

Neospora

1. Symptoms

Neospora caninum is one of the major infectious causes of abortion in cows. Neospora caninum is a protozoan parasite that causes hardly any symptoms in the cow itself, but it is the major cause of abortions and irregular returnees.

In the early stages of pregnancy, the infection may remain unnoticed. Especially in heifers fertility problems occur. If the foetus dies at the age of three to four months, it may become mummified and it is often deposited months later. If the foetus dies after the fourth month of gestation, abortion occurs mostly within 48 hours. Occasionally, calves are born with brain abnormalities caused by Neospora. Not every infected cow will reject the infected foetus, but it can transmit the infection to other animals.

2. Cause of the disease and infection route

Neospora caninum is a protozoan, which was recognized for the first time in 1984 in dogs. This explains the addition of 'caninum' (Latin for dog). Cattle and dogs are involved in the life cycle of this parasite.

2.1 Infection Route

The Neospora caninum infection occurs in two ways:

A: From mother to calf

Transmission from cow to calf is the main source of infection. More than 80% of the calves born from infected cows are infected. This is the main reason how a Neospora infection can maintain in cattle herds for many generations. Probably, when cattle become infected, these animals will remain infected for life. Occasionally calves are born with brain abnormalities caused by Neospora.

B: Via the dog

A cow can become infected at any age through a dog. The dog can become infected by the parasite through eating material from cattle, for example a discarded foetus, placenta or amniotic fluid. After a while, the dog excretes infectious oocysts (eggs) from the parasite again via the faeces. Cattle will be infected by infectious oocysts via the feed or drinking water. The infectious oocysts are not excreted in the manure from cattle.



3. How do I get a Neospora caninum infection on my herd?

By purchasing infected cattle you can get the infection on your farm. So investigate purchased animals on Neospora. Once your farm has been infected, the main infection route is from cow to calf: 80% of the offspring of the infected cow is infected.

Your cows may be infected 'horizontal', and the dog is playing the main role in this infection route. When a dog eats or licks amniotic fluid from a Neospora infected cow after birth, the dog will develop infected eggs in its stools. So avoid that dogs will get into contact with infectious material from cows, and make sure that cows do not come into contact with the faeces of dogs. Also be sure that also other dogs do not enter your premises.

4. Preventive measures

Preventive measures are recommended to reduce the damage caused by neosporosis.

- Do not purchase infected animals. Investigate animals beforehand buying, to prevent the purchase of infected animals.
- Prevent that the feed of the cattle is contaminated with dog faeces (learn dogs to stay at a certain location to do his faecal droppings)
- Prevent that dogs become infected by eating infectious material from cows (placenta, amniotic fluid, rejected foetuses, raw meat);
- The dog is not allowed to enter the calving pen or stay on the racks in the barn. These measures apply to all dogs (young or old) at the farm, including new dogs and puppies that are born on the farm
- Avoid the entrance of other (neighbouring) dogs on your premises.

5. Therapy

There is no therapy for neosporosis in cattle. However, the parasite is susceptible to various anti-coccidiosis drugs (coccidiostatics). These are used for acute (visible) infections in dogs with varying results. However, when the disease in cattle is manifested (abortion), treatment of the dog is too late. There is no vaccine applicable in the Netherlands.

6. Diagnosis

6.1 Bulk (tank) milk and blood

You can easily monitor the Neospora situation on your cattle farm and detect possible infections by analysing your bulk (tank) milk. Your bulk milk, but also blood samples from individual animals or aborted calves, can be tested for Neospora antibodies.

Each cattle farm has to deal with abortion and irregular returnees. But, in case more than 3% of the pregnant cattle reject the foetus, an infection with the parasite Neospora can be the cause. Check regularly on Neospora, as this is extremely valuable for your farm to improve fertility and milk production, and the future of your business.

6.2 What means the “Neospora Tank milk” program?

When you sign up for the “Neospora Tank milk” program, the lab will automatically examine a bulk milk sample from your farm for Neospora antibodies three times a year. The results can be viewed quickly and we can give you advices on how to handle.