

Neospora Caninum in Cattle

Neospora caninum is a protozoan parasite that is the most commonly confirmed cause of bovine abortion in cattle in England, Wales and Scotland. There is no effective treatment and no vaccine available in the UK, and cattle remain infected for life. Abortions tend to occur at 5-8 months of pregnancy.

Route of infection

- Initial infection of naïve cows is by contaminated dog faeces on pasture or in drinking water
- Main route within a herd is from mother to calf – up to 95% of all calves born to infected cows will be themselves be infected for life.
- Infected cows provide sources of infection in two ways:
 1. Vertical transmission (cow to calf)
 2. Products of abortion or normal calving can provide a source of infection to dogs which can then go on to produce oocysts which are infectious to other cattle.
- Abortions occur in both heifers and cows and repeat abortions are possible. If an animal is shown to be positive, do not use for breeding replacement stock in subsequent lactations.
- Embryo transfer can be used to produce uninfected embryos from infected cows to implant in uninfected recipients.
- Infected breeding bulls have been identified but significance with regard to transmission has not been evaluated.

Diagnosis

- Blood sample from aborted cows. Although not diagnostic, a high result makes it very likely that *Neospora* was the cause of abortion. Cows which have had a high result should be bred to beef or culled.
- Lab examination of aborted fetus is the gold standard

Control strategies

- Blood testing of breeding stock. The best time for a reliable antibody result is during late pregnancy or following abortion. Positive animals not used to breed replacement stock in future, and any heifer replacements born to a positive cow should be assumed to be infected.
- Dispose of all placentae and aborted foetuses by bagging and burning – not in the slurry.
- Do not allow dogs any access to placentae, foetuses or neonatal carcasses.
- Educate dog walkers of the need to pick up any faeces on land which could be grazed by cattle at any time as the eggs can survive for 6 months
- Only newly infected dogs will shed eggs in the faeces for 2-3 weeks, after which they will no longer be a danger to cattle
- Routine worming of dogs is not protective. Preventing access of dogs to calving areas where they can ingest infective material combined with public education about picking up faeces are the key measures.