

MANAGING AND TREATING CRYPTOSPORIDIOSIS

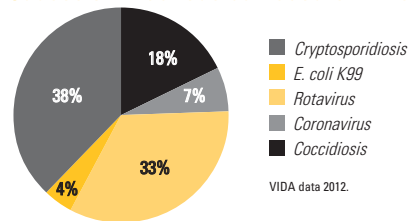
Cryptosporidium parvum infection can cause serious problems on some farms and current statistics indicate this parasite is the most common cause of scours in young calves in the UK.¹

> The parasite

Cryptosporidium parvum is a protozoan parasite that can infect a range of mammals including people.

- Oocysts (eggs) are shed in the faeces by an infected animal.
- At peak shedding, millions of oocysts are excreted for 7 to 10 days.
- Only 10 oocysts are needed to cause infection, so a single calf has a huge potential to infect other calves.
- Removal of the parasite from a contaminated environment is extremely difficult.

Causes of infectious calf scours in the UK



> Clinical signs

Clinical infections tend to occur in neonatal animals, whereas in adult animals infection does not tend to be associated with clinical signs. In the calf, infection leads to:

- Severe damage to the lining of the intestines.
- Destruction of the ability to absorb nutrients, water and salts.
- Profuse watery diarrhoea.
- Dehydration, weight loss, dullness and death.
- Animals that survive, show slower weight gain and growth.

> Treatment

Talk to your veterinarian today for a product that is registered for the treatment and prevention of diarrhoea caused by *Cryptosporidium parvum*. In animals treated we see:

- A reduction of oocyst excretion into the environment and
- A reduction of the severity of calf diarrhoea due to *Cryptosporidium parvum*.

> Diagnosis

Very specific diagnostic tests are available to diagnose *Cryptosporidium* infections. If you are experiencing diarrhoea and deaths in your calves, the options are:

1. Confirmation of diagnosis using faecal samples

This may be done at your veterinarian either by use of a rapid diagnostic kit for the detection of *Cryptosporidium parvum*, *E. coli* K99, coronavirus, rotavirus and *Giardia* or by microscopy for the detection of *Cryptosporidium* oocysts.

2. Submission of dead calves to your veterinarian for post-mortem examination

The intestinal tract of the calf will be used for analysis, albeit too late for the calf in question, but diagnosis of the pathogen(s) present will give you valuable information enabling you make informed management, treatment or preventative decisions for the other animals on your farm. This will also be the ideal method to determine which antibiotics are still effective on the farm for secondary bacterial infections.

5 STEP ACTION PLAN FOR FARMS WITH A CRYPTOSPORIDIOSIS PROBLEM

> 1. Diagnose

If you have scouring calves you should consult your vet to gain an accurate diagnosis of the cause. Treatments differ depending on the pathogen(s) involved.

> 2. Clean and disinfect

Clean out, steam clean, disinfect and leave to dry as frequently as you practically can.

Many common farm disinfectants are not effective against *Cryptosporidium*, so it is important that you use those which are effective and licensed against *Cryptosporidium*, such as 3 % hydrogen peroxide for 20 minutes at room temperature².

It is important that you make sure you leave pens to dry in the sun as much as possible, as *Cryptosporidium* does not like UV rays.

> 3. Colostrum

Implementation of the 5 Qs of colostrum management (Quantity, Quality, Quickly, sQueaky clean and Quantify) is critical to setting your calves up to having the best immunity possible. For more information please contact your MSD Animal Health representative.



> 4. Control

The cause of scours is often multi-factorial and so there is no single silver bullet to control scours. Good biosecurity, vaccination and nutritional policies will help to minimise the cases of scours on the farm.

Implementing some of the following quick control tips may help to reduce scours in your calves:

- Use disinfection at the entrance to calf sheds.
- Vaccinate dams against rotavirus, coronavirus, *E. coli* and salmonellosis to minimise the impact of these other diarrhoea-causing pathogens.
- Do not mix young calves with older ones as older calves may still shed *Cryptosporidium* oocysts.
- Clean out, steam clean, disinfect and leave pens to dry as frequently as you can.
- Keep all calves warm and hydrated. This is particularly important if they are sick.
- Quarantine sick calves as soon as possible after diarrhoea starts, do not mix them back in with the healthy calves for at least one week after the diarrhoea stops.
- Make sure you tend to your healthy calves before your sick ones so you don't transport pathogens back to the healthy herd.

> 5. Prevent and treat

Use a licensed product for the prevention and treatment of *Cryptosporidiosis* to reduce oocyst excretion and the severity of calf diarrhoea due to *Cryptosporidium parvum*.

To prevent you should dose all new-born calves within the first 24 - 48 hours of life and then follow the protocol as discussed by your veterinarian.

To treat you should dose all calves within 24 hours of diagnosis of *Cryptosporidiosis* and then follow the protocol as discussed by your veterinarian.

This 5 step action plan has been developed in conjunction with Moredun Research Institute.

References:

1. The Moredun Foundation, *Cryptosporidiosis in Cattle*, News Sheet February 2014 Vol. 6, No. 1
2. JE Bogan. Disinfection Techniques for *Cryptosporidium*. *Journal of Dairy and Veterinary Science* 2018, Vol 7(4)

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