

Regular screening plays major part in risk management

# Johne's testing programme – one year on

Twelve months down the line and NMR's disease screening service, Herdwise, has captured the interest and commitment of many vets and producers. And, thanks to regular quarterly tests, they are now making headway in Johne's disease control. We talk to a producer and vet about the results to date.

text **Karen Wright**

Staffordshire-based producer and vet Sarah Malpass now has three sets of quarterly Johne's disease test results for the family's herd of 215 Holsteins. Farming at Lower Cowley Farm, in Gnosall, with husband Chris, Sarah also works as a vet at the Shires Veterinary Practice, Staffordshire. "We'd had some cases of Johne's in the herd but, like so many cases, they weren't identified until the cows had shown clinical signs," says Sarah. "To some extent the horse has bolted when this happens and these cows could have spread the disease to their own calves and to other young calves that they had come into contact with." The herd calves all year round in loose yards. "This means that an infected cow might come into contact with other newly born calves as well as her own. "The disease can spread through colostrum and through infected dung so, with our system where there's often more than one cow and young calf in the pen, the youngsters can be very vulnerable. "But it isn't until some years later that an infected animal will show clinical signs of the disease. "By then you've born the rearing cost and she may have already infected some of her calves – it's soul destroying to find that she's Johne's positive at this stage."

**Eliminate losses**

A screening programme that uses milk samples collected during the routine NMR recording seemed an ideal way of taking control of Johne's for the Malpass family. "People see the cost of repeat screening using the milk sample as a barrier, but I think it's reasonable at less than £10 a cow a year and it all happens automatically – there's no vet visit and no interruption to the routine or extra samples needed. It couldn't be any easier." Sarah does emphasise the need for correct interpretation of results, which is why NMR markets the Herdwise screening through vets. "The whole reason to screen on a regular basis is to improve the sensitivity of the test. "One set of results is a start and any sero-positive cows and heifers can be identified and isolated before calving and



*Calves are vulnerable to infection unless controls are in place*



*Calves are not fed colostrum from any cows with 'red' or 'amber' test results*

their colostrum discarded, but you need to build up a picture over subsequent screening tests." Depending on the results, the Herdwise report groups cows depending on their risk of spreading infection. 'Red' cows have repeated positive test results and are high risk, 'amber' group cows have had one positive result and are also considered a risk and a green group that has repeated negative test results and are low risk. Colostrum from the first two groups should not be used.

Results from the first Johne's screening test at Lower Cowley Farm identified 12 cows that had the specific antibodies that are found where the Johne's causing bacteria (MAP) is present and two of the cows that went into the 'red' group started showing early clinical signs later on. Sarah double-checked these by taking faecal samples and, as expected, they tested positive for the causal bacteria. "This proved to us that the screening test was working. "A year on and we're now far more aware of the state of each

**Action plan**

Armed with the Johne's screening results, Sarah and Chris Malpass have followed the protocols, outlined below, to reduce the risk of Johne's disease spreading in their herd during the next two or three years.



*Sarah and Chris Malpass*

- Any Johne's positive cow must stay in the 'far off' pen throughout the dry period and calve here to reduce contamination in the 'near to' pen. This 'far off' pen is thoroughly cleaned out and disinfected after calving.
- No colostrum is used from Johne's positive cows – even for its own calf. Frozen colostrum is used instead.
- All calves – particularly dairy heifers – are removed as soon as they are born to stop them from suckling their dam and also because the environment will be heavily contaminated.
- And any calf born from a Johne's positive dam is kept separate from other calves in case it sheds the bug in muck for up to four weeks. Pens are cleaned and disinfected afterwards.
- Johne's positive cows are not bred, or they are bred to beef bulls, to reduce spread of the disease.

animal in the herd. We're managing the risk and are far more in control, although it is very early days yet. It's a long term process – we currently have 16 cows in the 'amber' and 'red' bands – so we'll keep screening for the next two or three years. We're a closed herd so hopefully that should help, but we will still do a routine annual test."

**Greater risk**

As a vet in one of the country's key dairy areas, Sarah believes that Johne's is more widespread than people think and herds buying in stock are putting themselves at greater risk if they haven't got a control programme in place. "It's possible to blood test and cull sero-positive cows but Johne's disease is like a dripping tap and control needs to be long term. "Quarterly testing allows identification of infectious animals and there is time to adopt the right management practice for each group. It is all about managing risk." But producers do need to justify the cost. "We have lost seven cows and one in-calf heifer from Johne's in the past four years. You can do selective screens where the lowest risk animals, such as calved heifers, are omitted. This works on the assumption that usually the disease is detected in older cows. "But I believed, in our case, that it was best to ascertain the disease status of all animals initially." |