

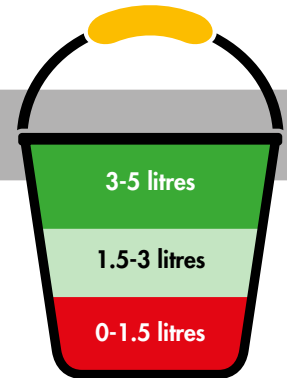
The 3 Qs of feeding colostrum: Quantity, Quality and Quickly

Colostrum is vital to the newborn calf as it contains antibodies (also known as immunoglobulins or IgG) to provide immunity and it is also rich in essential nutrients to provide energy for growth.

Quantity

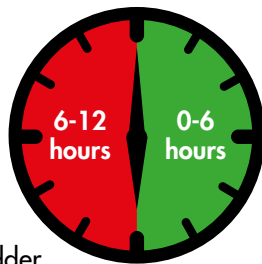
The recommendation is to give a first feed of 3 litres or 10% of body weight. This should be followed up by another similar size feed within 12 hours of birth.

The colostrum should be fed at body temperature which is 38°C.



Quality

- **Good quality** colostrum contains at least 50g/L of IgG. Any colostrum containing <20g/L of IgG should not be used
- Colostrum quality declines the longer it is held in the udder as it becomes more dilute with time
- You cannot tell the quality of colostrum by looking at it – it must be tested



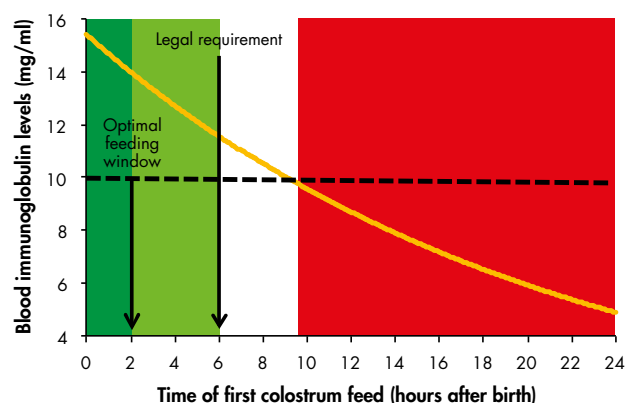
- Test colostrum from all cows. Ensure cows are milked as soon as possible after calving to ensure best possible colostrum is collected and fed to newborn calves
- Quality will decline if the colostrum becomes contaminated with bacteria.

Ensure that you have a supply of good quality frozen colostrum, from cows of known health status to use if the dam's own colostrum is not of sufficient quality.

Quickly

The efficiency of antibody absorption from colostrum declines rapidly from over 40% at birth to less than 5% by 20 hours.

It is very important that calves receive their first colostrum feed as soon as possible after birth, ideally within 2 hours, to optimise immunity.



Method of feeding

Calves left to suckle their dam are 2.4 times more likely to receive insufficient antibodies. **You should therefore feed the calf by either:**

- Nipple bottle. Promotes transit of the colostrum to the true stomach
- Tube feeding. Ensures that the full volume of colostrum is received by the calf but this is a skilled technique which can only be undertaken safely by trained staff.



If you start using a bottle and the calf does not drink it all, the remainder should then be given by tube to make sure that it receives the full 3 litres.

Future care

Even good quality colostrum fed on time only contains a limited amount of antibodies. The newborn calf does not yet make more of its own antibodies. It is, therefore, vital to follow up giving good quality colostrum by:

- Keeping the calf in a suitable environment
- Providing sufficient feed
- Maintaining high standards of cleanliness in both feed preparation and housing.

Monitoring

Providing sufficient good quality colostrum within 6 hours of birth will reduce calf mortality and disease.

Blood testing your calves can tell you how good your colostrum management is. Ask your vet to take samples from at least 12 calves within one week of their birth. Samples can be tested for either the actual antibody (IgG) level or the total protein (TP) in the blood. At least 80% of the group should be categorised as 'good'. Any less and you should examine the potential causes.

Quality	IgG g/L	TP g/L
Good	>12	>55
Marginal	10-12	50-55
Poor	<10	<50

Summary of recommendations

Feed the right quantity of good quality colostrum as soon as possible after birth to all calves.

Remember the 3 Qs...

1. Quantity – 3 litres or 10% bodyweight
2. Quality – contains at least 50g/L of IgG
3. Quickly – within 2 hours of birth.

For more information on calf management, please visit the web: dairy.ahdb.org.uk/calves

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