

CALF SCOURS (DIARRHOEA)

Calf scours cause significant economic losses to the beef producer. These losses are incurred through calves dying, cost of treating calves with scours (often time is one of the biggest costs), decreased growth rates in affected calves and the cost of prevention.

There are a number of factors involved in calf scours and these include:

- Health of the calf
- The environment the calf is raised in
- The presence of bacteria, viruses or protozoa that may cause disease (pathogens).

These pathogens include rotavirus, bovine coronavirus, *E. coli*, *Salmonella* and *Cryptosporidia* and are often found in low levels in healthy cattle. Calves are infected when they suckle or mouth surfaces contaminated with manure such as teats, the ground, contaminated feed and water. Any increase in these pathogen levels in calves that are not healthy or did not receive adequate immunity from the cow or heifer, may result in an outbreak of scours.

Calves get their immunity from the colostrum in the milk and can only absorb this colostrum for the first 24-36 hours after birth. Calves should suckle at least 5% of their bodyweight in colostrum in the first 12 hours and a total of 10% by 24 hours. Colostrum contains antibodies to the diseases that the cow or heifer has been exposed to as well as protein, vitamins and minerals. Colostrum from the cow is far superior to any colostrum substitute recipes (such as egg yolk-based recipes).

Calves with scours generally die from fluid loss and dehydration secondary to the infection itself. Early treatment with sufficient quantities of electrolytes such as Lectade or Vytrate is the most important part of treatment. Generally a maximum of 1 litre per 10 kilograms bodyweight is given at each feed. The frequency of feeding depends on the degree of dehydration. Oral electrolyte therapy may be insufficient in animals that are severely dehydrated and these animals may require intravenous fluids given by a veterinarian.

Dehydration is assessed by looking at:

- The calf's demeanour and posture
- If the calf is suckling or not
- If the calf's eyeballs are sunken
- The time it takes for the skin of the calf to return to its normal position after tenting it with your fingers
- Whether the gums are moist or dry.

Testing of calves with scours to determine the exact cause will help treatment as well as assisting in developing prevention strategies. Indiscriminate use of antibiotics may result in drug-resistant bacteria so determining the identity of the offending pathogen is valuable. There are vaccinations available for the two most common bacterial causes of calf scours (*E. coli* and *Salmonella*). The *E. coli* vaccination is generally given to the cows and heifers 8 weeks prior to calving with a booster dose 2 weeks prior to calving. These vaccinations aim to increase the level of antibodies in the colostrum and thereby increase the level of protection the calf has.

Segregation of infected calves from healthy animals will also greatly decrease the spread of the disease throughout the herd. Pregnant cows should be moved to a new "clean" calving paddock if available and newly calved cows and their calves may be moved to nursery groups with fresh paddocks as often as possible. This helps reduce the build-up of pathogens in the environment. Healthy animals should not be handled after sick calves without thorough disinfection of the handler and any common materials such as calf bottles etc. Some pathogens that cause scours in calves can also cause disease in people and precautions to prevent cross-contamination between animals and humans should be observed. These include thorough hand washing after working with calves, refraining from eating, drinking or smoking while handling infected animals and avoiding working with sick animals if you are currently on antibiotics, immunosuppressants or if you are otherwise immunocompromised.