Neospora Factsheet

CIS recommend you discuss the best testing options for your herd with your vet, prior to taking samples.

What is Neosporosis?

- Neosporosis is an important, infectious disease of cattle world-wide that results in abortion and stillbirth.
- It is caused by *Neospora caninum*, a single-celled protozoan parasite.
- Neospora eggs (oocysts) are produced by infected dogs and excreted in their faeces. Oocysts can survive in the environment for long periods of time. Cattle become infected if they eat food or drink water contaminated with Neospora oocysts.
- Disease occurs when Neospora multiplies in the cells of the developing calf and its placenta and causes sufficient damage to trigger abortion or stillbirth.

Diagnosis

- Early foetal death can result in the foetus being re-absorbed by the mother who then returns to service giving the outward appearance of a case of infertility.
- Examination of the foetal brain, placenta and other tissues can reveal characteristic damage caused by parasites along with the organisms themselves.
- Milk samples can also be screened for antibodies against the parasite.

Monitor

- Test bulk tank sample, or Individual cow samples, collected at routine CIS herd recording.
  NB: Antibody levels change over time. They are highest nearer the end of pregnancy. The optimum time to test is just after abortion or pre-dry off.

Interpretation

- The test detects the presence of antibodies in milk directed against *Neospora caninum*. 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 Milk sample with an S/P % lower than or equal to 0.25 (25%) is considered coming from an animal, which has not been in contact with *Neospora caninum*.
- Any Milk sample with an S/P % between 0.25 (25%) and 0.3 (30%) is considered doubtful. A second test would be necessary to confirm this.
- Any Milk sample with an S/P% equal or greater than 0.3 (30%) is considered to be from an animal, which has been in contact with *Neospora caninum.*

Treatment

- There is no vaccine against Neospora currently available in the UK.

Neospora 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.
- Watch the CIS Health Testing Neospora Webinar on YouTube: https://youtu.be/rlRHJ-jHcU0