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6th July

North Wales farm captures cream of milk prices





SCC in Sion Hughes' herd now averages 149,000 cells/ml

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By Debbie James

Modifications to milking infrastructure and protocols are allowing a Welsh dairy farm to capture the top milk payment bands by significantly reducing its herd's average somatic cell count (SCC).

The bulk milk SCC in John and Sion Hughes' 125cow Holstein herd had soared to a three-month average of 226,000 cells/ml despite the relatively low annual incidence of mastitis of 10 cases per 100 cows.

As a joint project between Farming Connect and their milk buyer, South Caernarfon Creameries, they embarked on a project designed to improve udder health and milk quality in their autumn calving herd at Ynysgain Fawr, Criccieth; they were among a number of dairy farmers who took part in the project.

SCC in their herd is now averaging 149,000 cells/ml. Kite Consulting in partnership with Advance Milking had been appointed to deliver a risk-based evaluation of farm performance.

A comprehensive audit by Advance Milking identified issues with aspects of the milking infrastructure and milking routine at Ynysgain Fawr.

A new 20:40 swing-over parlour had been operating for a year and, although the machine was correctly installed and well-maintained, a dynamic milking time test flagged up significant adjustments with the potential to improve performance.

The issues and how they were solved

Problem

Automatic Cluster Removal (ACR) settings were allowing significant over-milking, increasing the risk of hyperkeratosis – rough teat ends – and teat swelling.

Not only is this uncomfortable for the cow, reducing milk let-down, but it increases the risk of udder infection too.

Solution

The ACR take-off trigger was doubled to 500ml/minute and this reduced over-milking.

Once the milking routine was altered this was increased further, to 600ml/min, to improve milk flow patterns.

Problem

The fit between cluster liners and the teat were not ideal, resulting in vacuum at the base of the teat in many of the cows being much higher than the target range.

These high vacuums around the upper teat are a risk for teat swelling and this was the case in a large proportion of teats.

Solution

The liners have been changed to those with a smaller barrel diameter of approximately 22mm, which are more suitable for a Holstein herd.

Dan Humphries of Advance Milking says a better fit between the liner and teat will reduce the high vacuums that the upper portion of the teat is exposed to, resulting in healthier teats, more comfortable cows and less udder infection.

Problem

The machine problems were exacerbated by the milk flow from the udder being lower than it could be – the timings of the milking routine were not appropriate for maximising good milk let-down from the herd, says Mr Humphries.

The routine of dipping, wiping and cupping 20 cows meant the time lag from teat stimulation to unit attachment was too long.

“This is resulting in ‘biphasic’ milk flow, with more low flow rate periods, longer unit-on times and more traumatic forces being put on the teats,” says Mr Humphries.

Solution

A milking protocol of ‘Dip-10, Wipe-10, Attach-10’ was implemented.

Working with batches of ten cows ensures unit attachment is 90 seconds after stimulation, Mr Humphries advises.

“This maximises milk flow rates and minimises opportunity for bacterial entry into the teat,” he says.

The outcome

Milk quality quickly improved after the changes were put in place – reducing the SCC in the three months following the audit to 197,000 cells/ml – an improvement of 37,000 cells/ml.

Neil Blackburn, of Kite Consulting, says this improvement was particularly satisfying as udder health parameters across north Wales had been deteriorating over this period.

“This suggested that Ynysgain Fawr improved despite the fact that many farms were struggling with external factors such as the weather at that time,” he says.

It is eight months since the improvements were made and cell counts have continued to fall, to 149,000 cells/ml.

Another change has been to reduce the percentage of the milking herd with a high cell count to below the target of 15 per cent.

The initial elevated cell count came largely from cows with a chronic high cell count – those with readings over 200,000 cells/ml for two or more successive recordings. Eleven per cent of the herd fell into this category.

Advance Milking advises that an achievable target would be less than 10 per cent chronic cows, with a good target being less than 5 per cent.

In the eight months following the udder health review the herd was on target six times, compared to just twice in the preceding eight months, with most infections cured at drying off.

Another striking improvement has been in dry cow performance.

John and Sion had worked with their farm vet to improve drying-off protocols and had developed robust selective dry cow therapy procedures.

Over the busy autumn calving period there was an exceptional increase in dry period mastitis cure rates for from 51 per cent in 2018 to 81 per cent in 2019.

