

Neospora caninum abortion



- ◆ *Neospora caninum* is a protozoan parasite that predominantly infects dogs and cattle. Dogs are the definitive host and horizontal transmission occurs when cattle ingest oocysts excreted in the faeces of infected dogs.
There is no evidence of cow to cow transmission, however the probability of vertical transmission from cow to calf is very high at 95%.
- ◆ Infection is much more common than disease, however **infected cows are 3.5 times more likely to abort than uninfected cattle.** It is estimated 13% of all bovine abortions are likely to be due to neosporosis.
- ◆ Exposure of naïve cows to infective oocysts during pregnancy may or may not result in abortion, but provides protective immunity. This is termed exogenous infection.
- ◆ **Not all infected cows abort, hence calves may be born infected, but clinically normal. If these are retained as herd replacements, infection increases clonally in the herd, within family groups.** This is termed endogenous infection.
- ◆ **Control programmes for herds suffering abortions due to *Neospora caninum* depend on identifying infected individuals by whole herd testing, then selectively breeding from seronegative individuals.** Seropositive animals and their offspring are bred to beef. All bought in animals should then be screened, ideally prior to purchase. Exogenous infection is addressed by careful disposal of placentae/foetuses and control of farm dogs.

Guide to Sampling

In chronically infected cows, antibody levels fluctuate, with a big surge in titre in the second half of pregnancy. The ideal time for surveillance testing is therefore at drying off.

Bulk tank milk antibody estimation can be helpful to give a broad indication of herd status regarding neoporosis.

Blood sampling female calves < 4 months old can also be helpful to identify infected individuals and their dams when selecting breeding stock.

Serology is not helpful in farm dogs as infected animals may remain seronegative but still shed oocysts.

Samples Required

Serum (clotted blood)
Individual milk
Bulk tank milk



Leeds Laboratory
Gate Way Drive
Yeadon, LEEDS
LS19 7XY

Tel: 0113 250 7556
Fax: 0113 250 0198
Email: lvi@lvi-labs.co.uk