More milk, using less labour, was just one reason for robotic switch

'Future-proof' milking

Installing a robotic milking system has enabled one Welsh dairy business to increase productivity, as well as free up time to pursue other career opportunities.

text **Paul Jennings**

Grass-based systems are not, typically, thought to be compatible with robotic milking. But the Griffiths family is bucking the trend and their new milking set-up, based at Blaencorse Farm near St Clears, has actually increased the productivity of their extensively-managed business and has given son William the opportunity to pursue two careers.

Linley and Marian Griffiths run a 120-cow herd, plus followers, on an entirely grass-based system. The business relies 100% on family labour, with Marian's 80-year-old father, Gerwyn, still actively involved in rearing the unit's young stock. Their 20-year-old son William has also joined the family business and he's the impetus behind a major upgrade to the farm's milking infrastructure.

"We were milking through an eight-stall abreast parlour, which was originally installed in 1967," says Linley. This was upgraded in 1998 to include ACRs, computerised feeders, and milk meters. And further improvements four years ago included adding activity monitoring pedometers to improve herd fertility.

Despite the improvements, and even with both Linley and Marian in the parlour, each milking was taking at least two hours to complete. So the couple were keen to install a new system that would not only speed up the milking routine, but would also 'future-proof' the farm for William's career.

The family had previously ruled out a herringbone parlour, simply because there wasn't enough space within their existing buildings. "We'd have had to make some major and expensive alterations to the layout of our cubicle sheds to make a herringbone work and

Regular milking: cows visit the robots, on average, three times a day

Marian and Linley Griffiths: "System has freed up more time for herd management"

to achieve an acceptable cow flow," says Marian.

"I was also looking to reduce the effects that the twice-daily milking routine was having on my hands," Linley adds. "I suffer from Raynaud's disease, which causes severe pain in my hands and fingers when they get cold and wet. I've been interested in automated milking systems since the first robots were introduced to the UK in the early 1990s. I could see that they had the potential to meet all our requirements."

Automatic 'split'

Automatic milking systems account for between 40% and 45% of the market, according to Fullwood's David O'Hare. "And there's a definite split, with robots a popular choice for producers with small- to medium-sized herds, of up to 250 cows. I'd say that more than 40% of herds in that bracket would choose to install an automated system when it's time for a new parlour.

"Herds that are larger than that – or where producers are planning to expand cow numbers in the future – tend to plump for rotary or other conventional parlour designs with space for additional capacity, provided they can find the quality labour required for milking," he adds.

The Griffiths' herd is ideally suited to automatic milking, so the decision was made to install two Fullwood M2erlin robots in an area previously occupied by the abreast parlour's collecting yard.

"We looked at several similar robotic systems in Ireland and worked with our local Fullwood dealer, Gareth Howells, to design a set-up that would suit our grazing-based system," says Linley. "All we needed to do 'building wise' was to install a couple of new drains and lay a small area of concrete to provide a level footing for the two robots to sit on."

Both robots feature a twin-exit design that allows cows to be directed back to the cubicle house and feed barrier, or diverted into a small holding area for veterinary attention.

"That feature was one of the main reasons for choosing the Fullwood machines," he adds. "That and the fact they are so quiet when operating, thanks to an all-electrical milking arm. Other systems use pneumatic air to move the cluster and this can be noisier and more intrusive, particularly for timid cows."

Cow training

Training the cows to use the robots turned out to be far simpler than Linley and Marian anticipated. "We had prepared ourselves for months of physically pushing the cows into the robots," Marian says. "But by the third day the vast majority were using the robots voluntarily. It was simply a case of using the touch-screen panel on each robot to guide the cups onto the teats for the first time. After that, the robots were able to refer to each cow's previously stored teat co-ordinates to quickly and easily attach the cluster."

Marian and Linley's daily routine starts at the same time as it always has, but finishes much earlier now they're not spending several hours a day in the parlour. "The first job of the day is to check which, if any, cows are overdue to be milked and to send them to the robots" says Linley. "After that, we have more time available to walk through the cows, check for signs of bulling and keep on top of routine jobs, like foot trimming. It's a much more relaxed and productive environment for both us and the cows."

Situated in South West Wales, grass grows in abundance at Blaencorse Farm and the herd grazes from the end of March through to mid-October, with 24-hour access to fresh grass during the summer. So how has that worked with the new milking system?

"We've installed a segregation gate in the cubicle shed to prevent cows going outside it they are due to be milked," explains Linley. "During the robots' first winter, when the cows were housed, we were averaging 3.3 milkings per cow per day, with the high yielders reaching five or more milkings.

"And even with 24-hour access to grass, the herd is still averaging between 2.5 and 2.7 milkings per day. We're pleased with that. The increased frequency has had a direct impact on productivity, with average milk yields increasing during the first six months from 9,000 litres to 9,300 litres per cow."

Feed efficiency

These yield improvements have been achieved without any additional feed. Previously the herd was fed 4kg of blend per head, but this year that's been reduced to just 2kg. "We're feeding the same amount of parlour cake but, because the robots are able to identify each cow individually, we're able to target feed according to yield," explains Marian. "As a result our peak yields have improved, with our record daily production for an individual cow peaking at 67 litres, with several other animals easily achieving in excess of 50 litres per day."

The M²erlin robots have certainly proved to be a solution to the Griffiths family's milking issues. "We've installed a new milking set-up with minimal disruption to the herd and seen a good increase in milk yields. Our working day is more productive and the unit is now set up for a long future in milk production," says Linley.

"The robots also allow William to pursue a career away from the unit. He is balancing a part-time job as an AI technician alongside his farming commitments. That is a huge positive for him and the business because it means that he can earn an income away from the farm and is less vulnerable to volatile milk prices." |