

As herds embrace automation, how do we manage more mechanisation?

Man versus machine

Robotic milking is providing relief to 850 producers in the UK, with 25% of income being spent on the introduction of this technology onto units. With this trend gaining popularity at a rapid rate we spoke to a few industry experts to find out why.

text Allison Matthews

High land prices, a difficult climate and variable grazing conditions have motivated producers to rethink their methods of improving performance and feed efficiency.

Thompsons' dairy specialist Mary-Jane Robinson says this has come at a time

when a plethora of modern technology has allowed the rapid expansion of robotic milking. "During recent years we have seen the transition from traditional milking parlours to robotic milking increase dramatically. With one unit required for every 60 animals, robots are

as equally suited on smaller family farms as they are on larger units installing up to eight machines." Ms Robinson says this is due to the flexibility robotic milking offers. "Not only will it suit a totally confined system, but the option to partially graze cows – if the correct management is adopted – can also be achievable."

Greater flexibility

Moving from conventional twice-a-day milking, through a conventional parlour, to a robotic milking system can potentially increase yields by up to 15%. However it is vital to note that other factors such as genetics, feeding and management will still contribute significantly to the herds

Automated milking: using a robotic system can result in a more relaxed and less stressed herd



overall improvement. Ms Robinson says that the system is proving popular where there are land constraints and restricted housing. "The ability to increase litres without having to expand herd size is an attractive option for many producers. The potential benefits of maintaining cow numbers can be seen in a couple of areas such as a reduction in labour requirements and a positive effect on greenhouse gases. But for many producers the daily flexibility that comes from having no set milking time is making the quality of life, particularly on smaller family farms, much better."

Father-and-son team Adrian and Conor McAufield, based in Lisburn in County Antrim, recently installed two Lely Astronaut robots. Welfare on this unit is paramount and the McAufield's aim was to increase litres efficiently while improving on the overall wellbeing of the herd. Adrian McAufield explained how a 'free-cow-traffic' system has seen the cows adapt rapidly to their new routine.



Conor and Adrian McAufield: "The robotic system frees up more time to focus on cow health"

"We apply the five freedoms to our herd ensuring that not only do we have high yielding cows lying on sand bed cubicles, with the lying time improving litres, but we also comply with the DARD farm quality assurance schemes influenced by supermarkets and the consumer. This, for us, is a win-win situation. We now organise our time differently, which means we can concentrate on other management issues such as hoof care."

Stress relief

Ms Robinson explains how the use of a machine has brought about an improved welfare and productivity status for Lissue Holsteins. "Compared to traditional milking routines, robotic milking appears to lower stress levels. The rigidity of milking time is eradicated, allowing the animals to be milked when they choose. There's no more waiting around in the collecting yard and pressure on the udder is also reduced. The cows have more time to eat and lie down and, subsequently, somatic cell counts are lowered along with the chance of mastitis.

"Computerised software also helps to identify sick animals early and, depending on the make and model of the robot, will record various parameters such as weight. In the early period of lactation – when negative energy balance and fertility can be severely compromised – the producer can monitor weights and with the support of their nutritionist and vet try and reduce ketosis," she adds.

On the McAufield unit, cows are grouped to allow high yielders to be fed according to their needs. "The high yielding batch not only receive a TMR mix, including silage and a blend and Megalac, but they are also fed a high energy density ration through the robot, with glycerol supplied via an applicator during the early

lactation period. "Cows in this group are also topped up with a higher protein compound, fed via the out-of-parlour feeder," says Adrian McAufield.

Lower yielding cows have been zero grazed this summer with silage now being phased in and cows being fed accordingly through the robot. "The computer software associated with the Lely robots allows access to a vast amount of information – including milk quality, rumination data, live-weight and heat detection – which influences and improves the management strategies we adopt," adds Conor McAufield.

With cows averaging 3.9 visits per day to the robot, Adrian says that the herd has settled well and individuals are currently averaging 32 litres at 168 days in milk. "Moving forward, the aim will be to continue to drive genetic improvement alongside more litres and better welfare." Whether the decision to purchase a robot is financial, practical or welfare driven, there is no disputing the fact that they are increasing in popularity. The benefits seen on those units that have adopted a new daily routine are filtering through the industry.

"With 'robot' cows the warning signs are the same, but some may argue because of the detection software, problems are being noticed and treated much earlier.

"Although the robot will fail to work correctly without good udder hygiene, a natural benefit of more regular milkings is improved udder health, so the two elements seem to work together," says Ms Robinson.

"As more robots are installed, the development of hard data to back up the evidence will become more readily available, but until then the cows will continue to provide the proof." |

