

### Calf diarrhoea (neonatal diarrhoea, calf scour)

Diarrhoea is common in newborn calves, lambs, and kids. The acute disease is characterized by progressive dehydration and death, sometimes in as quick as 12 hrs. In the sub-acute form, diarrhoea may persist for several days and result in malnutrition and emaciation.



Calf with watery diarrhoea

### Incidence and costs

Average incidence in the UK is estimated at 10% with a mortality rate of 3%. In cases of outbreaks these numbers can be a lot higher with almost all calves affected and high mortality rates.

Total cost for scours are a result of treatment costs, growth reduction and dead calves. It comes to £40-£50 per scouring calf. This doesn't take into account the labour that is required to take care of sick calves.

Older animals that have suffered from diarrhoea will also perform less well compared to disease free pen mates.

### Disease mechanism

Calf diarrhoea is caused by a range of infectious agents. The most important ones are Rota- and Corona virus and Cryptosporidium which is a parasite.

Next to these E. Coli, Salmonella, BVD, coccidiosis and others can cause diarrhoea of varying severity.

All of these are part of the so called SIMS (shit-in-mouth-syndrome) which means infection takes place by being exposed to contaminated dung from older animals or diseased calves.

Most of the time the bugs will alter or damage the gut lining causing loss of fluids. This will lead to dehydration, and in severe cases, death. Damage to the gut lining can also lead to septicaemia.

A very important complicating factor is the tendency to stop feeding milk or milk replacer to scouring calves and replace this by electrolytes. Feeding electrolytes in water in itself is good but does not provide enough energy to the patient, no matter what the package says. Therefore it is recommended to feed electrolytes in addition to the normal feeds. (see treatment)



Shit-in-mouth-syndrome

### Treatment

The most important treatment is replacing the fluids lost by the scour. Calves with diarrhoea can lose 4-6 litres of fluids so aim to supplement that amount in addition to their normal milk. When you spot a calf with diarrhoea a good pattern for that day would be:

1st feed: 2 litres water with electrolytes

2nd feed, 4-6 hours later: offer normal amount milk\*

3rd feed: 4-6 hours later: 2 litres water with electrolytes

4th feed: 4-6 hours later: offer normal amount milk\*

\*: some electrolytes (e.g. Rehydion) can be given with milk and this will help the calf to restore its normal body fluids.

In some cases antibiotics can be given, preferably orally (e.g. Bimamix, Synulox and Duphatrim boluses.)



### Prevention

The key to prevention is hygiene and colostrum.

Colostrum is invaluable and free so use it to its maximum potential. Milk the dam within 4-6 hours of calving and feed the calf 4-6 litres in the first 12 hours of its life.

A clean, properly ventilated but warm environment is essential to prevent calf scour.

Isolate sick animals as they will infect others.