

Robots free up labour and allow business to grow

Robotics provide expansion solution

A robotic milking system has proved to be the perfect replacement for an out-dated, labour-intensive conventional parlour and, coupled with the right nutrition, it's allowing one Leicestershire-based dairy herd to push up cow numbers.

text **Lauren Chambers**

Robots have proved to be a lifeline for the Collishaw family's dairy business. The family partnership, comprising John, wife Molly and son Edward, installed three Merlin robots in 2011 at their unit, based at Melton Mowbray in Leicestershire, and the business has been expanding ever since.

Parlour 'bottleneck'

Prior to putting in the robots the unit followed a traditional system, with cows grazed outside in the summer, housed in the winter and milked twice a day. Yields were good, with the Holstein Friesian herd averaging 8,000 litres, but with the

milking herd numbering 150 head, the unit's parlour was becoming a bottleneck and prohibiting any further expansion. "The parlour was old and worn out," explains Edward. "It was originally designed for 100 cows, which was making milking incredibly slow and causing issues for the number of cows we were putting through it. The parlour needed significant investment to meet the needs of our current herd, and to allow for future growth."

The family was also facing challenges concerning labour. With John and Molly looking towards a time when they wouldn't want to milk every day, and it

being too big a job for Edward alone, the family used relief milkers for a while. However, they struggled to find people with the right experience in the local area, and felt they weren't in control when they had to rely on temporary staff to look after the herd.

Everything was pointing the family towards investing in robots. "Robots had always been of interest to us, right from their introduction," says Edward. "However, like many producers, we weren't confident to jump in and invest in them straight away. Instead we took our time and waited to see how they worked on other units before deciding that, in order to move the business forward, we had to take action. Robots seemed to be the best solution."

The business was one of the first in the area to install robots, initially putting in three units, with a fourth coming on line in July this year in time for summer-calving heifers. "The robots have freed up more time for us to spend managing the cows," explains Edward. "The time we would have spent in the parlour is now spent monitoring the health, welfare and performance of our cows."

New routine

Edward's new daily routine is straightforward. The milking units require only basic visual checks each day, such as looking for leaks and checking that all pipework is connected, as well as a quick milk filter change. Edward then uses the unit's computer

Robotic milking: cows each average 2.7 visits to be milked every day



Cosy calves: heifers calve at 24 months old





Edward Collishaw: "Our ambition is to achieve a 10,000-litre average"

system to see if any cows are running late for milking and, if so, gets them to the machine. At the moment cows are averaging 2.7 visits to the robot per day and this is increasing. Heifers average three visits per day.

"Pre robots, we were seeing 8,000 litres per cow, with the introduction of the robots this quickly increased to 8,500 litres and this is rising all the time. Our ambition is to get closer to achieving 10,000 litres but we appreciate that this will take time," says Edward.

Clearly set on the level of production he wants to see, getting cow nutrition right has been an important part of the jigsaw. "We have found that if the cows have got the potential to give the milk, the machine will give it to you. So getting the diet right is essential," he says. And, working closely with ForFarmers' feed advisors Keith Colley and Andrew Torrens, Edward has found a diet that is working well.

"Initially we did face some challenges

when trying to get the ration right. Switching to a new crop of maize silage with higher starch content did upset the cows a little, with the animals showing signs of acidosis, including cud balls."

So, on the recommendation of his feed advisors, Edward introduced Rumibuff, a lactic acid buffering product, to the diet and this immediately had an impact. He now keeps it in the diet to help keep things balanced, particularly during the transition to different silage cuts to minimise the risk of rumen acidosis and stabilise rumen pH.

Currently the cows are on a base ration that provides maintenance plus 24 litres. Individuals are then fed, to yield, via the robots with ForFarmers RH-1 18 dairy compound. This contains a unique concept called RumiGuard, which works together with Rumibuff fed in the feeder wagon. This nutritional approach helps to optimise rumen health and support the cow's immune system for the many challenges she faces.

Optimum yield

The ration has been designed to get the most out of the robots and to ensure that the cows visit the robot regularly enough to achieve their optimum yield. It is also designed to ensure that the cows peak for longer and sustain that yield without putting fertility at risk. "The diet is nice and settled," explains Edward. "The robots flag up early signs of acidosis and ketosis, but we aren't having any issues now. We don't have

Collishaw's milking herd ration

- 18kg grass silage
- 8kg maize silage
- 8kg brewer's grains
- 1kg rolled wheat
- 1kg lucerne hay
- 1kg Nutrimaize 28
- 3kg bespoke ForFarmers blend
- 0.05kg Rumibuff

any cud balls and dung consistency is good, so we are happy that the diet is consistent and working well."

Milk quality is good, with butterfats averaging 3.87% in the summer and 4.00% in the winter. Protein is 3.40% and, because the family's milk is supplied to local Stilton cheese makers Long Clawson, good protein content is essential for efficiency in the cheese vats.

Fertility is also good at the unit. Heifers calve at 24 months old and the family rears its own replacements, with some additional heifers bought in to facilitate herd expansion. The unit uses sexed semen, with a Hereford sweeper bull used for anything that is missed.

"We're really pleased with the robotic units," says Edward. "Some of the cows have taken longer to adjust to the robots than others, but they are now milking well, and we are moving closer to our 10,000-litre target." |

Balanced ration: the herd's diet is carefully formulated to maximise milk yield

