NARACOORTE & PENOLA Veterinary centres

CALF SCOURS

Scouring in calves is a significant cause of morbidity, mortality and economic loss in the Australian beef industry and can be a distressing condition to deal with. Scouring calves can quickly become dehydrated, hypovolaemic and die if not treated.

Causes:

1. **Hygiene** – housing or yarding in contaminated areas.
2. **Dietary imbalance** – sudden changes in diet including milk (or replacer) composition, concentration and temperature, introduction of solids (pellets, grass feeding) etc.
3. **Stress** – bad weather, cold housing, under nutrition etc. all may depress the immune response.
4. **Improper Antibiotic usage** – there are "good bugs" and "bad bugs" – kill the good ones and digestive imbalances may occur.
5. **Infectious causes** – these are usually secondary to the first three points above

- **Viruses** – coronavirus & Rotavirus – the most common infectious causes of calf scours.
- **Protozoa** – Cryptosporidium & Coccidia – commonly seen.
- **Bacteria** – many types, esp Escherichia coli (E. coli).

Note – of all of these causes, only bacteria might respond to antibiotics.

For improvement to occur to any given antibiotic:-

- Bacteria must be present and actually contributing to the scour – NOT the most likely.
- That bacteria must be sensitive to that antibiotic.
- There must not be any severe effect on the "good bugs".

Diagnostics:

Our clinic stocks Rainbow 6 Calf Scour Testing Kits, which test faecal samples from affected calves for six of the most common pathogens that cause calf scours. These are:

- Rotavirus
- Coronavirus
- Cryptosporidium
- E. coli
- Clostridium perfringens
- Epsilon toxin (secreted by some strains of C. perfringens

If you have a calf scours case (particularly if multiple animals are affected) we highly recommend bringing a sample into the clinic for testing. As well as the Rainbow 6 test, we can assess faecal samples under the microscope for parasitic causes. If animals are dying, it is worth contacting our team to perform a post-mortem examination and potentially send samples off to a laboratory for further work-up (if severe enough, state government funding can be allocated to fund the

investigation).

Treatment:

1. Correct the fluid imbalance – oral intake of fluids must exceed loss in diarrhoea.
2. Maintain energy intake – milk solids are absorbed low down in the bowel, but inflammation causing the diarrhoea prevents absorption. Glucose/dextrose solution is absorbed high in the gut, where absorption is not hindered.

   Solution – use an electrolyte and glucose replacer

   Eg – Vytrate®, Scoulyte®, ResQ® etc.

   Should the calf be unable/unwilling to drink, tube feeding may be necessary – consider purchasing a McGrath Fluid feeder.

   When re-introducing milk or milk replacer to the calf, it is important to separate milk and electrolyte feeds by at least 2 hours. This is as milk forms a clot in the calf's 4th stomach and if electrolytes are introduced to soon, this clot will dissolve and be washed into the small intestine making the scour significantly worse by causing an osmotic diarrhoea.
3. Provide sheltered housing and warmth – dehydration and shock are the killers.
4. If scouring calves are in a paddock scenario with their mothers, it is worthwhile to fence calves into one corner of the paddock. Calves suffering from scours shed copious amounts of pathogens, so effort should be put into stopping these animals from defecating all over the paddocks.
5. Antibiotics – if the calf is suffering blood poisoning (toxaemia), injectable antibiotics may be necessary. Find out positively the cause and best treatment.
6. Anti-inflammatories. If a calf is in danger of becoming septicaemic or is suffering from a viral cause of diarrhoea, anti-inflammatories like meloxicam will significantly improve a calf's chances of survival.
7. In extreme circumstances where animals are significantly dehydrated and unwell, it is worth considering calling us to give the affected calf/calves intravenous fluid therapy. This significantly improves a calf's chances of survival by rehydrating them, as well as correcting pH imbalances in the calf's bloodstream and supplying them with energy.

Preventative measures

When it comes to calf scours, prevention is always better than cure. There are many different strategies that can be employed to prevent calf scours, and all depend on your unique situation. Consider the following when attempting to prevent calf scours:

- Housing conditions of bucket calves: Hand-reared calves must be housed in conditions that are clean, warm, dry, and well ventilated. If any of these conditions are not met, calves are significantly more likely to get scours, or an existing scour issue will be made worse. Separate "hospital" pens should be made for sick individuals.
- Paddock conditions: Calves are more likely to develop scours in paddocks that are wet, muddy and have little shelter. Ideally cows should calve down in drier, better sheltered paddocks. Additionally, sick calves shed high levels of pathogens into the environment. If you have noticed that you have issues in particular paddocks, it is worth considering not using those paddocks for calving for at least 12 months
- Vaccination: There are vaccines currently available that protect against rotavirus, coronavirus, C. perfringens and E. coli. If you have confirmed any of these causes as the source of your scouring issue, it may be worth vaccinating against these diseases. Vaccine protocols can vary but generally these involve vaccinating cows pre-calving.