

Johne's is too damaging to ignore

A Johne's disease strategy is needed now to avoid the disease getting out of control

By Sarah Trickett

Johne's disease may not be high up the agenda on some farms but, if ignored, it may end up impossible to do anything, according to vet Keith Cutler speaking at Dairy UK's conference on Johne's Disease recently.

"If we ignore this disease it will rise unnoticed until it is almost impossible to do anything to control it," he said.

Alarming figures suggest losses in milk yield of up to 20% in cows exhibiting clinical symptoms of the disease and 10% for sub-clinical cases.

"It's rare you will see animals in severe stages of the disease because it's known 70% of animals culled for 'other reasons' are culture positive for *Mycobacterium paratuberculosis* (MAP), the organism causing Johne's disease," he said.

Results from a DEFRA study released at the conference estimated up to 42.5% of UK dairy herds were infected with MAP when sampled in 2006. "It is likely the figures have carried on rising since then," commented Mr Cutler.

But the reason the disease is tricky to manage is because detecting infection is difficult.

"There are a range of tests available, but all tests lack sensitivity, particularly in the pre-clinical stage of the disease, with false negative results common."

However, sensitivity can be improved by repeating tests more often rather than just testing once a year, added Mr Cutler.

"Farmers need to start by testing suspect cases, then testing the animal's offspring, testing cohorts of confirmed cases and also looking at cull cows. These sorts of tests will be able to demonstrate if disease is on farm."

And the option of milk tests could be key to bringing Johne's under control, according to NMR's Hannah Pearse.

Because Johne's antibodies fluctuate throughout the year, only doing one test a year can throw up false negatives, even though they could be positive, explained Ms Pearse.

"This is why having a bulk milk ELISA test four times a year improves sensitivity and also has good specificity," she said.



Cows identified as Johne's-positive after milk testing should be calved in separate pens, with calves removed within the first 15 minutes, to reduce the risk of disease spread.

NML's Herdwise programme aims to reduce spread of Johne's and lower cost of disease control.

"This is a Johne's management programme and is a practical way for farmers to try and reduce Johne's in the herd. For those enrolled, individual cow milk testing allows farmers to identify and control Johne's positive cows appropriately," she said.

And a similar system has proved highly successful in Denmark, said Soren Nielsen, head of the Danish Johne's disease control programme.

"In Denmark we have about 80-85% prevalence and it's likely the UK will have this sort of level too. Little by little farmers have started accepting and admitting they have Johne's," he said.

In February 2006 all Danish farmers were invited to participate in the Danish ParaTB (Johne's disease)

control programme. "If they wanted to participate in the programme all farmers had to commit to four annual tests," said Mr Nielsen.

Local herd advisers were then instructed to establish aims within individual herds and action plans were drawn to lower risk of transmission. Now, 29% of producers are part of the scheme, which accounts for 40% of all Danish dairy cows.

"It may cost about £8 a cow a year plus advisory fees of about £400-500 a herd, but it is more cost-effective to test than to have Johne's in your herd," he explained.

Test results are then used to form a risk-based management system by colour coding cows on farms, explained Mr Nielsen.

"All cows not reacting at the time of testing can be considered low-risk or green cows while all other reactors are high-risk cows. High risk cows are then further divided in to red

and yellow cows depending on their risk of shedding the disease. Cows with repeated positive ELISA tests have a high risk of shedding and are classified as red cows. Cows that have reacted in the past year, but not necessarily with repeated positive results, are classified as yellow cows," he said.

Management practices can then be adopted to deal with the three levels of cows, said Mr Nielsen. "For example, calves are allowed to receive colostrum from green cows, but not yellow and red cows and separate calving pens should be used for yellow cows with calves removed within the first 15 minutes and red cows culled before the next calving.

"Already, on those farms taking part the prevalence is dropping. But, for complete eradication all farmers need to participate," he said.

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