

# PROBLEMS DURING MILKING

## (Level 3)

Topic	Milking& milk Hygiene
7.1	Instructions hand milking techno & hygiene
7.2	Instructions machine milking good practice
7.3	Problems during milking
7.4	Scoring of teat condition
7.5	Milk production recording
7.6	Calculation of costs hand vs machine milking
7.7	Which milking parlour to choose
7.8	Testing & maintenance of milking machines
7.9	Milking & cleaning routine in milking parlours
7.10	Storage & cooling of milk on farm



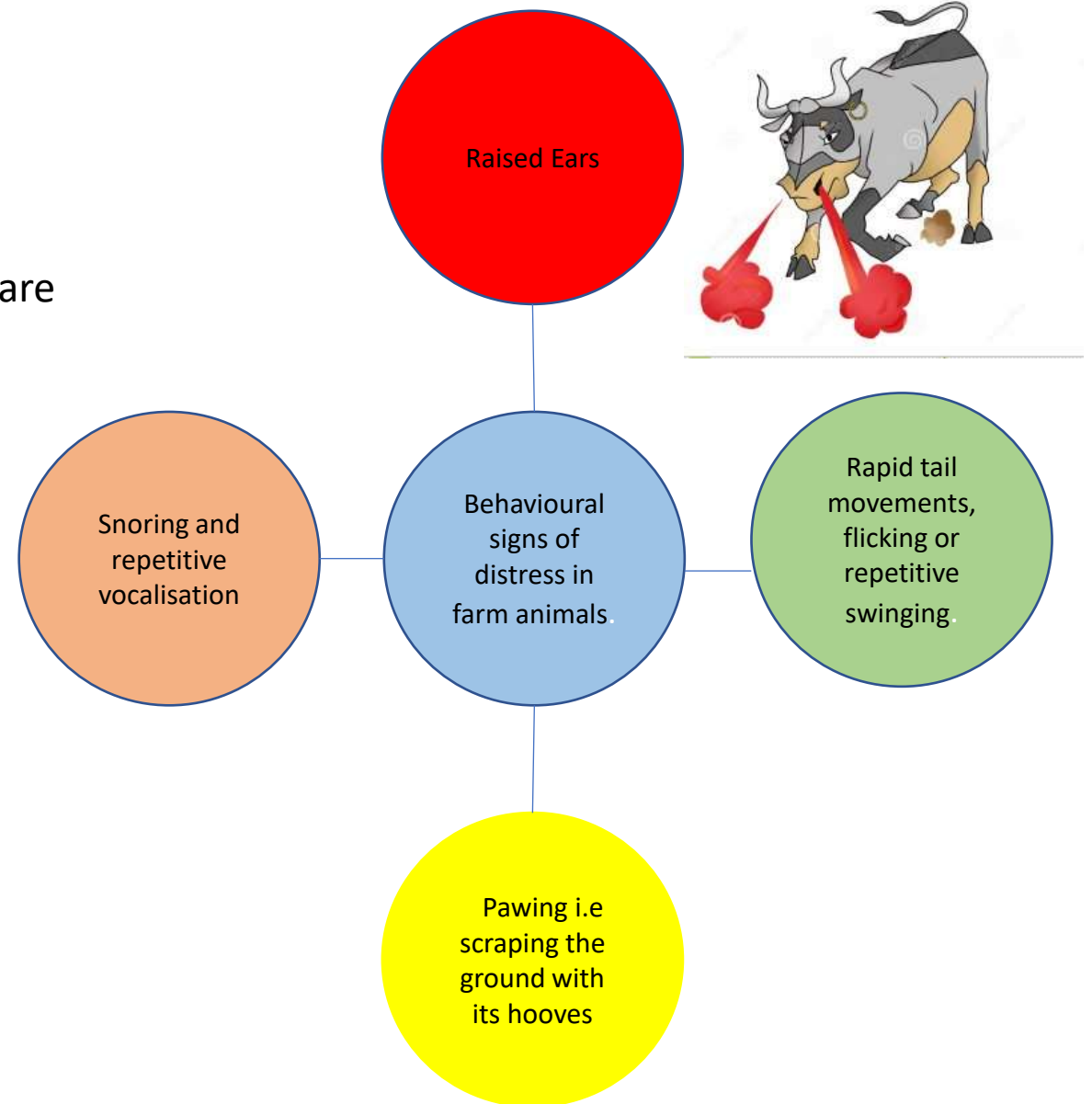
## 1. You will learn about (learning objectives):

- Manage unpleasant behaviour of cows,
  - a good relation between cow and milker is crucial,
  - Anti kick device will help to avoid continuously kicking by the cow (first milking heifer) ,
- Recognize poor milk let down,
- Restrain cows while milking,
- Prevent udder health,
- Recognize mechanical adjustments,
- Vacuum during (machine) milking.



## 2. Unpleasant behavior of cows

- Not all the cows like to be milked either manually or by machine.
- Unpleasant behaviour can mostly caused by stress. Here are several reasons;
  - Attitude of the milker.
  - Skills of the milker.
  - Poor machinery adjustments.
    - Vacuum.
    - Pulsations.
  - Sore teats.
  - Heritable (poor)milk let down.



### 3. Milking “Time”

- Regularity.
  - Milking always takes place at same time.
  - Cow are being milked by same person.
  - Cows are being milked according to a fixed protocol.
  - Cows are preferably always milked in the same order.
  - Cows like to be milked by the same equipment on the same place.
- Irregularity will/can cause.
  - Poor milk let down, less milk.
  - Blind milking.
  - Mastitis.
  - Unwanted behaviour like kicking and kicking off clusters while milking.



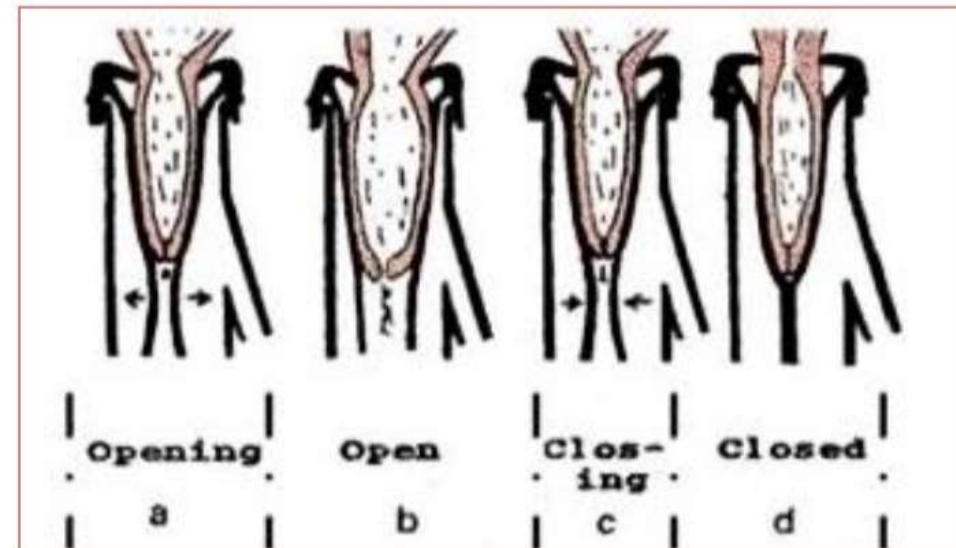
Same;  
Person.  
Time.  
And  
Place !!!!

## 4. Unwanted behavior

- In case of machine milking unwanted behaviour might be caused by.
  - No concentrates available while milking.
  - Sore teats because of udder oedema in fresh cows(especially first calvers).
  - Vacuum level during milking.
  - Inadequate pulsation rate/ratio.
  - Presence of leakage current.
  - First calvers' first milking.
  - Wet (using water) preparation of teats/udder.

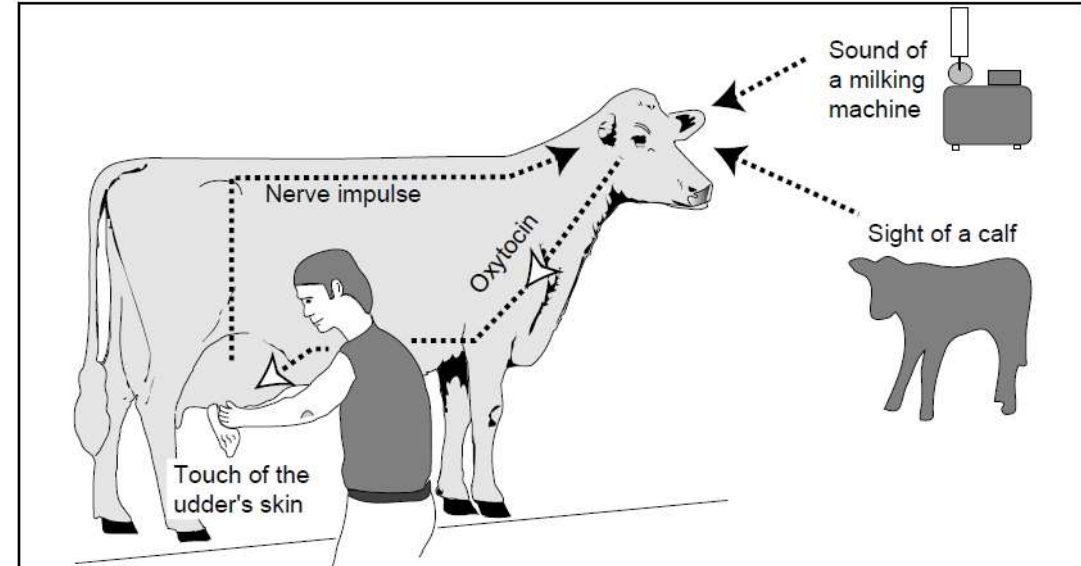


A well adjusted vacuum meter and a right balance between opening and closing time of the clusters is necessary for optimum “milking”.



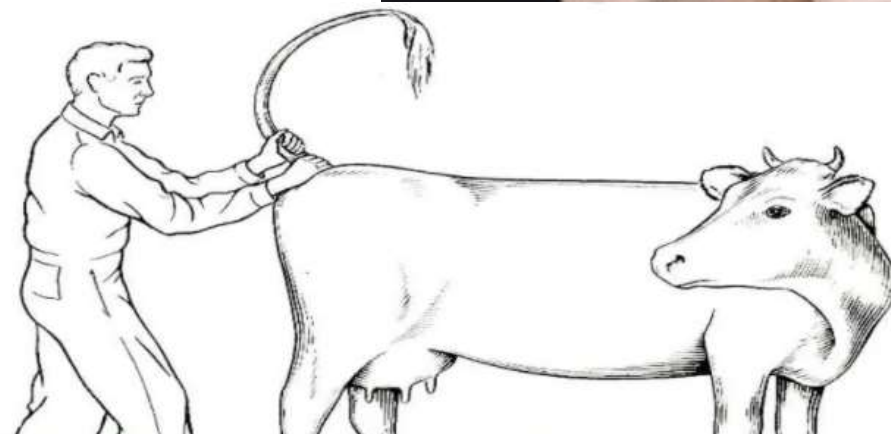
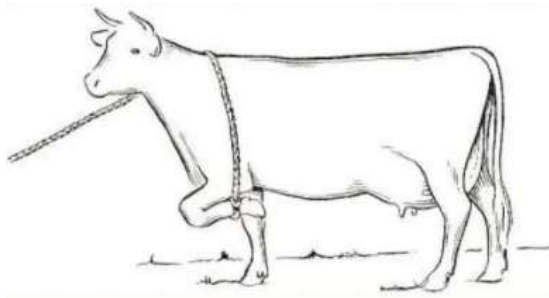
## 5. Back ground

- Concentrate feeding during milking and all other habits that take place during milking ensure optimal oxytocin release.
- Unwanted behavior usually results in release of adrenalin.
- Cause of unwanted behavior.
  - No concentrate.
  - Pain i.e., udder oedema.
  - Approach.
  - Cows on heat



## 6. Restraining when ???

- Be aware;
  - Only in some exceptional cases a farmer is allowed/advised to restrain the cow in such a way that the cow feels “comfortable”.
- Proposed “friendly” methods.
  - Lift up cow’s front leg.
  - Restrain tail.
  - Use of tension bracket.



## 7. Milking place

- Cows always need to be milked in an environment where cows and milker both feel safe and comfortable.
- General advice;
  - Tie the cow during milking.
- Remember;
  - If your cow shows unwanted behaviour, there is always a reason and milker is the only one who can help the cow to feel comfortable again.





## 8. Udder oedema

Udder edema is caused by **excessive accumulation of fluid in extravascular spaces of the udder and surrounding tissues**. Usual recommendations for minimizing the problem include avoidance of excessive salt, potassium, or body condition before calving.

In case of udder oedema udder tissue feels very hard and teats also are hard which makes it difficult/painful to milk the animal.

Udder edema is common, especially with first calvers, immediately before and after calving. Older heifers (> 30 months at first calving) are at greater risk.

Also lack of exercise (tie stall) during and before calving, over conditioning, nutritional management in the transition period may cause udder oedema.



Udder oedema in milking cows is painful for the cow and quite often it results into mastitis because of incomplete milking due to poor milk let down.

## 8.1. Udder oedema. What to do?

- Herd problem /Cow problem.
- Herd problem (Nutrition) .
- Exercise, let the cow walk.
- Milk the cow more often during the day.
- Massage the udder as often as possible.
- Hot compress stimulates blood circulation and promotes oedema reduction.
- Diuretics drug (water pills) may be helpful.



To decrease the oedema pressure;  
Milk the cow at least/ 4 times a day

## 9. Teat shape and teat size

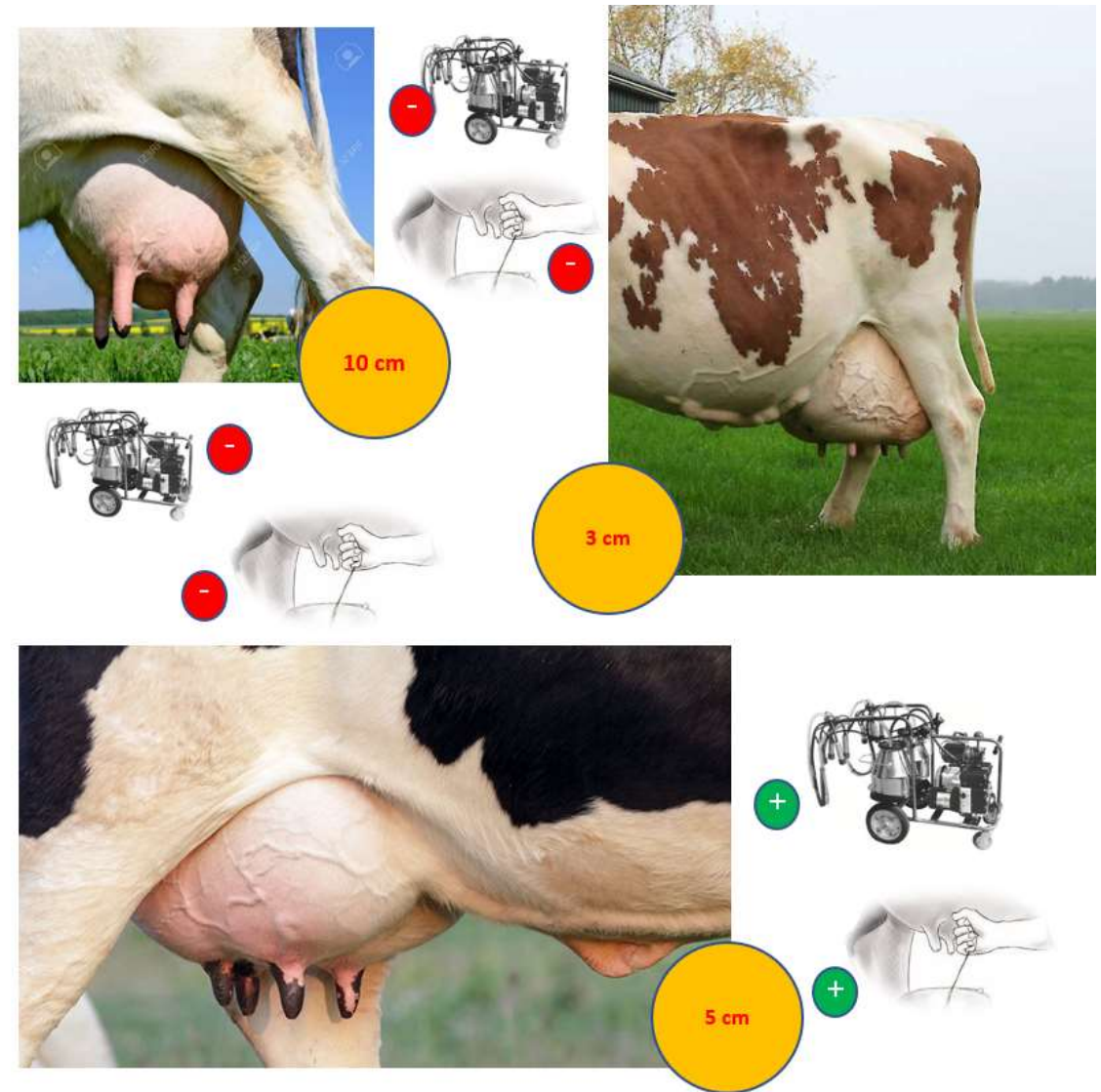
In order to be able to milk a cow properly and smoothly, the teat length and teat shape are largely decisive

The shape of a cow's teat must be cylindrical always.



The most desirable teat length for hand milking is about 7 cm's.

For machine milking the teat length must be 5 cm's



## 10. Incorrectly adjusted milk machine

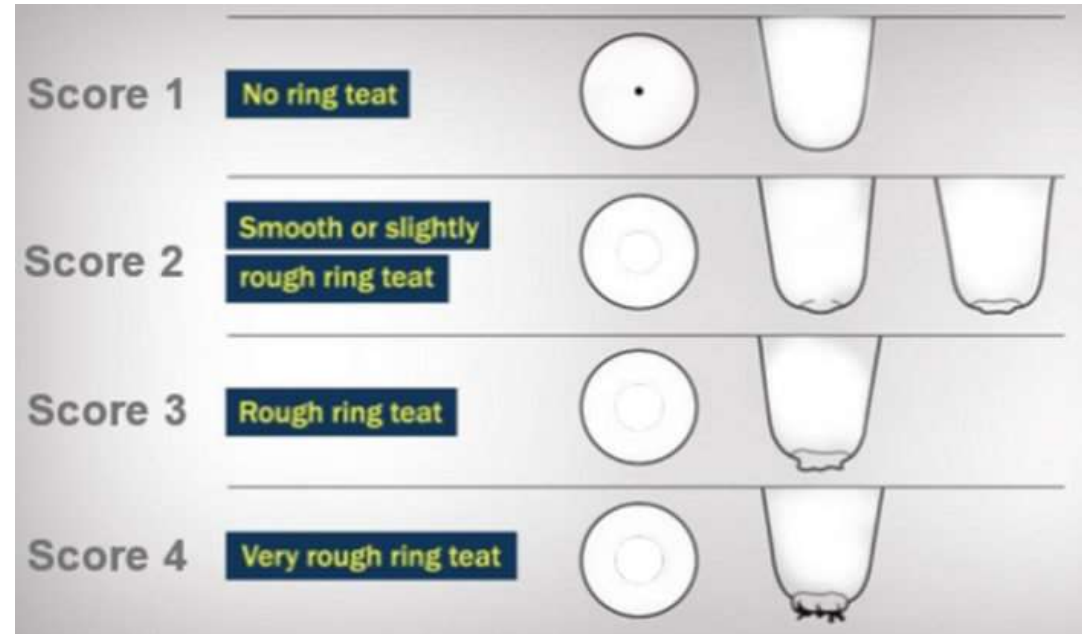


Score 1	Score 2	Score 3	Score 4
No Ring	Smooth or Slightly Rough Ring	Rough Ring	Very Rough Ring

## 10.1. Incorrectly adjusted milk machine.

Cont'd...

- High vacuum.
  - Damaged teat holes(sphincter)
  - Affected teat canal.
- Low vacuum.
  - Poor milking.
  - To much milk stays in udder.
  - Clusters fall off during milking



Damaged teats/teat holes, usually caused by poor maintenance, on the long term will cause (sub clinical) mastitis



Before every milking the vacuum needs to be checked and if necessary to be adjusted to the right level immediately.

## 10.2. Possible effects of incorrectly adjusted milking machine

- Cows are leaking milk.
  - Damaged teat opening (orifice).
  - Stretched teat canal.
  - High vacuum pressure.
  - Blind milking.
  - Over milking (extra pressure on clusters).
  - Irregular milking (time), long intervals.
  - More sensitive to mastitis.
- Milk losses therefore financial losses.

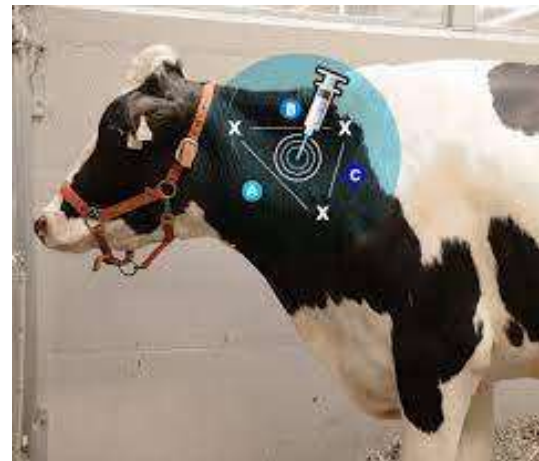
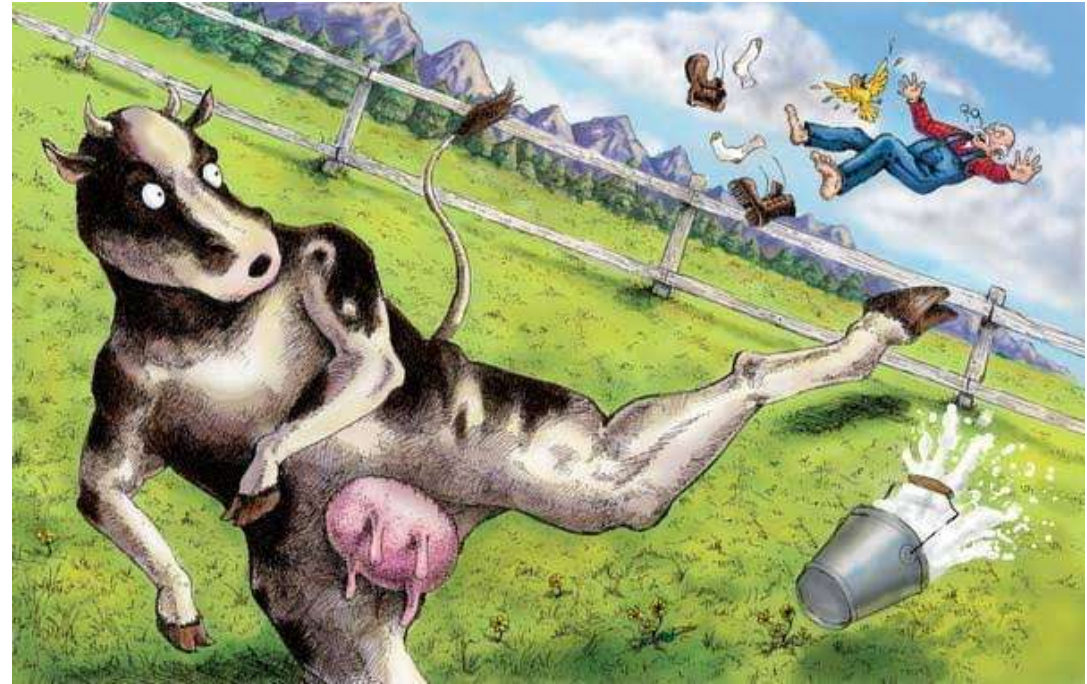


## 11. No/poor milk let down causes

- Newly calved heifers once in a while have problems with milk let down.
- Fear.
- Unfamiliar with milking facility and procedures.
- Mastitis can cause reduced milk let down or no milk let down.

What to do;

- Oxytocin treatment (20 U,IM). Repeated doses should be gradually reduced to avoid dependence.



Milking cows without milk let down will cause trouble. IM Oxytocin treatment just before milking will help.

## 12. Other pain cases

### Udder Cleft Dermatitis (UCD).

Severe cases of udder infection are characterised by an open wound with necrotic tissue and bleeding. When the milk vein is affected, udder metastasis can lead to death.

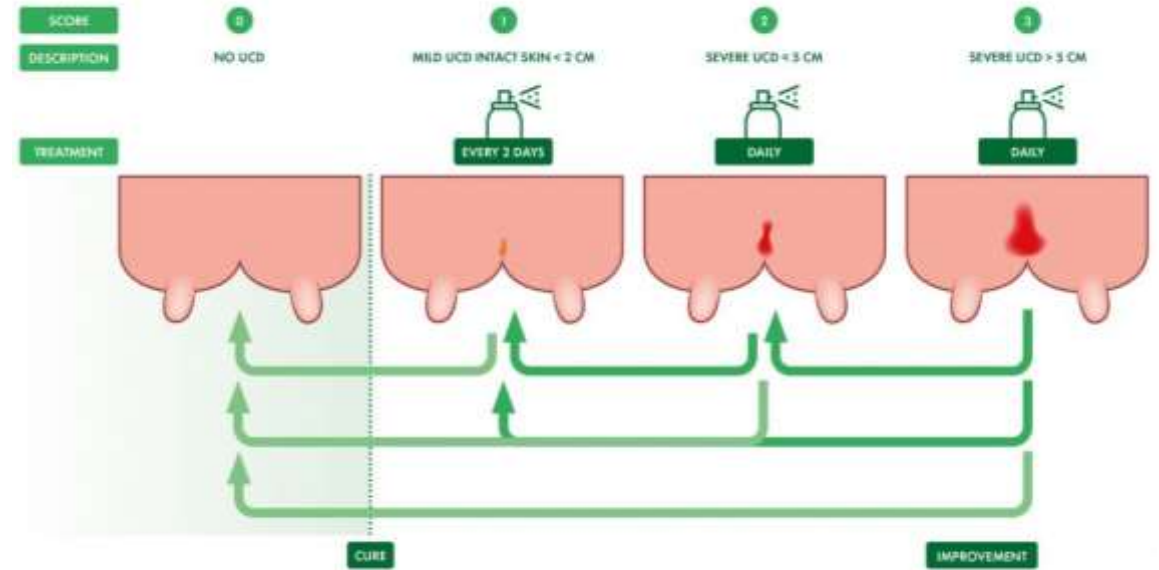
Not always seen.

Especially in high productive cows with high udder pressure very painful.

Has a very bad smell.

Not easy to treat.

Copper-Zinc /Micraderm spray



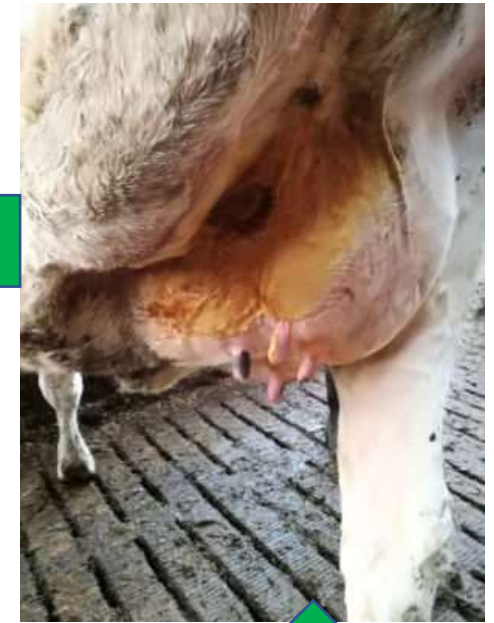


## 12.1. Groin fold eczema

Appears when udder starts swelling (heifers). First calving heifers that will lick themselves are suspicious to develop groin fold eczema.

Inspection by lifting the hind legs is necessary to start the treatment process as quickly as possible.

Healing of groin fold eczema is a difficult long-lasting process due to the high movement frequency of skin and fold.



Skin care products like gel, iodine or spray protect the wound and promote the healing process.



Moist wounds should be wet cleaned with disinfectant iodine soap or unscented shampoo



## 12.2. Blind Milking/Over milking

More than 30 seconds of blind/over milking becomes painful and has negative impact on udder health.

It gives unnecessary damage to teats.

Be aware. In case of machine milking there is always a small amount (0,5 litre) of milk that stays in the udder.

Blind milking also can be observed in fresh heifers (stress), that's why preparation of the udder/teats is very important.



Before Milking



After Milking

### 12.3. Mastitis

When mastitis/abnormal milk is being recognized during the preparation its “ALARM PHASE 1”

- Abnormal milk.
  - Colour
  - Clothes.

All the hygiene measures now must be observed.

Milk separation !!

Clean and disinfect all the utensils that have had direct contact with the “sick” milk.

Postpone milking till all cows are milked.

After milking decide about the treating protocol.



Gloves	++++
Short sleeves	++++
Strip cup	++++
Clean udder	++++

Clinical Mastitis  
Clothes.

Discarded milk.  
Separated.



## 13. Hygiene

Milk is a very valuable product , most of the milk produced on a farm goes straight into the food chain.

Its farmers responsibility that the high quality milk stored into cows udder remains the same after milking.

Cow/udder hygiene

Equipment maintenance



How it should be !!!



Unacceptable

## 13.1. Hygiene. Cont'd...

Its not only the cow that has to be clean during milking, we also have to a lot of emphasis on the equipment being used for milking and last but not least the storage equipment's need to be clean and well maintained.

Before , during and after milking a farmer should take all the opportunities to check to road of the milk, from udder to storage tank, till the milk leaves the farm it's the farmers responsibility !!.



All four pictures are bad examples about how milk is being managed as long as it is in the farm.

This is not what a customer wants to see.

## 14. Training

Cows .

Cows (heifers) need time to get adjusted to the milking machine and to the milking place/parlour.

People.

Before milking machine is introduced every milker must undergo a training programme where all the aspects of milking will be explained by an experienced trainer/coach.



## 15. Summary

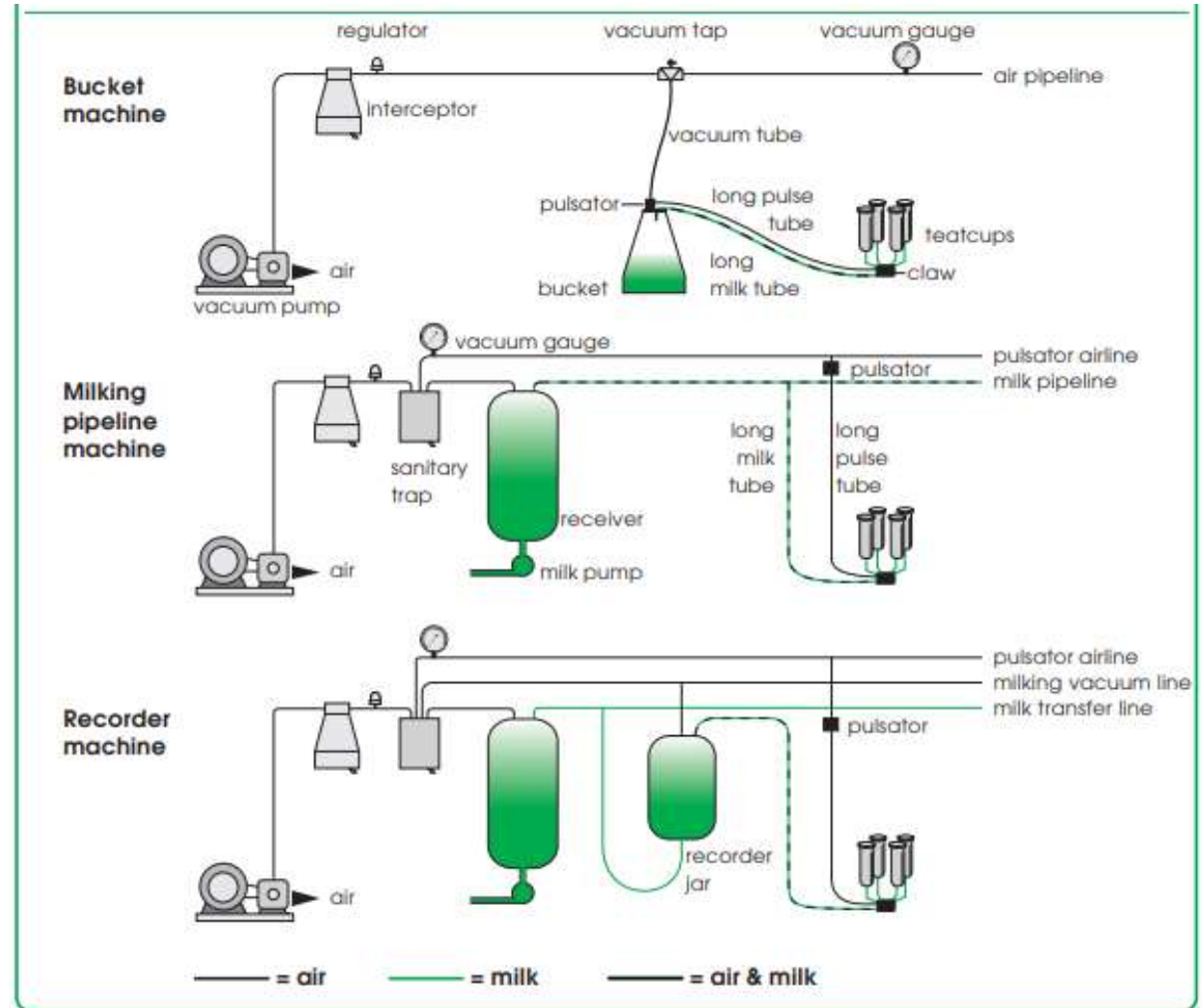
Problems during milking.

Are being caused by the farmer (people).

Poor skills/bad attitude.

Poor knowledge about equipment's.

Training before milking.



\*The basic lay-outs of the main milking machines.

## 15.1. Summary

Problems during milking can/must be avoided.

Problems during milking have a negative impact on cow's milk production.

Problems during milking have a negative impact on cow's health status.

Problems during milking are caused by farmers skills and attitude.

Patience , skills and love for your cows are necessary to avoid problems during milking.

