

## Advantages of feeding transition milk

More energy, higher levels of nutrients, local immunization of the intestines, prevention of diarrhea, utilization of antibodies secreted in the transition milk during the days after calving from vaccinated dry cows. This way the calves get immunized for a specific disease. Transition milk is the milk milked from 2.-4. milkings after calving.

## Milking

By milking with high hygiene (using gloves and ensuring a clean udder) the risk of bacteria and viruses entering the milk is reduced. The newborn calves are very vulnerable towards bacteria and viruses from outside their own environment, as their immune system is not developed yet. The majority of the calf's immune system is located in the intestines; therefore, it is extremely important to be aware of what is fed into its digestive system.

Mixing transition milk with high cell count milk and/or milk containing antibiotics increases the risk of excessive bacteria in the calf's intestines. As a result, the antibodies from the milk are used locally instead of being absorbed into the immune system. Calves are not strong enough to resist this at this age. Milk with antibiotics can hurt the calf later in life, as it may develop resistance against anti-biotics, making them ineffective if needed.

## Storage

When milking, handling and feeding transition milk there is a high risk of bacteria developing in the milk. It is advantageous to regularly test the bacterial count to ensure proper cleaning and handling.

**Protocol of volume of transition milk** As the volume of transition milk can vary together with the number of calves being born, it may be necessary to have a scheme or protocol to keep track of the available transition milk.

Test the milk after milking, after storage, and before feeding. It is recommended that the bacterial count doesn't exceed 20.000 cfu/ml total and <100 cfu per ml.

## Feeding fresh transition milk

1. Check the scheme for how much transition milk you need for this feeding (depends on the number of calves)
2. Place the cooled transition milk in the milktaxi (could be an older/cheaper milktaxi)
3. Heat the milk at correct feeding temperature (40 °C) in the recommended way (slow heating with stirring)
4. Feed the transition milk to the youngest calves first (3-4 litres each feeding depending on the herd's milk yield). Calves up to 7 days will benefit from being fed only transition milk if the herd has enough. Afterwards the calves can start on whole milk or milk replacer. If there is extra transition milk, then feed this to calves above 7 days (maximum 14 days) or sick calves. Feed them 0.5 litre per calf.

## Feeding frozen transition milk

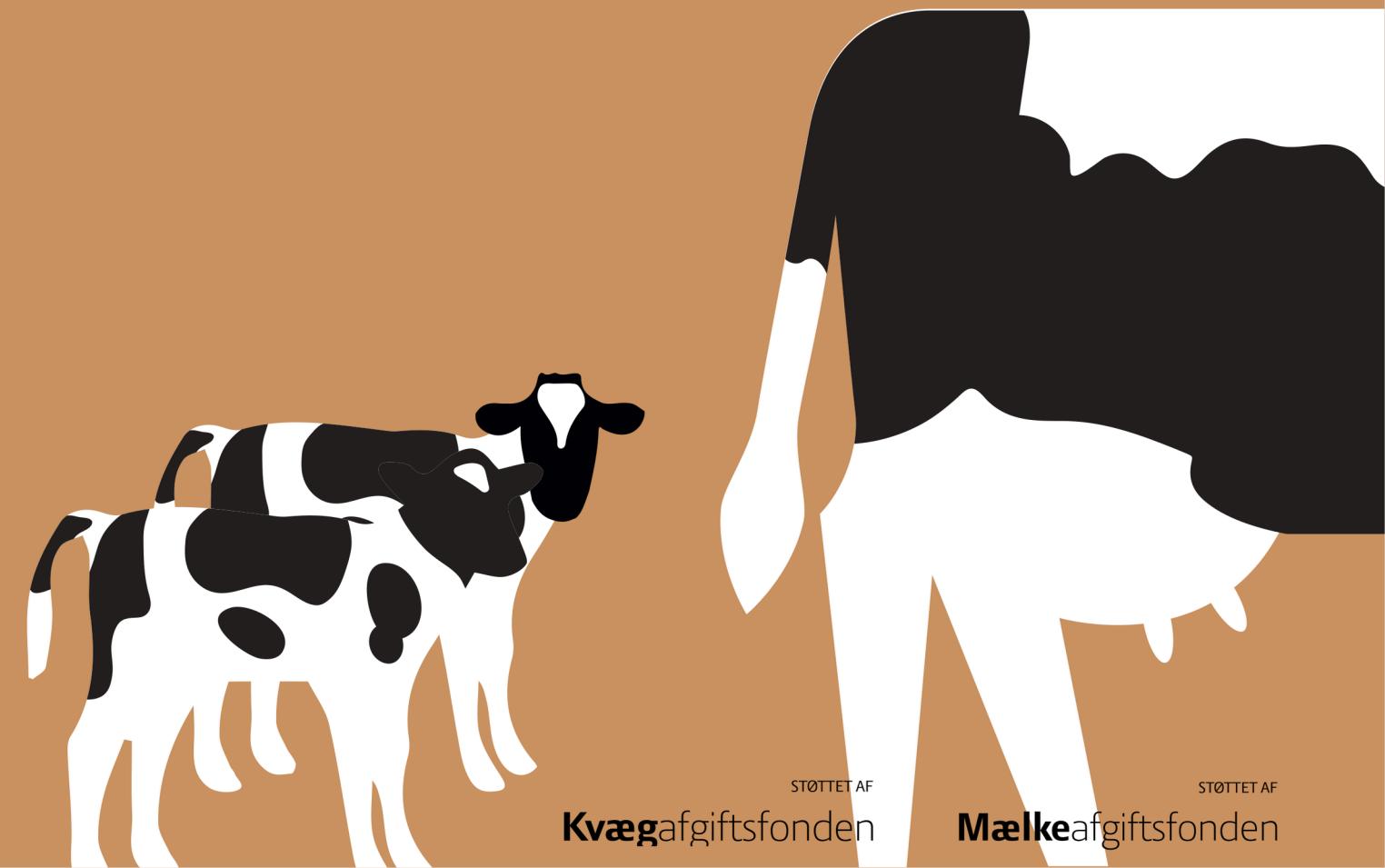
1. Check the scheme for how much transition milk you need for this feeding (depends on the number of calves) and thaw this from the freezer.
2. Place the thawed transition milk in the milktaxi (could be an older/cheaper milktaxi)
3. Heat the milk at correct feeding temperature (40 °C) in the recommended way (slow heating with stirring)
4. Feed the transition milk to the youngest calves first (3-4 litres each feeding depending on the herd's milk yield). Calves up to 7 days will benefit from being fed only transition milk if the herd has enough.

from the cow getting milked the first time to the last time of transition milk. For large herds, it may be beneficial to separate information about colostrum and transition milk into two different schemes.

**Purpose:** To have an overview of how many litres of transition milk are available for each calf.

Cow number	Number of milkings after calving	Volume	Number of calves <7 days	Number of calves 7-14 days	Litres needed

# How to handle transition milk safely and securely



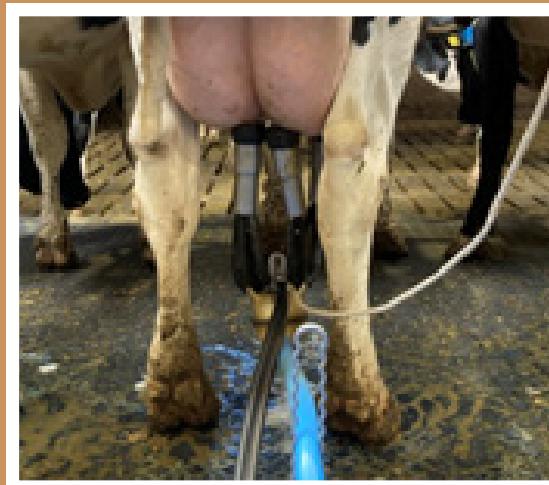
# TRANSITION MILK GUIDE

## Milking

Milk the cow into a separate bucket. Maintain high hygiene (use gloves and ensure a clean udder) and remember to teat dip.

**IMPORTANT** – Do not mix transition milk with high cell count milk or milk containing antibiotics!

● **SEE MORE** in the folder.



## Storage

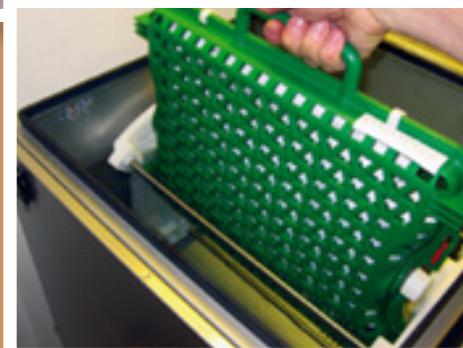
Store transition milk in clean buckets, cassettes, or a separate cooling tank, and cool or freeze it immediately after milking. Keep transition milk in buckets containing no more than 10 litres to ensure faster cooling.

Transition milk can also be fed immediately after milking. Pay attention to the time between milking and feeding to prevent bacterial growth.

● **SEE MORE** in the folder.



**Bucket:** Label each bucket with the milking date. Always use the oldest milk first (maximum storage of two days in the refrigerator).



If the herd is infected with salmonella or mycoplasma: Pasteurize the transition milk at 60 °C for 60 minutes immediately after milking, before cooling or freezing.

**IMPORTANT** – Do not raise the temperature above 60 °C, as higher temperatures will destroy the antibodies

## Feeding – an example

### CALVES FROM 1-4 DAYS

Feed only transition milk for the first 4 days and afterwards 0.5-1 litre at each feeding until the calf is 14 days old.

● **SEE MORE** in the folder.



Do you have enough transition milk? Feed the calves transition milk until 7 days of age.

### CALVES FROM 4-14 DAYS

**Milk replacer:** Mix the milk replacer and add transition milk corresponding to 0.5-1 litre per calf at each feeding.



**Whole milk:** Mix 0.5-1 litre of transition milk per calf at each feeding in the milktaxi and add the volume of whole milk needed for the feeding.