

## *Practical Exercise 10*

# **Milking of dairy animals**

**Objective:** *To study different methods of milking of dairy animals along with their hygienic measure*

There are mainly 2 types of milking system followed in farms.

- Hand milking system
- Machine milking system

Milking of dairy animals is by and large, done manually by hand milking. However modern dairy farms have switched over to machine milking.

### **Hand milking**

#### **Materials required**

- Clean water
- Body brush
- Cotton rope for tying legs
- Enamel bucket
- Milk recording register
- Healthy cow

- Chlorine solution
- Strip cup

## Procedure

- Clean the utensils and milking room at least 2 hour before actual milking.
- Wash the animals, especially hindquarters, before bringing them to milking barn.
- Tie the animal securely at its milking place and offer the concentrate.
- Apply milkman's knot (only to cows), wash the udder and teats with the towel soaked in disinfectant solution of chlorine and wipe with a clean duster.
- Massage the udder and teats till led down occurs.
- Take few stripping from each quarter in the strip cup and check for mastitis.
- Hold the diagonal teats and milk with full hand method of milking (Figure )
- Milk quickly, completely and silently.
- In case of small teats, use stripping method of milking (Figure )
- Pick up the milking bucket, un-tie the animal, weight the milk and record the quantity of milk produced against the animal number.
- Transfer the milk to milk can through a strainer/muslin cloth and store at a cool place till its disposal.



Figure 10.1. Full hand milking/fisting

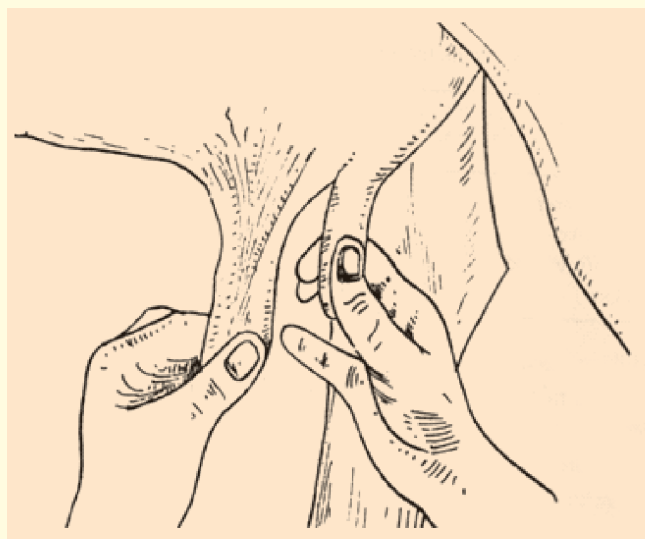


Figure 10.2. Stripping method of milking

## Observation

1. Date
2. Animal number
3. Breed
4. Time
5. Quantity of milk drawn
6. Time taken for milking

## Machine milking

Modern milking machine was invented by William Murchland of Scotland in 1889. In India, machine milking was first introduced during early 20<sup>th</sup> century by the Britishers at M/S Tara Devi Farms near Shimla. Modern milking machine are known as double milking machine as they use alternate negative and atmospheric pressure in a double chambered teat cup assembly. The main component of a milking machine are :

- 1) Vacuum pump assembly
- 2) Pulsator
- 3) Milk claw or cluster comprising of a central metallic shell and an inner rubber liner
- 4) Milk can

## Materials required

- Milking machine
- Healthy cow
- Clean water
- Body brush
- Cotton rope for tying legs
- Milk recording register
- Healthy cow

## Procedure

- Tie the animal after cleaning and wiping its udder and teats, and offer concentrate.
- Turn the milking machine on and check the vacuum pressure. It should be between 380 - 400 mm Hg for cattle and buffaloes.
- Apply the teat cups to the respective teats and see whether they are in correct position.
- Stand quietly near the animal till milking is in progress.
- When the milk flow ceases, remove the cluster by breaking its vacuum supply.
- Weigh and record the milk produced.
- Dip the teat of animal in anti-septic solution.
- Untie the animal.

## Observation

1. Date
2. Animal number
3. Breed
4. Time
5. Quantity of milk drawn
6. Time taken for complete milking

## STUDY QUESTIONS

- 1) Why is it essential to wash the animal before milking ?
- 2) Why is the tail tied along with legs during milking ?
- 3) Why disinfectant solution is used for wiping udder and teats ?
- 4) What are the advantages of machine milking over hand milking ?