

Calves acquire no immunity (antibodies) before they are born. They are solely reliant on the quality and quantity of colostrum they have in the first 24 hours of life (and especially within the first 6 hours of life) to protect them from common diseases (and the dominant pathogens in their environment.

The key to successful transfer is to administer colostrum manually (teat or stomach tube),

using the <u>following guidelines</u>:

Quickly	Within 2-4 hours (the sooner the better), the legal maximum is 6 hours.
Quanti-	10% of bodyweight (e.g. 4 litres for a 40kg calf) for the first feed; repeated at 6-12
ty	hours after birth
Quality	Colostrum given must be rich in antibodies (at least 50g per litre*); extremely clean
	(both storage equipment and feeding equipment must be spotless); NOT pooled; and
	ONLY from cows testing negative to Johne's disease.



\*Measuring colostrum quality

Colostrum can be measured using a colostrometer or Brix refractometer.

Colostrometers are made of glass and have a 'traffic light' indicator which floats in the colostrum and gives a reading for its quality. They need to be used at room temperature so keep them in the kitchen. Refractometers are easy to acquire and easy to use. Place a drop of colostrum on the glass and then look through the viewfinder. The blue line should be above 22% for colostrum to be used.

## Measurement of colostrum quality will allow:

- Identification of high-quality colostrum for freezing (can be frozen for up to a year)
- Identification of moderate quality colostrum which may mean calves need a higher volume to receive adequate protection.





- Identification of poor quality colostrum: frozen high quality colostrum or colostrum replacement powder should be used instead.
- Colostrum supplement may be used if necessary, but cows colostrum is preferred.
- Frozen colostrum must be defrosted at room temperature or in a water bath (no higher than 370C)

# Measuring colostrum intake

Blood sampling calves can be undertaken to monitor colostrum intake. This is carried out at one week of age and will allow a management strategy to be put in place if passive transfer is identified as inadequate.

# **Preventing Scour**

- Avoid prolonged calving season and don't overstock group pens
- Isolate sick calves
- HYGIENE keep clean calving pens, thoroughly clean + disinfect between calvings and having calves in pens, thorough cleaning of feeding equipment in between feeds
- COLOSTRUM
- Feed enough milk (at least 2.5 litres 2 or 3 times daily)
- Reduce stress (cold, changing groups, procedures, lack of routine)
- Provide a calf jacket and warm/dry bedding
- Vaccinate pregnant cows to pass on the protection if indicated

## **Preventing pneumonia**

- Try to keep stocking densities to a minimum
- Monitor for BVD as this can lead to immunosuppression and increased risk of pneumonia
- Suitable pneumonia vaccinations at key times
- Treat cases promptly and follow pneumonia treatment plan
- Each day access and monitor weather conditions in sheds
- Cold windy days place wind breakers or make a den for younger stock
- Hot days remove wind breakers and allow adequate ventilation

by Lizzie Relph





Spring is a key time in both the cattle and lambing lifecycles as turnout and weaning bring very specific nutritional challenges and work must be done to minimise any associated performance lags. Optimised nutrition of lambs at weaning and cattle at turnout is key, using a supplement such as Optigain; a safe, high-quality product, can be vital to help maintain that growth potential.

# Calf Scour

# **Bovine Coccidosis**

Calf scour is an extremely frustrating and costly disease for any calf producer. The main causes of calf scour in very young animals (<3 weeks) are the viruses (*Rotavirus* and *Coronavirus*), *Crytosporidia* and *Ecoli K99*. We can offer a "snap test" in the practice which checks for the presence of these in a faecal sample. Getting a diagnosis is important to help us come up with a targeted control programme. As with all samples, the best animals to take them from are untreated, affected animals early in the disease course. Individuals can be tested but multiple samples will give us a better chance of reliable diagnosis.

The major causes of calf scour are likely to be found on any farm where cows are calved, but not all of these farms will suffer with scour. This is because environment and management factors are very important in the management of scour.

## Main areas of focus:

- Calves should hit the ground in a clean and dry environment and be protected from contamination during the critical early days. In turned out cattle, this can mean moving ring feeders etc regularly to stop cattle congregating in areas where the ground has become contaminated.
- 2. Keep calving patterns tight or group calves to reduce older calves laying down a bed of infection for younger calves. Similarly, establishing management groups of calves of similar ages and maintaining these set groups reduces the risk of infectious scour (among other

things!). Removing scouring calves which are contaminating the environment for others is beneficial (where practical).

- **3.** Cleaning and disinfecting all housing used for calves is essential to reduce infectious load *Cryptosporidia* is very difficult to remove from the environment so if this is a concern on your farm then please contact our vets and we can advise on the correct disinfectant to use).
- 4. Colostrum is key! Good colostrum first requires a good cow, calving down in the target condition score (2.5-3.0) in good trace element and mineral status with good udder and teat conformation that calves with ease (the holy grail cow!). If the calf needs help accessing the colostrum then offer by bottle and teat or pass a stomach tube. If there is any concern over a cows ability to provide good quality colostrum (this can be checked using a refractometer) use a powered replacement/frozen stores from high health status animals. The volume required is 4 litres (or 10% of bodyweight) within 4 hours, then an additional 4 litres within 6-12 hours of birth. A calf requires approximately 20 minutes of continuous sucking to achieve enough colostrum. We can blood sample calves between 1 and 7 days of age to check how effective colostrum transfer has been.
- 5. Vaccination of breeding cows is possible for *Rotavirus*, *Coronavirus* and *Ecoli K99*. This boosts antibody protection and can be very effective if calf scour is a recurrent issue and any of these agents are involved BUT it cannot work unless there is a good colostrum policy in place.

#### What is it?

- Coccidiosis is a gut infection caused by Protozoan (singlecelled) parasites which affects the small and/or large intestine. They cause damage to the intestinal wall.
- There are over 20 cocciliar species, but the main species that cause significant damage are *Eimeria Bovis*, *E. Zuernii* and *E. Alabamensis*. If the burden of these parasites are high the result is diarrhoea (scour), dysentery (bloody diarrhoea) and tenesmus (straining)
- Disease outbreaks occur in calves aged between 3 weeks and
  9 months of age. It is associated with overstocking and contaminated environment.

#### How does it occur?

- Oocysts are passed in the faeces of infected animals and can remain dormant in the environment for a considerable period (years).
- Once the correct environmental conditions occur (warm and damp), the oocysts will develop
- The developed oocysts are ingested and invade the gut cell causing rapid damage to the gut wall and leading to the clinical signs.
- The duration of this life cycle varies according to conditions and species but it is usually between two and four weeks in cattle.

#### **Clinical signs**

- Classic signs are diarrhoea, dysentery (blood diarrhoea) and tenesmus.
- There can be chronic or subclinical forms due to high levels of challenge these infected animals would present as "poor doers" with poor growth rate, stary coat and pasty faeces.

#### Diagnosis

- Usually diagnosed using clinical signs. May affect large number of calves in group.
- Coccidial oocysts can be detected in faeces. There are only very few oocysts shed in the faeces during early stages of infection.
- The species of coccidosis can be determined by laboratory testing.

#### Treatment

- Affected calves should be separated to reduce contamination of the environment with more oocysts. Severely affected animals may need oral fluids if severely dehydrated.
- There are number of anticoccidial drugs are available for treatment of affected calves including toltazuril and diclazuril
   please get in touch with our knowledgeable vets to discuss treatment.
- The environment should be cleaned with a disinfectant that is effective in killing coccidial oocysts (not all disinfectants work!). Please call Howells Veterinary Services for advice if you suspect coccidiosis in your calves.

By Louise Conway



By Sian Curtis







# **BIOSECURITY: IT'S AT THE HEART OF EVERYTHING WE DO**



#### EXPERTISE

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your farm layout and management, this helps us to provide bespoke technical and practical advice.





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# Lungworm In Cattle

When we think about worm control, we often rely on pour-ons and drenches to control worm burdens. However, when it comes to lungworm, anthelmintics are not necessarily the best answer to preventing disease. In fact, the use of anthelmintics to treat lungworm infections in cattle has caused fatal clinical disease in adult cattle. This is because when young stock are treated with a slow release bolus or a long acting injection, they do not get a chance to develop an immunity to lungworm; the wormer does all of the work. As a result, when animals are turned out the following year as adults, they are very susceptible to disease.

Thankfully, there is a more sustainable solution for preventing lung worm disease in cattle. The gold standard approach to lungworm control in cattle is through vaccination. The vaccine available is called Huskvac and is an oral vaccine given to calves from 8 weeks old. Two doses are given four weeks apart with the second dose given two weeks pre turn out. This vaccine is particularly useful for yearling suckler animals, dairy heifers and turned out store animals.

The vaccine contains lungworm larvae that cannot cause disease but initiate an immune response to lungworm. The immune response generated to lung worm is strong and long lasting so boosters are not usually required.

By Leanne Forde-Archer BVSc MRCVS



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