



serval

ADVICE SHEET

Immunoglobulins
Nursing
Maternal Calf
Colostrum
Immunity
Quality
Milk
Protection
Refractometer
Antibodies

VEAL CALVES

Colostrum



COLOSTRUM

CARACTERISTICS

The real colostrum is milk from the **first milking**, it is rich in antibodies & protects the calf against neonatal diseases, until its own system is fully functional. Colostrum is also important as a primary source of **nutriments**. It is essential for the **immunisation of calves** against post-partum infections.

ROLES



NEEDS

Distribution at the earliest (immediately after birth), sufficient quantity of quality colostrum is essential for the life insurance of young animals.



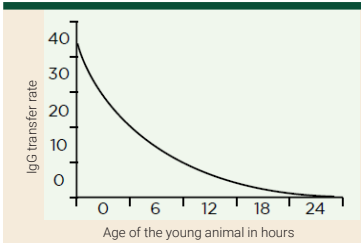
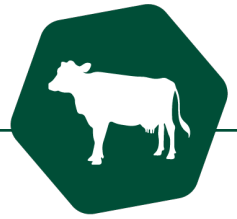
calves

	Within the first 2 hours	1,5 L
	Within the first 4 hours	4 L
	Within the first 12 hours	4-6 L
	Within the first 24 hours	6 L

For good immunity, a calf must absorb 200g of immunoglobulins in the first 6 hours of life:

i.e. 4L for a colostrum of 50g/L of IgG.

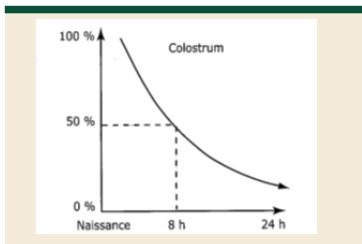
Ideally, you should obtain: 300 g of IgG.



Graph adapted from Blomquist, 2009.

The ability of the small intestine of the calf to absorb immunoglobulins decreases rapidly during the first hours after birth.

If a calf has not received any colostrum within 12 hours of birth, it is unlikely that he will be able to develop enough antibodies later to develop immunity.



The colostrum contained in the “first milk” is the richest in antibodies and nutrients. These amounts decrease in the colostrum produced later by the mother.

QUALITY

The quality of colostrum is measured in g of **type G immunoglobulins (IgG)**. Colostrum varies from mother to mother and depending on the calving preparations.



calves

IgG quantity for cattle (g/L)	QUALITY
0-25	VERY BAD
25-50	BAD
50-100	GOOD
GREATHER THAN 100	EXCELLENT

Excellent quality colostrum can be frozen.

Thawing is done in a water bath or at room temperature.

NEVER IN THE MICROWAVE

If the colostrum is of poor quality, do not hesitate to supplement or replace with a colostrum-replacement.

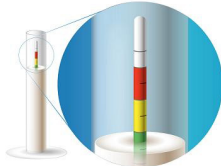


COLOSTRUM

MEASURE

Two tools can be used to measure the quality of colostrum: the colostrum scale and the refractometer.

The colostrum scale is calibrated for bovine colostrum. Density is different for goat or sheep milk.



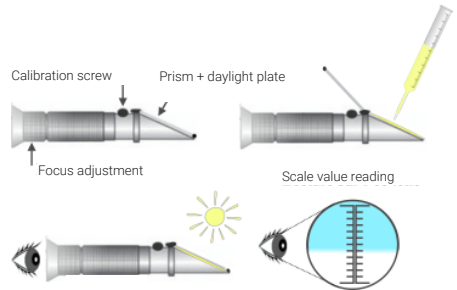
a colostrum scale



a refractometer

REFRACTOMETER

- Put a few drops on the plate (prism).
- Close and look through the eyepiece.
- Read the number between light and dark on the left.
- Clean and dry thoroughly after each use.



calves

	Brix	Actions
VERY BAD	< 17 %	Take colostrum from another cow
BAD	18-24 %	4 to 6 liters or 3 liters + 1 bag of colostrum-replacement
GOOD	25-29 %	3 to 4 liters
EXCELLENT	> 30 %	2 to 3 liters

CONSEQUENCES of a bad distribution of colostrum (quantity, quality, delay)

- risk of mortality x 5
- risk of disease x 8
- mediocre weaning weight: inferior ADG

Areas for improvement to study in the event of bad colostrum:

- Ratio of dry up cows (in quality and quantity, minerals included)
- Control of parasitism (especially fluke)
- First milking as early as possible (possibly within a few hours after calving)
- Vaccination of cows against diseases of calves