

CARE OF COW AND CALF AFTER CALVING (Level 3)

Topic	Training & information Content
6.1	Selection of bulls, use of sexed semen, feeding management of dry cows
6.1.1	The calving process
6.1.2	Use of equipment around calving
6.1.3	Care of cow and calf after calving
6.1.4	Colostrum management
6.2	Milk (replacer) feeding schedule
6.3	From birth to weaning
6.4	Disease and health management
6.5	Handling of calves after difficult birth
6.6	Young stock rearing info and Key Performance Indicators



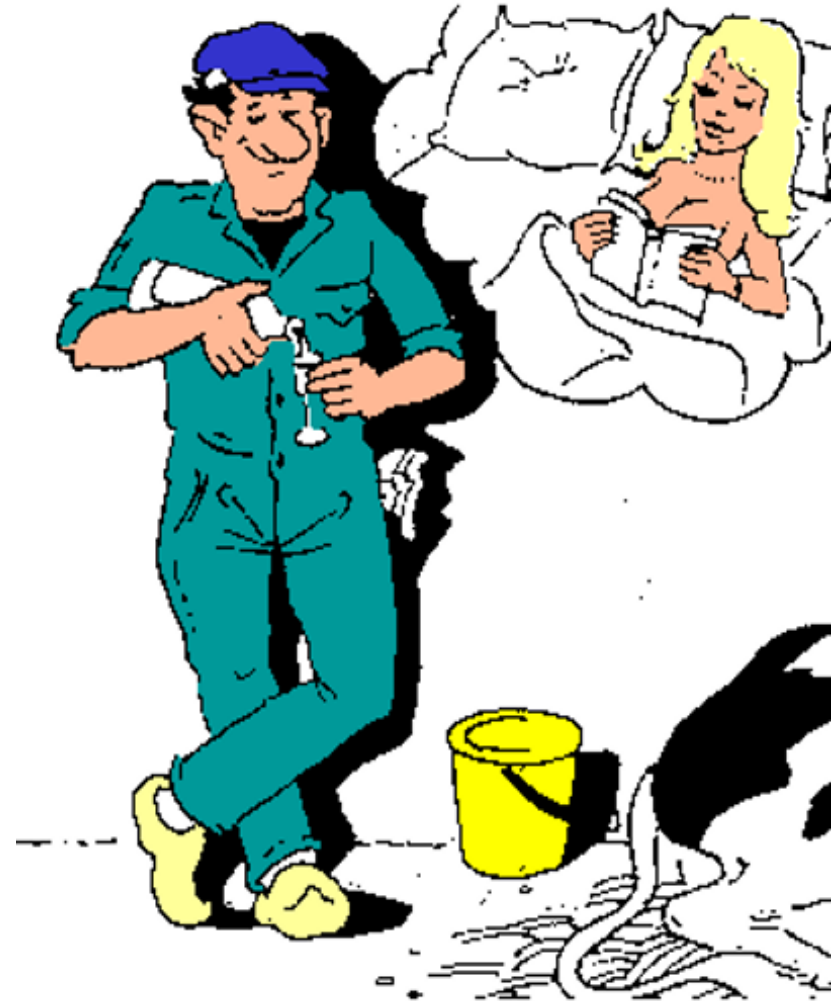
1. You will learn about (learning objectives):

- How to treat a calf during the first 24 hours after birth
- What to do to reduce calf mortality rate during the first 24 hours
- How to treat the “mother” cow after parturition
- Importance of Colostrum management



2. Background

- Worldwide in every farm system, many calves die during the first 48 hours
- In most cases it is the farmer who is responsible for these calf deaths/losses
- In general, a high percentage of these losses are caused by;
 - Lack of skills
 - Lack of knowledge/low level of awareness; and
 - Ignorance



3. Checklist for pre and post calving

To be checked	Yes	No	Action to be taken
Parturition area is very clean	Yes	No	
Vulva area of cow in labor is clean			
Cow's udder is clean and hairless			
All necessary equipment's are present			
Clean fresh cold water is available			
Calf hutch is ready for use			
Navel cord disinfection fluid is present			
Milk cans are disinfected and washed			
Feeding bottle, (tube feeding) near by			
Contacts Veterinarian available			
Cooling facilities available (colostrum)			



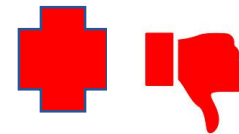
3.1 Checklist for pre and post calving Cont'd... (Pictorials)



Calf Care ?

Cow Care ?

Hygiene!



3.2 Checklist for pre and post calving Cont'd... (Pictorials)



+++Calf Care

+++Cow Care

+++Hygiene



4. Calf mortality

Example;

Negative impacts on calf mortality in the first 48 hours

- + Poor comfort for the cow.....calving process may delay.
- + Poor hygienic conditions.....sterile calf immediately infected.
- + Leaking milk, wet and dirty udder/teats.....contaminated colostrum
- = Relative high risk of diseases and death



5. Calf survival

Example;

Positive impacts will help the calf to survive easily

- + The best place to give birth
- + Excellent hygienic conditions.....clean environment
- + Nice clean udder..... Good quality colostrum, no unnecessary infections
- = High survival rate without diseases



6. Preparation for calving: Calving area

- Calving area is the place where many “future” diseases are instilled
- Manure from fresh cows/cows under parturition have an estimated more than 100 more Coliform units more in their manure compared to other cows in the farm
- Early scours and early deaths can be avoided by having a separate area where cows give birth. The area, if enclosed, must have smooth surfaces and be cleaned and preferably disinfected after every use



7. Calf care – after birth

- Immediately after the calf is born, all the emphasis must go to the calf
 - Is the calf alive?
 - Is the calf active?
 - Is the calf breathing/stuffy?
 - Is the calf's navel cord not bleeding?



What next:
Navel cord
disinfection

8. Calf care: Navel cord disinfection

- Navel cord disinfection is a number one priority immediately after birth

Step by step procedure

- Step 1; Localize the exact place of the navel to be sure the treatment is effective
- Step 2; Dip the umbilical cord in the dip cup few times up and down to be sure that the whole area is disinfected



Source: Roodbont

8.1 Navel cord disinfection Cont'd...

- Step 3; Take the dip cup away after the treatment and asses the presence of sufficient dip agent
- Step 4; To finalize; fill your hand with dip agent and massage the navel for 10-15 seconds



Source: Roodbont

9. Calf care: Licking and/or drying

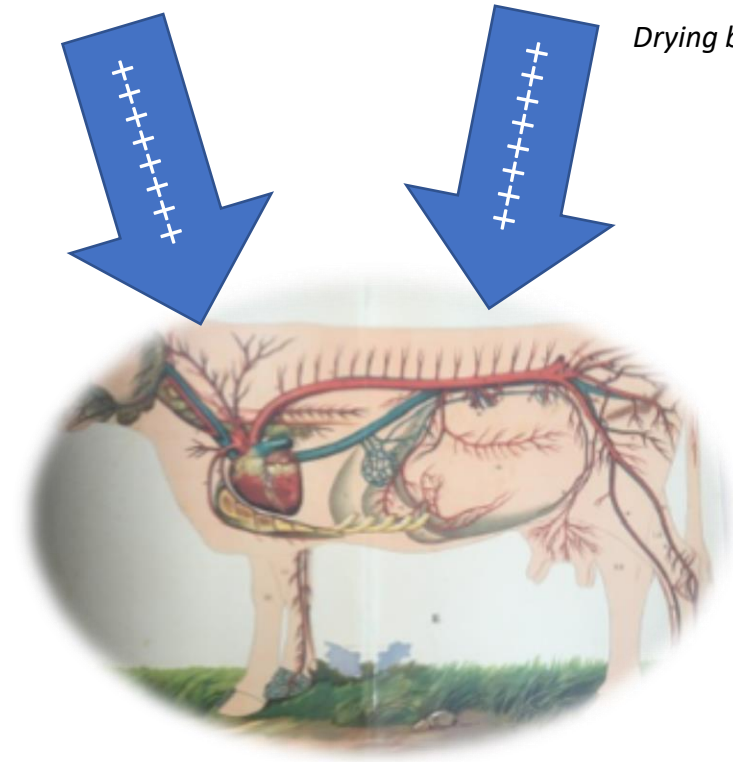
- Calf's blood circulation is stimulated under influence of licking by the mother or drying by the farmer
- This activity for sure has a positive influence on the calf's suckling reflex and the calf's colostrum intake



Licking by the mother



Drying by the farmer



10. Caring for both Calf and Cow

++ high level of cow care, offering water
-- low level of calf care, dirty underground, calf can easily be infected through (open) navel cord



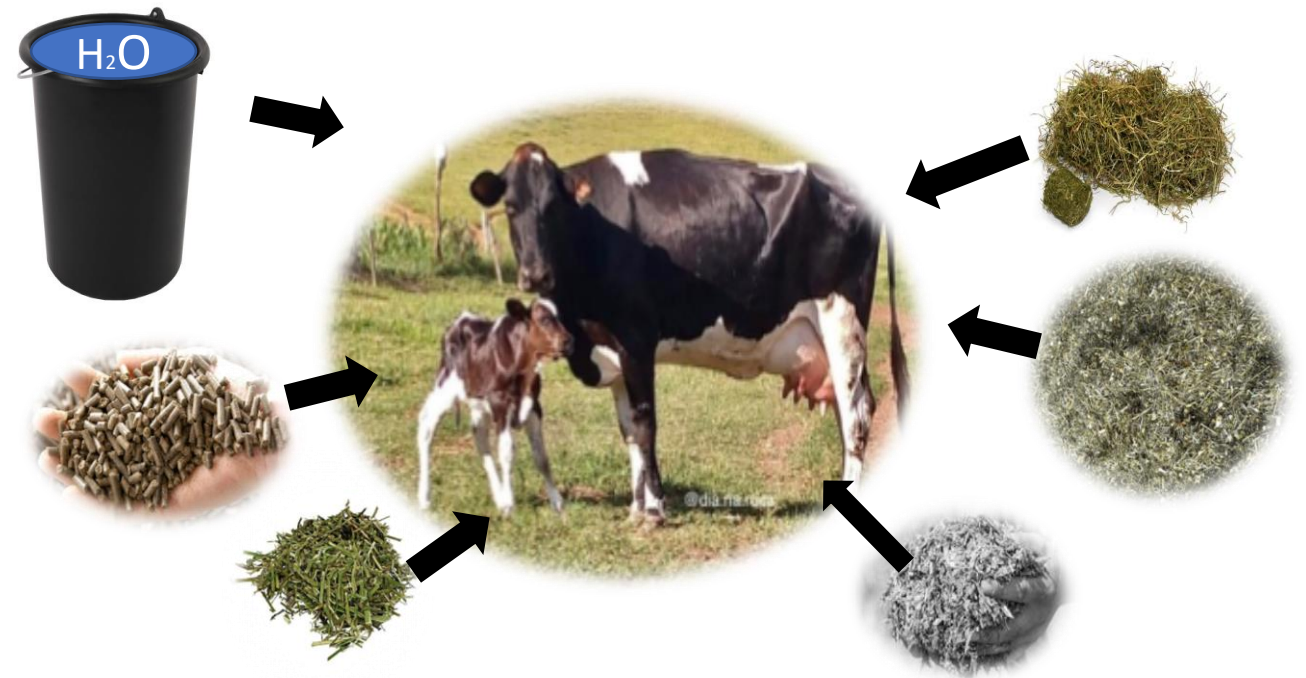
11. Cow care

- For a newly calved cow, everything must be aimed at getting the feed intake going as quickly as possible
- All the feedstuff available in the farm must be offered to the cow to fill up her stomach

!!!!

Be careful with concentrates. Roughages can be given ad-libitum

- Water, without limitation, is the cheapest medicine to increase the feed intake and to let the cow feel hungry



Remember: "A healthy rumen is a healthy cow"

11.1 Cow care cont'd...

- After heavy parturition, a cow normally doesn't want to drink/eat. Drenching will help to activate the cow
- Of course it is better to add some electrolytes (commercial, or home made sugar-salt solution), but if not available just water will also help to arouse the feeling of hunger in the cow
- The cow on the picture has had a heavy parturition, look at swollen vulva.

TIP: Take the water hosepipe and start cooling the vulva area for at least 30 minutes to avoid further swelling.

Watch this video:

<https://www.youtube.com/watch?app=desktop&v=JCwwBEQrMRI>



11.2 Cow care cont'd: Drenching fresh COW

- Ready-made products, if available, can be used for drenching a fresh cow
- In case of home made electrolytes you can make use of the recipe mentioned on the picture alongside

Fresh Cow Drench Recipe

(Adapted from Stokes and Goff, Hoards Dairyman Sept. 10, 2001- McGuirk,-2007, Peffer-2008)

To a large pail, add the following:

Water - 20 liters (5 gallons)

Calcium propionate - 570 grams (1.25 lb)

Yeast (Alltech Yea-sacc) - 200 grams (0.45 lb)

KCl (*Potassium Chloride*) - 100-150 grams (0.22-0.33 lb)

MgSO₄ (*Magnesium sulfate*) - 200 grams (0.44 lb)

Sodium PO₄ (Sodium Phosphate) - 220 grams (0.5 lb)

Others ingredients that may also be added.

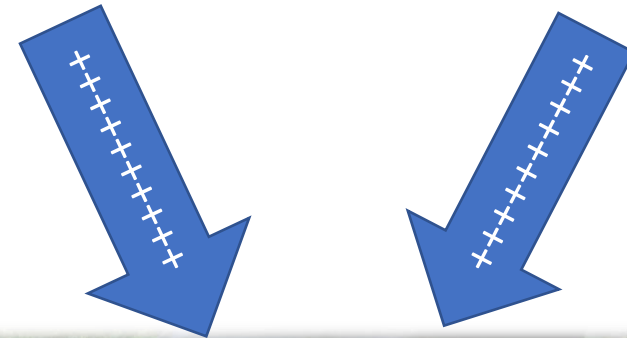
- Alfalfa meal - 1kg (2.2lbs)
- Fats - (energy)
- Vitamin A
- Vitamin D3
- Vitamin E

**Caution: Use of stomach pump needs to be carefully and properly preformed to avoid drow



12. Placenta

- Placenta will come off soon after calving, giving the cow the opportunity to lick the calf will help to drift off the placenta
- Also frequent milking has a positive impact on drifting of the placenta
- In healthy cows this process is completed within 12 hours after the calf is born



13. Hygiene

- Maintain hygiene at all times

Hygiene!



14. Colostrum management in case of Feeding

- Milk the colostrum as soon as possible (within one hour after calving)
- Use clean buckets and wash your hands properly before milking
- Before milking, clean the udder and teats intensively
- Feed the calf at least 1.5- 2 litres fresh colostrum
- If some colostrum is left, store in a cool place (e.g. refrigerator) for use in the second feeding
- Milk the cow again after 6-8 hours and store it in a cool environment for another feeding to the calf



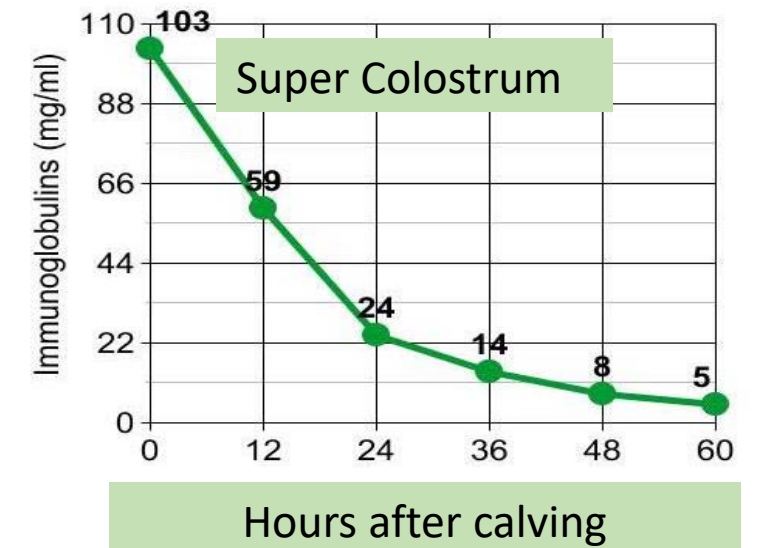
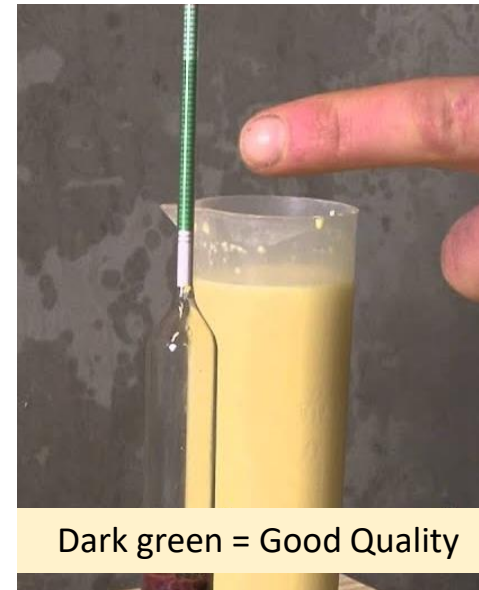
14.1 Colostrum management in case of Feeding Cont'd...

- Cooled colostrum must be warmed up to 40°C by the so called 'Au-Bain Marie method.' That is;
 - Put the colostrum in a container and inside another container with hot water 70-90°C . Continuously add hot water and stir the colostrum
 - DO NOT put the water container with the colostrum container on a heat source



15. Colostrum quality

- Note:** Immediately after calving the quality of the colostrum in the cow's udder decreases because dilution. This is why we must try to milk the cow as soon as possible and store the "extra" colostrum for second feeding



15.1 Colostrum quality cont'd...

- High quality colostrum (with high content of immunoglobulins) fed fast/early, will help the calf to increase the level of passive immunity (yellow line) and at the same moment help develop the active immunity (green line). Combining these two activities will automatically lead to decrease in the length of the risky period (orange line)
- Good colostrum management and feeding means that after 21 days, the calf's active immunity level is strong enough to fight external pathogens



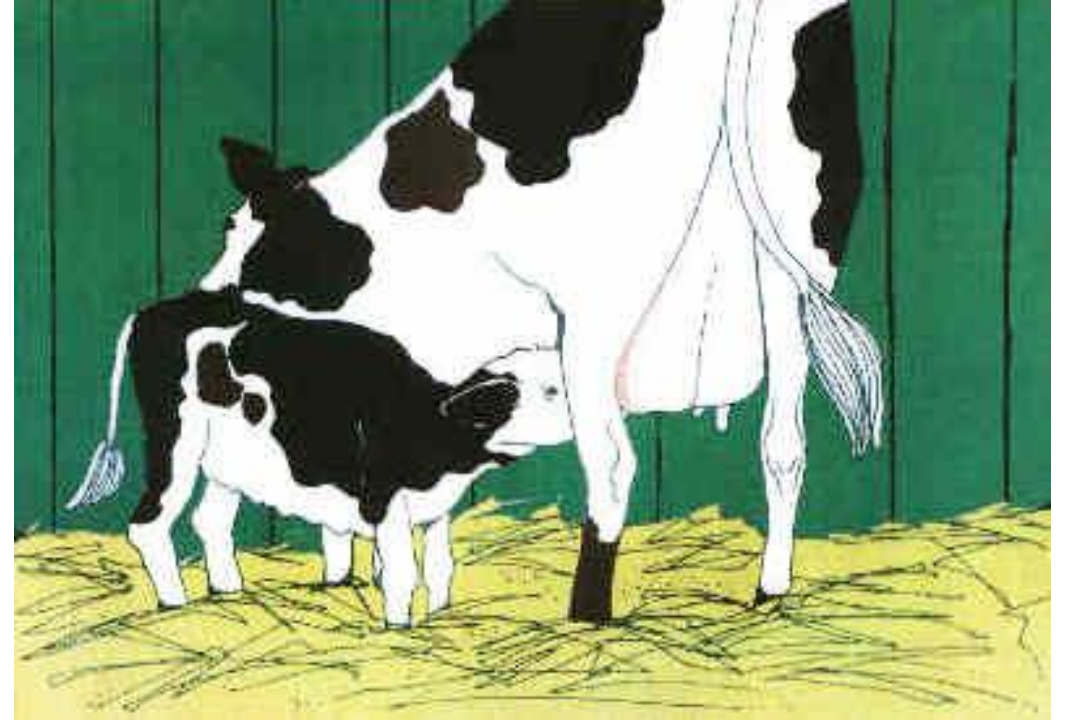
16. Colostrum management in case of Suckling

- Keep cow and calf together but separate from the rest of the herd
- Before suckling, udder and teats need be cleaned intensively
- Always check the teat canals whether they are open
- Also check all four teats for mastitis



16.1 Colostrum management (in case of suckling) Cont'd...

- Observe behaviour of the cow (especially first calvers) whether she allows the calf to suckle
- A sleeping calf is a content calf, means stomach is full
- Active calf throughout the day means:
 - Low intake of colostrum
 - Dirty udder
 - Deep udder (udder sagging closer to the ground)
 - Poor maternal qualities
- Relying and trusting that the calf will instinctively suckle the mother is not recommended. That is, older cows who give birth, more than 45% of the calves will not get the chance to suckle the mother (Source: Edwards & Broom. 1979. Res. Vet. Sci. 26:255-256)



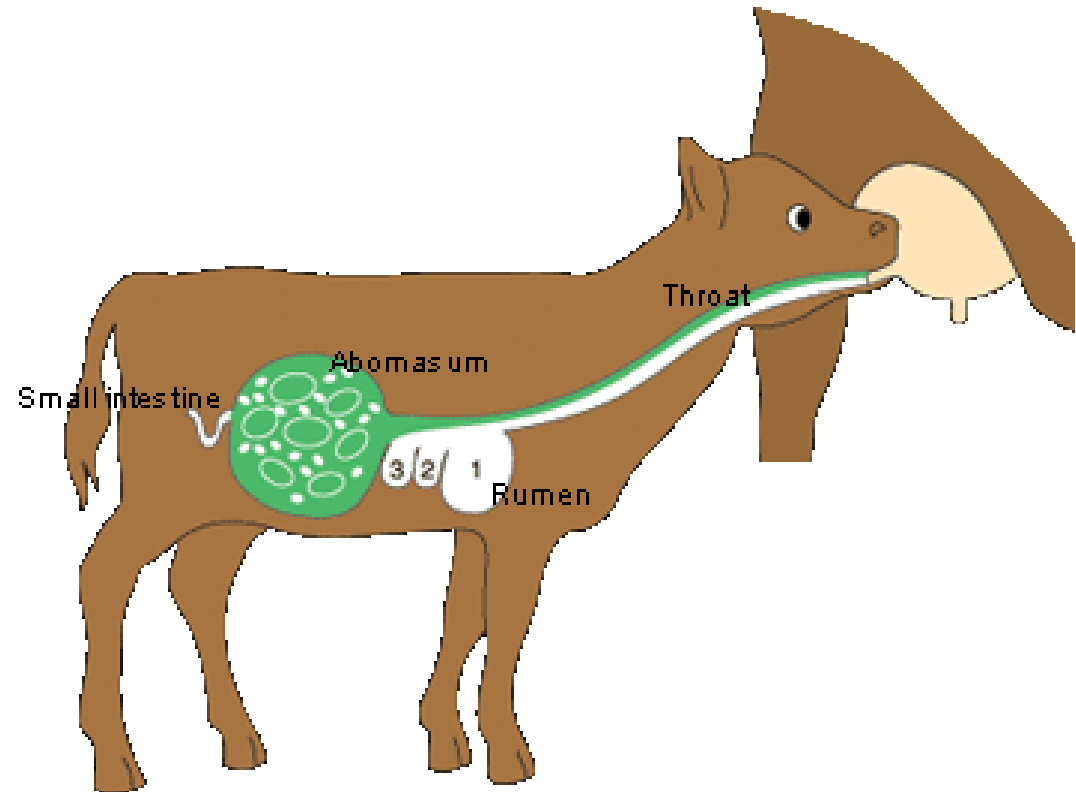
16.2 Colostrum management (in case of suckling) Cont'd...

- In summary, calves can suckle colostrum from;
 - a milk feeding bottle
 - a teat bucket
 - the 'mother' directly



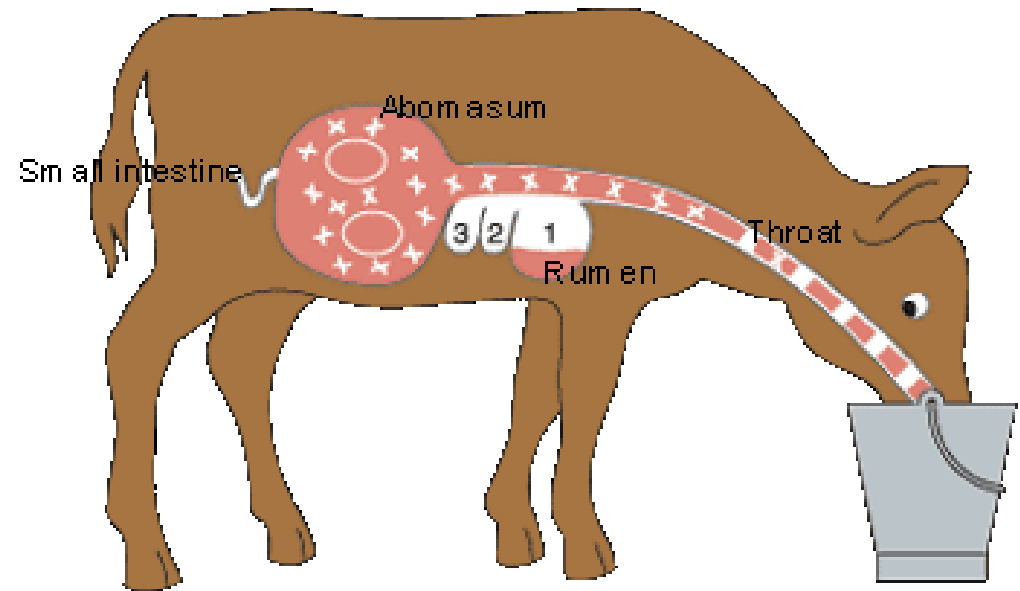
17. Suckling/feeding milk to calves

- The way of suckling/drinking might be the cause of problems
- This is the how a calf should drink milk. This way, all the milk goes into the abomasum



17.1 Suckling/feeding milk to calves cont'd...

- This way of drinking may cause some digestible problems. Look at the milk that enters the rumen !!!!



18. What to do in case of abnormalities

- In case; there is no feeding bottles/teat bucket, bucket feeding may work
 - Ensure your hands are very clean! (wear gloves if possible)
 - Keep the drink bowl high (see brown calf)
 - Look at the black calf, far to low. Milk goes into rumen
 - Beware of the feeding temperature. Milk that is too cold milk may cause respiration problems



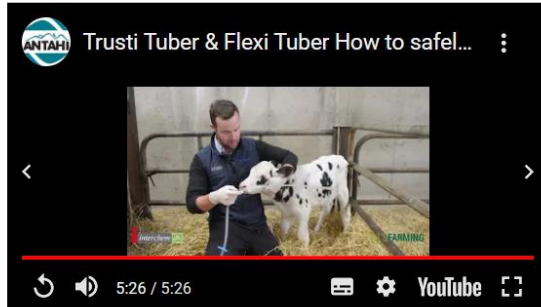
18.1 What to do in case of abnormalities Cont'd...

- In case; a calf is inactive without any suckling activity, tube feeding will be safe for the calf
 - Only allow tube feeding at first (milk) feeding
 - Care has to be taken milk does not go into rumen



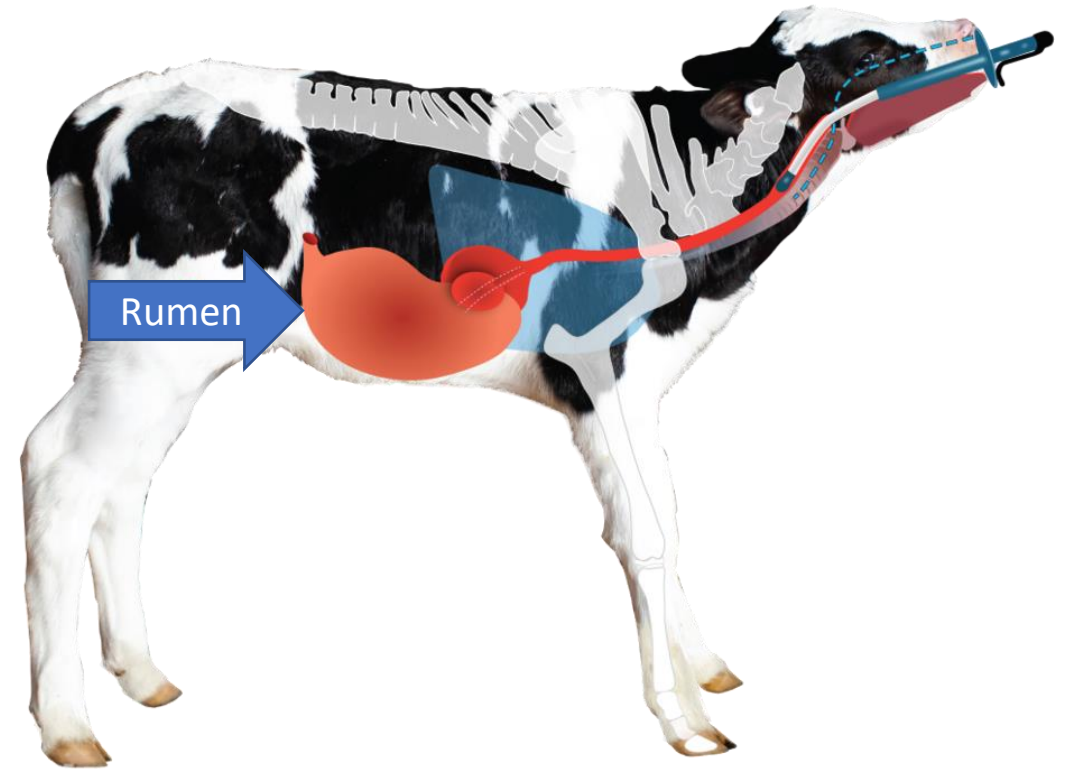
18.2 Tube feeding

- To practice Tube feeding a calf, look at the picture and watch this video



<https://antahi.com/products/trusti-tuber>

Important: Tube feeding with milk/colostrum is only allowed at first feeding. In older calves, tube feeding is allowed only when you use water in case of dehydration



19. Summary: Take home message(s)

Calf	Cow
Its all about Hygiene	Its all about accuracy
Poor hygiene is the most important reason why the mortality rate in new born calves in some farms is unnecessarily high	Poor accuracy is definitely the cause why many cows do not perform well in the first few weeks after calving
Beware! A calf is born without one single gram of resistance, and in any chance bacteria will get to enter the calf's body/bloodstream/respiratory tract and cause a disease to the calf	Beware! The period after calving is the most sensitive period for the cow. The cow is weak and starts mobilizing body reserves. Attention is required to guide the cow throughout this difficult period
First colostrum should be warm and clean; must be given as soon as possible	Water feeding is the cheapest medicine to let the cow eat and recover from parturition issues

- END -