



On Farm Opinion

Thirty-year allegiance

For one Suffolk farm business, broadening its land base and the variety of crops it grows has placed greater demand on many input factors including its materials handling requirements. *CPM* learns how its choice of brand has stayed unchanged for three decades.

By Martin Rickatson

When Geoff Mayhew purchased his first Merlo telehandler in 1995, the marque was still relatively unknown in the UK — the Italian manufacturer had founded its UK subsidiary just two years previously. However, an active local dealer plus design features such as a low-mounted boom pivot, consequent all-round vision and hydrostatic transmission, were the key points which persuaded Geoff to change brands.

Today, with the expansion of its operations through contract farming and FBT (farm business tenancy) opportunities, Geoffrey Mayhew Farms has grown to manage 810ha of cropping

ranging from cereals and potatoes to sugar beet and parsley.

Despite this, the business' machinery fleet is relatively modest with a hired combine, two main tractors in the 200-300hp bracket and a trailed beet harvester. But with a spread of land and farm bases, plus the diversity of crops, its telehandler fleet has tripled, yet Geoff's chosen make remains unchanged.

Shotley peninsula

An arable-only operation, Geoffrey Mayhew Farms covers mostly light sandy loam soils on and around the Shotley peninsula, south of Ipswich. In addition to winter milling wheat, winter malting barley and winter beans, cropping includes 80-100ha potatoes, 130-140ha sugar beet on a 10,000t contract, and 75ha parsley for processing by a local business.

"Adding in an equestrian business we've recently invested in, that means there's a large handling workload moving grain, potato boxes and beet, plus the other tasks such as building maintenance," says Geoff.

"We've reduced the potato area a little, but I'm now looking to build it back up after signing a marketing agreement with East Suffolk Produce which gives us excellent multi-outlet opportunities and should provide a little more stability.

"In terms of the beet, we use a contractor for drilling but lift around 80% of the crop ourselves with a six-row trailed

"I'm not a fan of making a big change for the sake of a small discount offered by a dealer trying to get me to move to their make of machine."

Garford V6 Hydro. I purchased the harvester a couple of years ago on the basis that we have the staff and tractors and trailers, so may as well make full use of them in the quieter winter months," explains Geoff.

He says it's a very simple system and with the tractor and harvester combination being much lighter than a self-propelled, he can choose when to lift and travel without causing excessive damage. "Even in the past wet season we still lifted around 100ha of our own with a contractor to help just at the beginning and end when we were busy with other tasks.

"On our light sandy loam we don't tend to require too much dirt separation, and by the time it goes through a self-propelled cleaner loader it's clean enough for loading, with dirt tares below the factory average. ▶



Staying with the same make of handler negates having to change existing attachments or the machine's headstock.

► "But I don't make a point of owning all of our major equipment. I prefer to adapt machinery investment to the situation so, for example, we contract-hire our New Holland CR9080 combine from APH," he continues.

"Machinery is all about service and back-up, and I know it'll have been serviced and maintained properly ahead of each harvest and I don't have a depreciating asset in the shed. Having the latest technology is nice but it comes at a significant cost, and the machine we hire has all we require."

The business' tractor fleet is operated on a different basis though, with three major manufacturers and four brands represented.

"We've scaled back from a Challenger crawler, replacing it with a Fendt 828

wheeled tractor with VarioGrip tyre inflation system for tillage and drilling," explains Geoff.

"The crawler did a job in terms of helping us to restructure the land as we moved towards minimum and no-till, but tyre technology has moved on and the 828 is a lot more flexible and convenient. It's supported by a John Deere 6250R which is equally as capable on lugging work but is switched to narrow wheels ready for irrigation tasks when necessary.

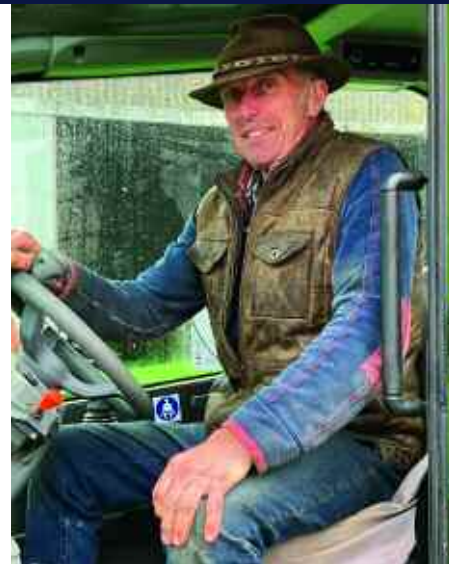
Considered purchases

we also run a Valtra N Series and a couple of older Deutz-Fahr Agrotrons, and contract hire a small, flexible, light-footed John Deere 6130R which is on dual narrow wheels all round to pull the beet harvester. With only 150hp, we can lift a sensible tonnage of beet each day; I wanted to prove that we could do our own beet with just this much power and investment," he says.

According to Geoff, with a wide spread of crops the farm's 36m John Deere R4040i sprayer has its work cut out, particularly as it's also used for liquid fertiliser.

"The windows of opportunity to get jobs done have been really tight in recent months and this is exacerbated by the fact we're close to the coast," he points out.

"A reliable sprayer is crucial to our operations, particularly with the varied products and spraying intervals required by the parsley, beet and potatoes as well as the combinable crops, and then the liquid nitrogen on top which by its nature is high volume work."



According to Geoff Mayhew, some of the farm's most demanding work is when the team is working with potato boxes.

But while the liquid fertiliser work takes some load off the telehandler fleet, seed and crop handling keeps the Merlos busy almost all year round.

"Possibly some of the most demanding work is when we're working with potato boxes," says Geoff. "This is where an efficient infinitely-variable transmission that doesn't suffer from the lumpy movement that afflicts some telehandler transmissions is so important for safe stacking at height and manoeuvring boxes.

"We found year on year that the Merlo transmission, plus the boom suspension, gives us exactly that."

Powered by a Perkins 3.6-litre engine producing 136hp, the transmission fitted to Geoff's newest Merlo telehandler, a Turbofarmer 38.10, stays true to Merlo's hydrostatic hallmark being a twin-range unit with maximum 40km/hr travel speed.

Further specification can include cab suspension, boom suspension and Merlo's CVTronic transmission, which comprises two hydrostatic motors with axial pistons driven by an electronically controlled hydraulic pump.

At low work speeds they function in conjunction to provide maximum torque with an increase of 12% above that of conventional hydrostatic transmissions. During transport, the second hydrostatic motor is automatically disengaged from the control system and the oil from the pump powers the main hydrostatic motor that enables the machine to reach its maximum 40km/hr travel speed.

"Even when we first ran Merlo telehandlers in 1995 the transmissions were so much better than those of any of



Merlo's infinitely-variable hydrostatic transmission provides the smooth response necessary for delicate loading tasks, says Geoff Mayhew.

the competition and is a key reason why we've stuck with them," comments Geoff.

"When you have something that works, even though all of the alternatives are improving it doesn't make sense to change. We're used to the machines and the prices are pretty similar, so then it's down to dealer relationship and the service and support they provide.

"We stayed with Merlo when the franchise switched from an independent dealership to a new start-up Marst Agri, which was founded by some of the service engineers from that former dealer. They know the machines and were on the ball when we were looking recently for a new one," he says.

With the latest purchase, Geoff chose to not trade in an existing machine, instead transferring one of the older 2011 handlers in his three-strong fleet to the equestrian business he's developing, while another is mostly permanently sited on an outlying contract farm.

"I'm not a fan of making a big change for the sake of a small discount offered by a dealer trying to get me to move to their make of machine, so it takes something serious to make me consider another

brand. The new 38.10, which is our first new telehandler for a while — we bought our last machine second-hand in 2011 — has settled in well since its arrival in March.

Operator familiarty

"Staying with the same brand, of course, also means we don't have to change our existing attachments or the machine's headstock, and at the same time it helps with operator familiarity. We have four full-time staff and they like the Merlo machines — that familiarity means they know how to operate and get the best from them," explains Geoff.

"There's perhaps more technology on the latest machines than an occasional operator will use, but the fundamental Merlo traits such as transmission smoothness remain, and the telehandler-qualified casual operators we can have during the busier months can jump on and drive these machines with ease," he adds.

A key attraction of the new machine, which his dealer had in stock and is the first handler he's bought new from him, is that at 10m, it has 3m more lift height than his former main machine.



Operator familiarity with the Merlo design and controls means the Mayhew team, including casual staff, know how to get the best from the machines.

"I've sacrificed a little maximum capacity, at 3.8t versus 4.0t on my Turbofarmer 40.7, but the additional reach is really useful on box and grain store work and for reaching out over the drill when filling.

"We've recently moved from a Lemken Solitair cultivator drill to a 4m Mzuri Pro-Til, our first direct drill, as I've taken advantage of the FETF grant and wanted ▶

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With a diverse farming portfolio including combinable and root crops and an equestrian enterprise, the farm has retained older Merlo models for lighter uses.

- ▶ to minimise crop establishment time on short weather windows.
- “It’s been a challenging first season but

although some of the wheats seemed to struggle a bit at first, the barley drilled straight behind sugar beet were looking very good by late spring despite the difficult winter,” continues Geoff.

Manoeuvrability

“The Merlos do all of the seed handling and carting and pull and handle well on the road. A nice compact design makes a big difference here in terms of vision and manoeuvrability. While our nitrogen is mostly liquid, there’s also some bagged fertiliser to cart and transfer,” he says.

The Merlo ASCS system, which adjusts the speed and maximum extend of boom movements based on attachment, load and load position, also comes in for praise.

“Another of the tasks which we use the new machine for is building maintenance,

working with an approved safety cage. Features such as this help to ensure staff safety as well as prove our safety commitment for insurance and inspection purposes.”

In terms of design criticisms, Geoff’s chief one is typical of that levelled at many agricultural machines.

“There’s nowhere to put a toolbox, but that’s a pretty minor gripe as things go. What I’m most concerned about it how a machine stands the test of time — we give our handlers a hard time, but past experience has shown me Merlo machines can cope.

“Service-wise, with the dealer back-up we receive I’m assured by the fact they know exactly what the handlers’ regular service requirements are and they’re here promptly to conduct them. It’s tough for smaller independent dealers, but I champion them,” he says.

Geoff points out that he didn’t look at other machines when it came to purchasing this latest handler, as he believes some decisions are personal and simple to make if there’s trust in a dealer and the products they support.

“If I instinctively see that I’m receiving the best back-up I can, I’ll actively seek the advice of that dealer over the right thing to buy. Others may be keen to bring me their machines to try, but I already know I have a robust machine that does what it has to do, so I don’t really have the time or reason to look at alternatives.

“I don’t require anything that’s physically bigger. Even this 10m machine offers the compact dimensions I want for moving around my yards, and the visibility I require for precise loading and for safety, which has been part of Merlo’s design principles since we had our first Merlo Panoramic.

“Competitors’ machines have undeniably caught up, but I see no reason to change,” concludes Geoff. ■

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Specification for the Merlo 38.10 can include csb suspension, boom suspension and Merlo’s CVTronic transmission.

Drone application development

Applying plant protection products using drones is a step closer to reality now a trials permit has been issued for slug pellets.

The decision by the Chemicals Regulation Division (CRD) to grant an extrapolated trials permit (ETP) paves the way for an Extension of Authorisation for Minor Use (EAMU), which could lead to the first commercial application of a pesticide to food or feed crops in the UK by drone.

The development is off the back of two years of work by Staffordshire-based technology company AutoSpray Systems, which first identified a market for heavy lift drones in UK agriculture in 2019. That autumn, similar to recent months, prolonged rain prevented growers from accessing land to drill seed or apply products such as slug pellets or pre-emergence herbicides.

The company's co-founder Andy Sproson says Civil Aviation Authority (CAA) regulations haven't explicitly excluded aerial application from unmanned aerial vehicles (UAVs) for some time. However, use must be justified and to do this, AutoSpray systems produced a risk assessment which was submitted to the CAA and the case was accepted in December 2022.

He says another missing piece of the puzzle was a pesticide regulatory framework with the data to show how the product behaves when applied from UAVs.

"Firstly, we had to prove our competency to the CAA. Thankfully, we were able to do so as the company has CAA Recognised Assessment Entity status. We also had to outline the benefits of using drones in this way," he explains.

Andy says these include application to land when ground machinery would damage crops and/or soil structure, cause compaction and increase run-off/pollution risk.

"Drones can also be used to target applications when a blanket approach isn't appropriate, or

larger machinery isn't as efficient, such as when spraying off patches of grassweeds. We also required the backing of an existing product authorisation holder, and now have this with Certis Belchim which distributes SluXX HP ferric phosphate slug pellets in the UK," he adds.

With the ETP granted, AutoSpray Systems and Certis Belchim will now conduct ballistics testing to demonstrate to regulators that the spreadability of SluXX HP is as good as what can be achieved using conventional applicators.

Once this data is submitted to CRD, it's hoped an EAMU will be granted and growers with access to a large payload drone — like the XAG P100 Pro imported by AutoSpray Systems — will be able to apply SluXX HP slug pellets from the air.

In work undertaken last year, the XAG agricultural drone broadcast cover crop seed into standing cereals at speeds of 30-35kph. Furthermore, work rates of 15-20ha/hr is possible with one drone, multiple batteries, a generator, and fast charger. The same will apply to slug pelleting.

"It's the first time a new application method has been made available to growers for many years and offers an option which compliments conventional machinery," highlights Andy.

He added that AutoSpray Systems has already worked with HSE-CRD and Silsoe Spray Applications Unit to gather spray drift data to show liquid products can be applied safely and effectively with its drones.

This sets up the possibility of further collaboration between the firm and agrochemical manufacturers, which could soon facilitate spraying of pre-emergence herbicides or late blight fungicides from the air with an unmanned aerial system (UAS).

CPM recently featured an in-depth article on drones in its April issue with insight from ABZ Innovation and Drone Ag (see pages 84-86).



Having invested in several MX grabs, Aaron Hughes has been impressed with the strength, build quality and the performance.



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