled tractor.

“Professional planned servicing is a necessary part of investment in a machine like this, and as we had always received good service from our local dealer for our combines and handler. While the tractor was an unknown for us we were confident in the level of support we would receive.”

Upon its arrival, the Xerion joined three Fendt tractors, comprising two 200hp 720s and a 360hp 936, which made up the rest of the farm fleet. Despite the fact a 500hp conventional tractor is now available from the same maker, Charles is convinced the Xerion is effective at putting wheeled tractor power to the ground. This comes from its equal-sized wheels and four-wheel steering,

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plus the central cab design as well as the ability to place weight packs directly over the rear axle and just ahead of the front.

"It would be interesting to compare the two, but when you watch the Xerion at work, it just seems weighted right for draft tasks," he says.

With the use of wide headlands and auto-guidance to work in lands where possible, damage caused by headland turning wasn't high on the list of issues faced by the Tylers when previously operating a twin-track crawler. However, the Xerion's four-wheel steering has proven useful on headland turns. Its crab steer functionality, which means trailed implements can be pulled with the tractor's wheels running in four different paths to spread its weight where appropriate, isn't something they've adopted, though.

## On-land ploughing

"We've upgraded our plough to an 8f Lemken semi-mounted reversible, which is used on-land. The Xerion could probably handle more furrows, but with something of this size we can put it on another tractor where necessary — if the Xerion has moved on to cultivating or drilling, for example.

"One of the key advantages we've found with the tractor is its ability to be able to carry on working with full traction and without smearing or significantly reduced grip if the soil surface is slightly wet. The tracked tractor gripped extremely well in the dry, but after only a relatively small amount of rain it would slip on the surface of hard ground when ploughing or on other primary cultivations. With the Xerion we seem to have overcome that issue, meaning that, as long as it's not too wet, a shower doesn't stop us from ploughing on-land."

Now entering its third full season, the Xerion handles all of the work with the farm's Simba SLD, and most of the Terrano FM workload, plus some of the ploughing and

*The Xerion is reckoned capable of handling more plough bodies than on the farm's 8f Lemken.*



much of the drilling, working with either an 8m Väderstad Rapid or, for beans, an 8m Horsch Sprinter tine drill. While it originally shared much of the heavyweight workload with the farm's Fendt 936, the Xerion has been sufficiently impressive to mean that last year another Claas tractor was added to the farm's fleet to take over much of the 936's work.

"We didn't initially intend to replace the 936 just yet, but it's almost ten years old, and we were offered a good deal on an ex-demo conventional Claas tractor, a 360hp Axion 950. As a result, we chose to buy the Axion and retain the Fendt, reducing its workload to limit the likelihood of higher repair bills but keeping it on duals for certain topwork jobs."

Having put 1680 hours on the Xerion by this spring, going into its third harvest on the farm, the Tylers have now had sufficient time to assess their switch from tracks to tyres and



*Four-wheel steering is valued for its ability to tighten the equal-wheeled tractor's turning circle on headlands.*

weigh up their likes and dislikes about the tractor. The former would appear to outweigh the latter. ►

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Weight slabs can be lifted on and off the rear deck with a telehandler.

► “Most importantly, so far reliability has been far better than on our previous twin-tracked tractor. The Xerion is on a service contract budgeted for 750

## Tech Specs: Claas Xerion 5000

- **Engine:** Six-cylinder/12.8-litre Mercedes-Benz
- **Max output:** 530hp
- **Max torque:** 2450Nm
- **Fuel capacity:** 740 litres plus 190-litre auxiliary tank and 90-litre DEF/AdBlue tank
- **Transmission:** ZF Eccom 4.5 or Eccom 5.0-based CMatic CVT with 40 or 50km/h maximum travel speed
- **Rear linkage maximum lift capacity:** 13,600kg
- **Optional front linkage maximum lift capacity:** 8400kg
- **Unladen weight:** 16,570kg
- **Minimum turning circle (with 4WS engaged):** 15.00m

hours/year of operation over five years, and over the past two years we've had no issues.

“It's a more flexible tractor, due to the wheels and the ability to vary the weight loading. That gives it a longer season — it's not just parked in the shed once primary cultivations are done. The driver likes it,

which is very important. And despite initial reservations over tracks versus tyres, it's boss of the equipment, while on the headland turns are smoother with less scuffing.

“When we previously compared our powershift tracked tractor with our CVT-equipped Fendt 936, I wasn't convinced that, given the workrate of the crawler, we were getting any fuel efficiency benefit from the CVT in the Fendt, but there's no doubt the CVT transmission is also a big improvement operationally on the powershift in the track tractor, though.

“The Xerion also handles much better than the crawler on the road, and although most of our land is within five miles, with one outlying block, that's important. The biggest improvement I think could be made is one of specification — we took the tractor on 900/60 R42 Trelleborg TM900 tyres, and I think the TM1000s, with greater sidewall flex, may have been a better bet. But in general we've no complaints with our choice of tractor.” ■



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## Farm Facts

*Tyler Farms, Oakham, Rutland*

- **Farmed area:** 1200ha
- **Soils:** Brash through to clay
- **Cropping:** Winter wheat, winter and spring barley, spring beans, winter oilseed rape, grass
- **Livestock:** 2000 North Country Mule ewes
- **Staff:** Four plus Charles and Richard Tyler
- **Mainline tractors:** Claas Xerion 5000, Axion 950; Fendt 936 2x 720
- **Combine:** Claas Lexion 770 with 12m header
- **Sprayer:** Bateman RB35 with 4000-litre tank and 24m boom
- **Telehandler:** 2x Claas Scorpion
- **Drills:** 8m Horsch Sprinter, 8m Väderstad Rapid
- **Primary cultivation equipment:** 8f Lemken reversible plough; 4.5m Simba SLD; 6m Horsch Terrano FM