

Johnes Disease

What is Johne's Disease?

- Johne's is an infectious, chronic, progressive wasting disease caused by the bacteria *Mycobacterium avium paratuberculosis* (referred to as MAP). In affected animals it can lead to progressive damage of the intestines, and in cattle this leads to profuse and persistent scour, with severe weight loss.
- The bacteria are secreted in faeces throughout infection and can last up to a year on pasture or in dried faeces. The organism is picked up through ingestion of infected material and whilst mature animals seem to show resistance to the disease, young animals are susceptible and most animals are affected at or shortly after birth.

Diagnosis

- Symptoms of Johne's disease are extremely rare in cattle under two years old. The most obvious sign of the possibility of infection is profuse diarrhoea resembling bubbly, dirty water. A gradual weight loss can be seen in most cases and if left, can lead to emaciation and death. A decrease in milk yield can often be seen in dairy cows prior to the observation of other symptoms.

Monitor

- Test bulk tank sample, or
- Individual cow samples, collected at routine CIS herd recording.

Interpretation

- The test detects the presence of antibodies in milk specific to the *Mycobacterium paratuberculosis* bacterium. If the antibodies are present, the test results in the formation of a blue compound which when blocked become yellow. The intensity of the colour known as the optical density (OD) is a measure of the amount of antibodies present found in the milk sample. The OD of the test sample is compared with the OD of a specific control sample to calculate a S/P percentage or limit of positivity.
- Any sample with a S/P % equal or lower than 20% is considered coming from an animal, which has not been infected by *Mycobacterium paratuberculosis*.
- Any sample with a S/P % between 20% and 30% is considered to be doubtful. A second test would be necessary to confirm this.
- Any sample with a S/P % equal or greater than 30% is considered to be from an animal, which has been infected by *Mycobacterium paratuberculosis*.

Treatment

- At present, there is no effective treatment for infected animals, as vaccination is not an available option as it can interfere with tests for TB.
- Contact your veterinary surgeon if individual results indicate the presence of Johne's.

Johnes Testing Protocol

- Analysis of milk samples taken as part of routine recording can be used to identify individual cow disease status.
- The milk recorder will need to be advised on the day of recording if the whole herd is to be tested or the line numbers of individual cows if part herd testing is required.
- The milk recorder will complete a submission form highlighting the line numbers and corresponding barcodes of the cows that require disease analysis.
- This submission form will then be placed in the box with the samples to alert the laboratory that further milk testing is required.

Results

- Milk disease analysis will not delay routine milk recording results.
- A report of the results will be available on 'Your Herd'.
- It is recommended that all results are discussed with your veterinary surgeon before any action is taken.