

Mastitis vaccine can cut infection rates by 50%

Vaccinating cows for mastitis has helped some Cumbrian producers get on top of the disease, reports **Jeremy Hunt**

Vaccinating cows as a preventative mastitis treatment has made all the difference to the control of mastitis on a wide range of herds in Cumbria.

Some herds have been able to cut mastitis rates by up to 50%, with a big reduction in retreatment rate also seen.

Vet Colin Lindsay of Capontree Veterinary Centre has been working with farmers in his area using the Startvac mastitis vaccine. The vaccine has been used to help tackle the two primary causes of mastitis – E coli and Staph aureus.

"We've had some great results with this vaccine," says Mr Lindsay. "And even where farmers have pulled out all the stops to try to control mastitis and still had a problem, this treatment has made all the difference."

MASTITIS VACCINE PROGRAMME

There are two mastitis vaccine programmes that can be used. The first involves vaccinating cows at 45 days pre-calving, 10 days pre-calving, and then after 52 days in-milk.

At Capontree this programme has been adapted to make it more convenient for farmers by injecting at drying off, as cows move into the transition group, and then during the fertility check at 45-55 days in milk.

An alternative, which many farmers prefer, is a rolling quarterly programme. This involves vaccinating the cattle twice – 30 days apart – and then every three months thereafter.

As a result of using the vaccine,

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Mr Lindsay says lower-grade antibiotics are working to a greater effect to treat mastitis cases in herds on the vaccination programme.

"Where mastitis does occur in vaccinated herds we're now having success using basic treatments such as penicillin and terramycin. And for me that's been a really big benefit, because we can move away from having to use the more modern drugs, and that reduces the risk of resistance, which the medical profession is concerned about."

Mr Lindsay says when a cow suffers from a mastitis infection caused by Staph aureus it is necessary to find a clinical cure – but acknowledges in reality it's difficult to achieve.

"In the majority of cases a sub-clinical cure is what we get; so while the cow no longer shows any clinical signs of mastitis, she still has an elevated somatic cell count."

"So, when a cow is treated for a Staph aureus mastitis infection you'd expect a 50-60% success rate. While we are still working out the precise figures on farms where the vaccine is being used, the retreatment rate of cows several weeks and months down the line has significantly reduced, so we must be improving the actual clinical cure rate. This is often reflected in the bulk tank, where we see a reduction in the somatic cell count."

VACCINE USE AS PART OF A PACKAGE

Herds vaccinating their cows are still using dry cow tubes, but vets see the vaccination programme as being part of the overall armoury dairy farmers can use against mastitis at this stage. That includes maintaining high standards of management to reduce potential environmental risk factors.

Although the reduction in antibiotics use is considered by vets to be one of the big advantages of the vaccine programme, the cost benefits are also being recognised.

"Increased milk production from herds where mastitis is being controlled is a contributory factor

MASTITIS VACCINE

- * Helps tackle E coli and Staph aureus
- * Can cut mastitis rates by up to 50%
- * Reduce retreatment rates
- * Fewer antibiotics used
- * Needs to be used as part of wider mastitis control programme

towards justifying the cost of vaccination," says Mr Lindsay.

Mr Lindsay also firmly believes the vaccine programme has a significant role to play in meeting the target figure for mastitis cases of 30 for every 100 cows a year.

"Few herds in the UK are at the target level, but the vaccination programme has a significant role to play if it is regarded as part of an overall approach to mastitis control involving cubicle bed hygiene, milking routines and drying off procedures."

fwlvestock@rbi.co.uk

Using a mastitis vaccine enables farmers to use basic antibiotics when infection does occur.

DAVID BYERS, CARLISLE

Vaccine has 'dramatic effect' on mastitis infections

* The Byers family from Cumbria began using Startvac to tackle a high number of clinical cases of mastitis in their 190-cow herd at Byegill Farm, Corby Hill, near Carlisle.

"We didn't have a high cell count problem, but we did have issues with clinical cases. Our vet Colin Lindsay told us the Startvac treatment had been successful in similar situations on other farms, so we decided to try it," says David Byers, who farms with his brother Mark and father Robert.

"It was a bit slow to show an effect at first, but within nine months of using it – the stage when cows had been jabbed three

times – it was having a dramatic effect and knocking the mastitis down substantially. We have used more than 50% fewer mastitis tubes in the first year of vaccinating – and that figure is still falling."

The family had followed strict parlour and milking-time hygiene routines, but say they were still failing to reduce the clinical cases of mastitis, even though the cell count continued to fall.

"We didn't have very serious cases of mastitis, just the sort of three-tube cases, but it was a problem that was niggling away and we needed to get on top of it," adds Mr Byers.

The bulk milk tank test identified Staph aureus as being responsible.



ANTHEA KITTING

When the decision was taken to vaccinate, the entire herd received the two initial vaccinations, followed by the three-monthly booster.

"We jabbed everything in-milk and anything coming up to calving, including heifers and dry cows. It was probably after the second of the booster jabs we started to see a real improvement.

"There was a small improvement at the start, certainly enough to justify carrying on, but the real benefits followed after that. We've only recorded four cases in the past two-month period," he says.

The Byers say they are making big savings by using fewer mastitis tubes. "But we can't see the point of taking an extra risk by not curing any problems there may be in the dry period, so we still tube all dry cows."

The Byers have been vaccinating for mastitis for just over a year and

there were no mastitis cases recorded in February.

"That's unheard of for us. We were getting more than one case a week even though we were following our herd health plan, so we knew the time was right to try something new. Now we're seeing hardly any mastitis cases in the younger cows."

On cost the Byers say the vaccine has "more than paid for itself" through the reduction in mastitis cases – but there's extra income earned and savings made on top of that.

"There are more milk sales, less treatments, fewer cows culled after three infections and less replacement costs. But this isn't an approach to mastitis that totally wipes out using tubes; the cost justification comes from a wide range of improvements," he says.