

DN NEWSLETTER

issue 27

Five calves are born every minute in the UK, compared to 1 baby being born every minute. Calves are managed and reared by farmers with assistance when required by vets. The average loss of calves is 7% by 24 hours. The cost of these losses can be as much as 1.8ppl. On many farms we need to review calf management and start our attention with these animals, which are the future of the industry.

Calf Management

Managing the young calf begins in the maternity pen, and even earlier:

1. Carefully formulate dry cow diets to meet trace mineral requirements as mineral deficiencies can impact the calf and decrease colostrum quality.

Long bone deformities occur with manganese deficiency. Water which is high in Iron content will inhibit manganese.

2. Maternity pens should:

- Be disinfected between calvings
- Have proper flooring (non-slip)
- Have adequate bedding (15cm)
- Provide adequate space (10-12m²)
- Be well ventilated, lit, and draught free
- Provide access to feed and water

3. Colostrum management is perhaps the most important aspect of calf management:

Always obey the 5Q's of Colostrum Management:

Quality (>50g IgG/L): Regularly check colostrum quality to ensure poor quality colostrum is not fed

Quantity (>150g of IgG fed): Quantity is not liquid volume, but amount of IgG fed. If quality is good, calves need at least 3 L of colostrum at the first feeding.

Quickness (< 2 hours): Calves must be fed colostrum within 2 hours of birth as absorption efficiency decreases with time. Cows need to be milked within 2-4 hours of calving as delaying milking decreases colostrum quality

Quite Clean (< 100,000 cfu/ml): Clean colostrum and equipment are critical. Bacteria interferes with IgG absorption and is a major calf killer globally.

Quantifying (>10 g IgG/L): Passive transfer must be regularly assessed on farm to determine if goals are being met.

4. High intakes of milk can pay dividends as animals age (less health issues, greater milk yields). But, feeding more milk requires carefully planned weaning strategies.

5. Farm milk is deficient in trace minerals required for growth and immune function. Whole milk should be fortified with a trace mineral source.

6. Always provide plenty of clean water. Calves will drink 4 L of water for every 1 kg of concentrate intake.

7. Hay does not encourage rumen development. Ad libitum intake of hay, especially high-quality hays (such as alfalfa) is not recommended while calves are drinking milk.

Birth

The birth process is extremely stressful as we are expecting the calf to:

- Initiate breathing
- Manage acid/base balance
- Start its metabolic processes
- Control its own temperature, it's temperature will drop straight away and takes 25 hours to get control
- Consume colostrum





Feeding higher levels of milk in the first 5 weeks will optimise calf growth and then a step down will drive concentrate intake, e.g drop from 900g calf milk replacer to 500g.

For the last week before full weaning intakes can be helped by feeding concentrate in the morning and milk in the evening.

Water and starter feed should be offered from day 1 and the same starter should be fed until at least a week post-weaning.

Water is extremely important to encourage starter feed intake with an ideal ratio of 4:1. 0.5kg starter intake requires 1.8 litres water intake. Without water there will be slower rumen development and feed conversion.

At a month of age a calf could be consuming 5-8 litres water.

Important Factors to Remember

- KEEP THE CALF PROTECTED
- KEEP THE MATERNITY PEN CLEAN
- FEED COLOSTRUM

PROPER NAVEL DIP:

- Free of bedding and dirt
- Treat exposed navel
- <7% Iodine Tincture—it needs to have an alcohol content so not dairy Iodine

Separate the calf from the cow ASAP. The mortality risk doubles if the calf remains with its dam for 13-24 hours compared to 2-6 hours.

Feeding calves more milk will increase the milk they produce in first lactation. This is related to an increase in the mammary parenchyma (tissue in the udder).

The mammary gland responds to nutrients fed in the first few weeks of life.

Feeding the Calf

Calf starter should have:

- Digestible and palatable ingredients
- Minimum dust
- Balanced profile of nutrients
- NDF > 15%
- Easily fermentable carbohydrates, starch 35-45%
- Protein sources for microbial protein and post-rumen digestion



Forage:

- Use grass hay/straw chopped
- Limit to 5-10% intake
- Do not use Alfalfa until after weaning
- Helps increase muscle tone and development of the rumen

