

Molasses feed is boosting yields

Managing visit frequency and energy intakes are key factors determining the efficiency of robotic milking systems. For one Lancashire family, feeding a molasses-based liquid feed is supporting a 1,000-litre lift in production. British Dairying reports.

Richard Singleton and his son Tom farm at Eastwood Farm near Myerscough. The family moved to the farm in 1969 when Richard's father John took on the farm. The herd of 170 cows was being milked through a Fullwood herringbone parlour, with John still doing several morning milkings each week. But like many family farms they were having to face up to decisions regarding the future of the herd, and 15 months ago they installed four Lely A5 robots.

"We went for robots as they would help us with staffing issues," says Tom. "Milking was taking seven to eight hours a day, and we would have had to look at taking someone else on, which is always a challenge.

"The robots have eased pressure on labour and increased flexibility. They have also allowed us to increase cow numbers. Currently there are 220 cows in the herd with 200 in-milk at any time, but there is capacity to increase further."

The herd is now housed all year round as a single milking group. Initially this was done to train cows to the robots, but now the family feel it allows better management of the herd. A shedding gate allows cows



Tom Singleton is pleased with the cows' response to molasses feed

to be separated as required, and dry cows go out to grass until three weeks pre-calving.

The milking cows are fed a single total mixed ration (TMR) comprising grass and maize silage, 5kg of a blend and 5kg of brewers' grains. The TMR is formulated to maintenance plus (M+) 25 litres.

They are then fed to yield in the robots, with a 16% dairy compound from Lloyds Animal Feeds. They can receive up to 3kg/visit with a maximum daily total of 12kg. "Since moving onto the robots yields have

increased from 10,000 litres/cow to close to 11,000 litres/cow, and we are carrying 30 more cows," says Tom. "Visits per day are averaging 3.3, which we are pleased with. We are producing more milk with less staff, and we couldn't have easily put more cows through the parlour as milkings would have increased to around 10 hours a day.

"Milk quality has held up well despite the increased yields, at 4.25-4.35% butterfat and 3.35% protein."

With the increased production, the Singletons were concerned about getting enough energy into early lactation cows. While they were keen to maintain yields, more cows were reaching 50 litres by 14 days in-milk, and they were worried that there may be consequences for body condition and fertility.

Following a conversation with their Lloyds nutritionist, they agreed to take part in a trial using a liquid feed specially formulated for use in robotic milking systems. "Many robots can dispense a liquid feed, with most products being glycerine-based, but molasses-based blends specifically formulated for robotic systems can provide a more cost-effective alternative," says Dr Phil Holder at ED&F Man.

"A liquid feed can provide more than just energy and can help encourage more traffic through the robot." Robomol is a high-energy multi-energy source molasses blend which helps drive visit frequency to increase milk yields. Developed in conjunction with nutritionists and robot users, it is easy to handle

and will pass through any robot filters. A cost-effective source of sugars, containing over 40% sugars in the dry matter, palatability is improved through the addition of a banana flavouring.

"The sugars help stimulate rumen function and microbial protein production, essential for productive cows," Phil continues. "The inclusion of multiple sources of glucose precursors provides the high levels of energy essential for fresh calvers and high yielders while encouraging higher dry matter intakes. Typical feed rates are 0.5kg/day."

As the robots were set up to handle liquid feeds, the only change needed was the pipework to connect the intermediate bulk container (IBC). Initially, Tom fed half the cows the molasses feed, keeping the remainder on the original diet. "We fed 0.5kg/day of molasses, which was just trickled onto the dairy compound," he explains. "There were no problems getting the cows to take it, so we knew they were getting the extra energy."

The table (left) shows the results from the trial. Cows that received the liquid blend milked better than the cows that were not supplemented. They yielded better irrespective of the stage of lactation. In addition to milking better, there were fewer robot refusals among the cows fed the liquid. "A refusal is a cow wasting time, trying to gain access to the robot when it is prevented from doing so," says Phil. "The supplemented cows spent more time doing what we want them to do by eating, lying down and ruminating, which will have contributed to better yields."

Since completing the trial, the Singletons have continued to feed the liquid to fresh calvers. All cows are now fed up to 0.5kg/day in the first month of lactation, after which it continues for high yielders and is reduced for those below 40 litres.

It is too soon to be specific about fertility improvements, but the family are happy with fertility and body condition score overall. "Adding the liquid feed was easy to do and seems to have worked well," says Tom. "It has helped us increase energy supply and target the cows that need the extra help."

Effect of adding Robomol on milk yield at different stages of lactation

	0-50 days in-milk	51-100 days in-milk	101-200 days in-milk	201 days in-milk
Control cows (litres/day)	38.8	38.1	34.4	26.6
Robomol supplemented cows (litres/day)	41.6	41.7	35.2	27.7
Difference	+2.8 litres	+3.6 litres	+0.8 litres	+1.1 litres

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