Feeding molasses blends as one of the concentrates through a milking robot could be a way to improve milking efficiency. **Dairy Farmer** reports.

Liquid feed drives robot efficiency

Robotic milking systems continue to grow in popularity and it remains essential that efficiency of robot usage is optimised to deliver an adequate return on investment.

Dr Phil Holder, of molasses-based blends specialists ED&F Man, says: "The ultimate measure of efficiency of robotic milking systems is milk yield per robot per day which is a function of milk yield per cow and visits per cow per day.

"Cows need to be encouraged to make several visits per day, with a minimal number of wasted visits.

"Visit frequency is affected by factors including robot siting, building design, stocking rate and cow behaviour.

Encourage

"Feed also has a major influence over visit frequency.

"Systems are usually based on a lower level of with feeding to yield through the robot to encourage cows to visit more often, increasing intakes and milk yields.

"Offering different compounds and varying feed formulation have been shown to increase efficiency."

A new trial has recently demonstrated that including a high-energy molasses-blend, fed through the robot liquid dosing system, can positively influence both yield and visit frequency across a range of systems.

Feeding liquid feeds through robots is not new. A survey of UK

Feed can be used to improve efficiency in robotic milking systems.

Molasses can encourage more cows to visit the robot.
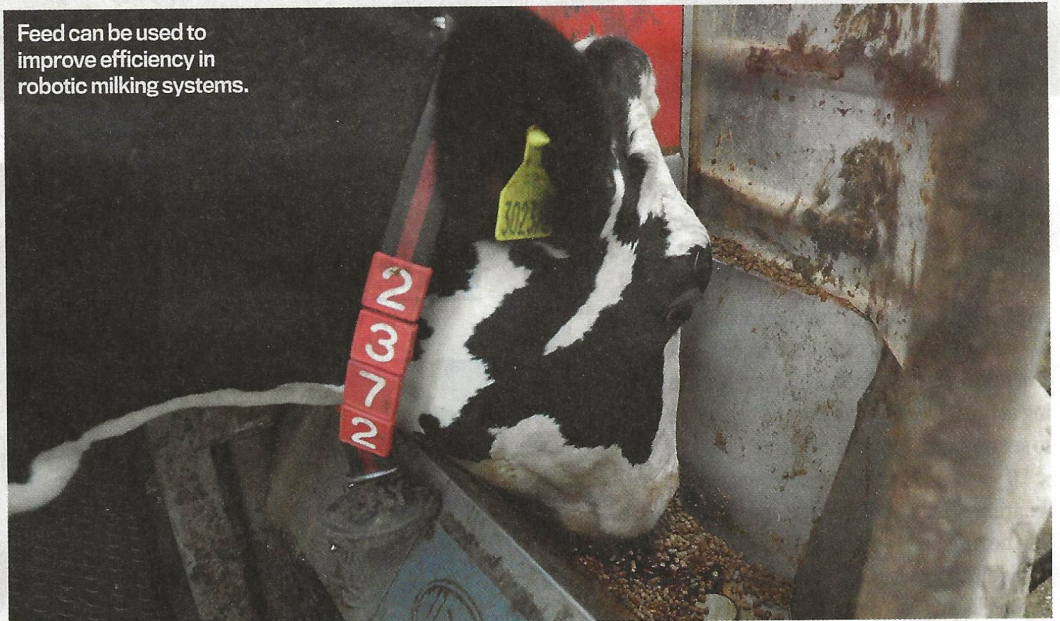
feed advisors showed the use of liquid feeds in robots is dominated by high-cost glycerine-based products, but molasses-based blends specifically formulated for robotic systems can provide a more cost-effective alternative.

Dr Holder suggests a liquid feed can provide more than just energy and can help encourage more traffic through the robot.

The trials were conducted on six farms UK using robotic milking systems, running for six months.

In total there were 1,300 cows on the trial and each herd used Robomol, a high-energy, multi-energy source molasses-based liquid blend from ED&F Man, for at least 90 days. The trials were overseen by Dr Sophie Parker-Norman, from Big Sky Technical Consultancy, who says this level of data would have been nearly impossible to gather using traditional methods.

Dr Parker-Norman says: "Each farm on the trial presented different challenges – some were understocked, others overstocked. Some had excellent rumination and visit numbers, while others struggled with cow traffic and visit frequency.

"These variances proved critical in understanding where RoboMol made the biggest difference."

Variations

Across all farms, the average increase in milk yield was around two litres per cow per day, but there were variations between farms regarding which cows benefited from the feed.

On farms with high stocking rates and low robot visits, the product had the biggest impact on lower-yielding cows where there was an increase in milking numbers, improved rumination time, and a lift in overall herd average milk yield.

Cows were encouraged to visit the robot more often.

In herds on the trial which were already achieving good robot access and rumination time, the product had the biggest effect on the top performers. There was an increase in eating time and a reduction in refusal numbers which is when cows go into the robot and get refused for visiting too soon.

If milking frequency is still adequate, then fewer refusals is a good thing – as those cows are the 'time wasters' which drive down robot efficiency.

"The trial shows that in addition to being a sugar source, the product is also a management tool for robotic systems," says Dr Parker-Norman.

"Depending on a farm's bottlenecks, the product can work in different ways, either supporting the top end cows, or by lifting the bottom end where visit numbers and rumination are limiting yield."