

By Sarah Thomson, Moredun Research Institute

Cryptosporidiosis (Crypto) in calves

What is crypto?

Crypto is the most common cause of calf scour, calves are usually infected shortly after birth and develop scour at around 5-7 days old.

There are four Crypto species which infect cattle, however the main disease causing species is *C. parvum*. Humans are also susceptible to infection by Crypto, this is often contracted by handling infected animals.

Symptoms

The main symptoms of Crypto include watery yellow scour, dehydration and loss of appetite.

Where do calves get Crypto from?

Calves become infected with Crypto when they ingest the parasites eggs. These eggs can reside in the environment in bedding, pasture, soil and drinking water.

Other calves and their dams can also act as potential reservoirs for the parasite, which release eggs but do not necessarily show any symptoms of the disease.

Animal handlers can also act as potential sources of infection, making good hygiene procedures such as the provision of footbaths and clean clothing important when trying to prevent the spread of the disease.

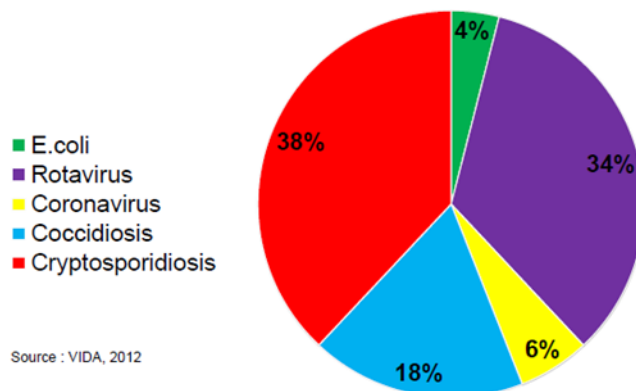
The Crypto Lifecycle

Once ingested the parasite, *C. parvum* attaches to the gut wall and multiplies which causes damage; this reduces the animals ability to digest food, resulting in the watery diarrhoea seen.

Whilst attached to the gut wall the parasite produces eggs, these are fully infectious and either re-infect the calf or are shed into the environment from the infected calf's diarrhoea.

Symptoms of the disease appear 3-5 days after infection, following infection a calf can shed the eggs for two weeks or longer.

Figure 1: Main causes of calf scour



Source : VIDA, 2012

An infected calf can produce enough parasites to infect 1,000 million other calves!

Figure 2: Crypto lifecycle



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How is it treated?

There are no specific drugs available to destroy the parasite which causes Crypto therefore treatment is focused on fluid therapy.

Affected calves:

1. Isolate in a well bedded pen
2. Rehydration of calves is key for survival. Feed one to two litres of oral electrolytes two to four times a day
3. Continue to offer scouring calves normal amounts of milk or milk replacer as long as they want to drink
4. Treat calves with Halocur®; even though this drug does not cure the disease it should help to reduce clinical signs and egg shedding. This drug cannot be used on dehydrated animals and can be toxic if overdosed
5. Quarantine calves until at least one week after scouring has stopped, this will prevent the spread of eggs to other animals within the calf shed

How do I prevent it?

3Qs of colostrum: Quality, Quantity, Quickly - Newborn calves must receive at least three litres or 10% bodyweight of colostrum within two hours of birth, this will ensure the calf has a strong immune system to fight disease.

Avoid overcrowding and mixing of calves of different ages, particular those a few weeks older that are likely to be shedding the disease.

Ensure excellent hygiene at calving and in the calf house using an effective disinfectant, this will reduce egg build up within the bedding.

Sources:

1. Wells. B. 2014. The Moredun Foundation

Effective disinfectants for Crypto:

- 2-3% Keno™Cox
- 2-4% Neopredisan
- 10% Ox-Virin
- 3% Hydrogen Peroxide

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