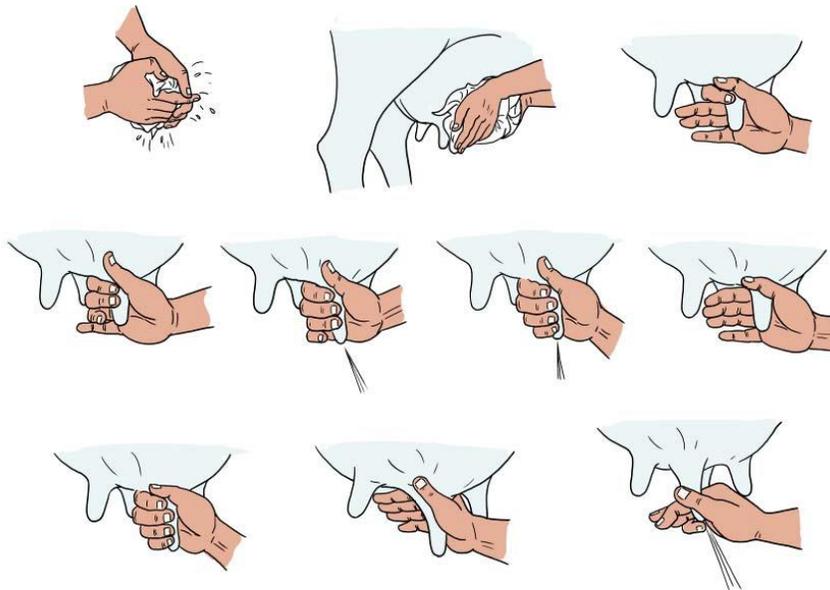


CORRECT TECHNIQUE OF MILKING DAIRY ANIMALS



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MILKING OF DAIRY ANIMALS

Milking Hygiene:

Good Practice:

- **Washing hands with soap and water** before milking each cow.
- **Washing the udder and each teat vigorously with soap and water** and dry them with a clean cloth.
- **Direct the first milk outside the milking bucket** into separate container and throw away.
- Have a clean, dry, floor preferably of rough surfaced concrete without sharp points for the milking area.
- **Keep calves where cows can see them during milking.**
- Use clean containers for milking and before re-using the milk container, rinse it, scrub it with warm water and detergent or soap, rinse it again leave it to air-dry.
- After milking, cover the milk to avoid contamination and place in a clean and cool area.
- Keep the area clean and safe for animals.

Bad Practice:

- **Using Milk from sick cows can transmit diseases to humans.**
- Using unclean plastic containers.
- Leaving milk uncovered.
- Keeping the milk in the sun or outdoors.

Methods of Milking:

1. Hand milking, and
2. Machine milking

1. Hand milking:

- Many milkers during milking tend to bend their thumb against the teat. The method is known as **knuckling which causes injury to teat tissues.**
- Thus milking should always be done with full hand unless the teats are too small or towards the completion of milking.
- The first few strips of milk from each quarter should not be mixed with the rest of the milk as the former contains highest number of bacteria.

2. Machine Milking:

Modern milking machines are capable of milking cows quickly and efficiently, without injuring the udder. The milking machine performs two basic functions:

- It opens the streak canal through the use of a partial vacuum, allowing the milk to flow out of the teat cistern through a line to a receiving container.
- Massages the teat, preventing congestion of blood and lymph in the teat.

Advantages:

- Easy to operate, costs low, saves time as it milks 1.5 liter to 2 liters per minute.
- It is also very hygienic and energy-conserving as electricity is not required.
- All the milk from the udder can be removed.
- The machine is also easily adaptable and gives a suckling feeling to the cow and avoids pain in the udder as well as leakage of milk.

Correct Technique of Milking:

Steps:

The cow is brought to the milking parlor as calmly as possible. **Frightening the animal at this stage has a negative effect on milk let down due to release of adrenaline (hormone) which has a negative effect on milk letdown.**

1. **Feed the cow its production ration** (this is optional depending on the feeding system). This calms the animal and stimulates milk letdown.
2. Restrain animal - tie hind legs above hock joint in the form of a figure 8.
3. Wash hands with soap and clean water before milking. Dry hands with towel.
4. Test for mastitis using a strip cup - strip first few rays of milk into strip cup from each quarter and observe for any abnormalities. If mastitis is detected, the cow should be milked last.
5. Wash udder with warm clean water with disinfectant using a clean towel.
6. **Warm water also stimulates milk let down.** Dry udder using a dry towel.
7. Apply milking jelly - prevents cracking of teats and eases milking (for hand milking only)
8. Milk quickly and completely by squeezing the teat, do not pull. **Milking each cow should take 5-6 minutes at most.**
9. Use clean containers for milking.

10. After milking: **Strip the animal - getting last drops of milk from udder to avoid incomplete milking (can lead to mastitis).**
11. After milking dip the teats in a teat dip (disinfectant to ensure that bacteria do not gain entry through the teat sphincter which is loose immediately after milking).
12. It is recommended that **the animal remain in a standing position for at least one hour to ensure the teat does not come into contact with the ground** while the sphincter is still loose.

Note:

- Routine milking procedures stimulate milk letdown and should therefore **not be changed** unnecessarily.
 - After cow has been maximally stimulated for milk let down, it should be milked immediately since the stimulus reduces over time. Oxytocin effects are maximum between **5-6 minutes**, thus milking should be completed during this time.
 - **Don't harass animal since adrenaline (hormone produced due to fright) has opposite effect of oxytocin (milk let down hormone).**
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