

## **Calf scour - causes and supportive fluids**

Calves may scour (have diarrhoea) at any age and for a variety of reasons. Scour can be caused by bacteria, viruses, parasites, nutritional issues and many other factors. The cause of scour cannot always be easily diagnosed for rapid accurate treatment. All animals that are scouring will be losing fluids as well as vital electrolytes and therefore fluid therapy that addresses these electrolyte imbalances is an important part of supportive therapy.

### **Scours may result in slow return to normal growth rates**

Scour can be defined as a failure of net intestinal uptake of sodium (a salt) and water such that the absorptive capacity of the colon is overwhelmed, resulting in the passage of liquid faeces. As salts and water are lost into the faeces, the animal will become dehydrated and may develop acidosis, as well as other issues related to the loss of vital electrolytes. The animal may well lose weight or fail to thrive as it needs energy to repair the gut. Failure to correct the fluid and electrolyte balance may result in death and certainly a very slow return to normal growth rates.

### **How can you treat a scouring calf?**

No matter the cause of the scour, the treatment of a scouring animal should aim to:

- Address the cause, if possible
- Assess and correct dehydration
- Address acidosis/electrolyte imbalances
- Maintain energy

Any scouring animals that are too weak to stand or have lost their suckle reflex should be assessed by your veterinary surgeon as intravenous fluids may be necessary.

### **Keep scouring animals on milk**

It has been recognised for a number of years that removal of milk from scouring animals does not encourage recovery. Continued milk feeding allows all of the benefits of milk, especially its high energy levels, to be utilised by the scouring animal. Milk has a very high energy level that is very difficult to replicate by any oral rehydration therapy. Energy is necessary for maintenance growth and repair, hence continuation of milk feeding has many advantages.

### **Why is the continuation of milk feeding important?**

- Milk is the natural source of energy - 50g/l lactose with 740kcal per litre
- Lactose supplies rapid and slow energy, therefore supports maintenance and growth requirements

- Milk provides glutamine - an amino acid very important in the function of gut cells, the structure of gut villi (the lining) and also has an important role in kidney function
- Milk helps maintain a natural antimicrobial barrier by maintaining the abomasal pH at a level that minimises the overgrowth of pathogens
- Milk also contains natural antimicrobials e.g. lactoferrins
- Milk maintains lactase activity which decreases risk of further relapses
- Palatable and no stress of removal from dam in beef and sheep

### Choosing an oral rehydration therapy (ORT)

There are numerous oral rehydration therapies available and not all are equal. An ORT must supply the following in order to be of maximal benefit to the animal:

- 90-130mmol/L **sodium** (enough to correct the losses)
- **Glucose** +/- another facilitator of sodium/water absorption
- **Alkalinising capacity** of 60-80mmol/L (strong ion difference (SID))
- 10-30mmol/L **potassium**
- Energy for maintenance and growth

Many ORT products contain high levels of bicarbonate or citrate which can affect milk clotting and therefore should be fed separate from milk (by 2 hours, ideally).

**Rehydion Gel** is designed to be fed with milk or if an animal is suckling, given directly into the mouth using our **NEW Dosing Pump**. **Rehydion Gel** has an SID of 75mmol/l and addresses the issues of electrolyte imbalance effectively whilst allowing recovery, repair and growth to continue as the calf is still receiving milk.

One bottle of Rehydion Gel = 8 feeds (40ml per feed). Feed each calf 2 times a day until scour stops.

It is important to note that the animals will continue to scour until the gut is healed, so they may appear clinically well but still have loose faeces.

