Managing Scours in the Young Calf

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Calf scours is the most common cause of illness and death in calves prior to weaning. Scours is not a specific disease, but a symptom caused by many different diseases. It is also important to realize that most cases of scours are mixed infections (caused by more than one agent). For these reasons it can be difficult and frustrating to control.

The incidence of clinical disease and the fatality rate depend on the balance between the resistance of the calf and the level of exposure to infectious agents. The newborn calf’s only source of antibodies is through the colostrum. A standard recommendation is to give two litres of first milk immediately after birth. It is important to let the calf drink this colostrum naturally, if possible, to ensure that optimum absorption occurs. This should be followed by two litres six hours later and another two litres by 12 hours of age. The level of calf resistance is heavily influenced by colostrum consumption (minimum six litres within first 12 hours), colostrum quality (thick, viscous) and timing of first feeding (minimum two litres within first two hours).

Other factors affecting the calf’s resistance are:
- Vaccinations received by the dam (this assumes adequate colostrum transfer)
- Vaccinations received by the calf (the immune system of the newborn calf is immature and not able to respond well to traditional vaccines)
- Nutrition of the dry cow
- Nutrition of the calf – free choice water and calf starter have a major impact on reducing scours
- Stress, which causes release of endogenous cortical steroids that directly decrease immune function

Examples of stresses are dirty, wet or poorly ventilated housing; social stress; movement; or other disease challenges like pneumonia or coccidia.

The majority of scour-causing agents are transmitted by the fecal-oral route. Decreasing exposure means:
- Washing the dam’s teats before collecting colostrum
- Birthing the calf into a clean environment
- Removing the calf before it attempts to nurse
- Putting calf into an isolated, clean and disinfected pen (hutches must be cleaned, turned upside down for several days, moved to clean ground and freshly bedded)
- Feeding utensils should be cleaned and disinfected between uses
- Caretaker should avoid direct contact when possible and move from youngest to oldest calf

Scours can be difficult and frustrating to control.

Decreasing exposure and building resistance are critical for prevention of scours.
Prevention is key because most scours problems can be avoided. Once the calf is sick, treatment is expensive, difficult and often unrewarding because a calf has very limited reserves and most infections involve more than one agent.

Rehydration therapy should be the main feature of any scours treatment program, as dehydration is almost always the cause of death. When dehydration is first detectable (sunken eyes, dry muzzle or skin that does not rebound normally after being pinched) the calf is already six to 10% dehydrated. This means it needs 2.5 to five litres of electrolyte solution to replace what has been lost, depending on calf size and degree of dehydration. This can be given orally (drinking or tube), intravenously or through a combination of methods depending on the severity of the situation.

Calf scours can be a confusing and frustrating disease involving several pathogens. Treatment and prevention will vary depending on the cause; therefore it is imperative to obtain an accurate diagnosis to ensure good results. The best way to understand the complete picture of scours is to work with your veterinarian to send samples to a diagnostic laboratory. The best sample is an acutely sick, live calf that has not been treated yet. With an accurate diagnosis, effective treatment and preventative strategies can be employed to tip the balance in favour of increasing the calf’s resistance and decreasing the level of exposure.