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FEEDING AND MANAGEMENT OF DAIRY ANIMALS

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Dairy (milch) animals are fed well balance ration to maintain quality and quantity of milk. Feeding should be economical, luxative & palatable because approx 60% of the total expenditure is spent on their feeding alone. Feeding depends on availability of feed, milk productivity ,body weight of animal etc. Feeds are provided to animals for maintenance and milk production. Following feeding schedule should be follow for milch animals

A. Feeding schedule when green fodder are not available

(i) Ration for maintenance of an animal

Follow the schedule given below

S.N	Feed (kg)	Cow	Buffalo
1.	Wheat bhusa	5-6	7-8
2.	Green fodder	2	2
3.	Concentrate	1.5	2

(ii) For milk production

Feed 1 kg concentration mixture fed for every 2.5-3.00 kg milk produced in case of cow.

Feed 1kg concentration mixture for every 2 kg of milk produced in case of buffalo.

B. When green fodder is available for milk production

Follow the schedule given below

(i) Ration for maintenance

Combination	feed	Quantity (kg)
1.	a. Green cereal	25-30
	b. Wheat bhusa	5-6
2	a. Green legume	15
	b. Wheat bhusa	5.6

(ii) Ration for milk production

a. Concentrate mixture as above.

b. If plenty of good quality legume forages such as cowpea berseem and lucern are available then 8-10 kg these forages can replace 1 kg concentrate mixture for milk production up to 7-8 kg of milk per day. For milk production above this level, the concentration

mixture should be added according to the scale mentioned above.

All the effort should be made for clean milk production and better management practices as follow

1. Floor space

Cow & Buffalo should be provided with 3.55 quintal (20-30 sq. fit) and covered space respectively for each animals 4.5 sq.m. (25-35 sq. feet).

2. Ambient temperature

For optimum production, the ideal temperature is 15 to 18 C. High temperature during summer months causes discomfort and decreases in the voluntary intake of feed and inefficiency in animal production and reproduction. Continuous high temperature (above 40C) reduces intake very considerable. During summer, feeding the animals at night when temperature is lower than during the day and offering cool water improves the intake. Similarly, keeping the feeding place in shed is useful

3. Breeding management

After parturition cow and buffalo are mated on 2nd or 3rd heat period (oestrus) of oestrous cycle in tropical countries like India. She buffaloes indicate seasonal sex periodicity (seasonal breeder) in respect of oestrus and conception. As much as 63% buffaloes show periodicity in October to February with the peak around December and this period coincides with higher conception rate. During the period from March to September with comparatively longer days and higher intensity of sun, ovarian activity appears to be adversely affected. The oestrus in milch animals is detected with the help of a teaser bull once in morning and again in afternoon if normally not observed by dairy man.

4. Health management

The health management of the milch should be maintained by deworming and vaccination in the scheduled period of time and age of animal.

Deworming programme- Deworming against the infestation of internal & external parasites should be done with suitable deworming agents.

- Deworming should be started from the first week of calf. A single dose of 10 gm piperazine adepate is recommended for the calves preferably in the first week of life to control neonatal ascariasis especially in buffalo calves.

- Deworming should be done every month for first 6 months ,thereafter once in three months.
- Deworming should be done as per advise of Veterinarian.
- Common deworming agents are as follow:
 1. **Albendazole** bolus/susp. (Albidol, Albacril, Albonil bolus and Albomar susp.)
Dose-5-10 mg/kg body weight in cattle, buffalo, sheep, goat, horse, pig.
 2. **Fenbendazole** bolus/susp.(All clear, curaminth, fentas, fenzol, panacure bolus etc.)
Dose-5-7.5 mg/kg b.w in cattle, buffalo, sheep, goat, horse, pig.
 3. **Morantel citrate** bolus/susp (Banmin bolus, Danminth bolus, Animeth tablet etc.)
Dose-5-10 mg/kg b.w in cattle, buffalo, sheep, goat, horse, pig.

5. Milking

Milking management should be followed for for clean milk production. It requires clean environment, pre milking preparation, milking practices etc. Observe regular milking hours and as for as possible equal milking intervals should be followed. Wipe the udder with a clean cloth dipped in a mild antiseptic lotion. Letting down of milk occurs within half to one minute and milking should be completed within 5-7 minutes. Do the milking quickly, gently, completely and only dry hand milking use full hand method followed by stripping.

6. Watering

Dairy cows must consume, a large quantity of water for milk production, so they should be offered with clean, fresh and pure water which is free from germs, ova or larvae of parasites throughout the day particularly in summer months. Buffaloes need more water for drinking, swimming and wallowing especially when ambient temperature is high. Water intake is influenced by ambient temperature, kind of feed, milk yield, age and body size, exercise, season, health etc.

7. Grooming

Daily grooming of buffaloes and cows help in the maintenance of their health, keeping them clean and detecting illness in the animals. Then face, eyes and nostrils of all animals should be cleaned in the morning with a muslin cloth or towel and the body should be brushed gently using a curry comb and dandy brush of straw/ha pad. Angular parts of the body, inguinal region, thigh, udder and groves and hooves should be cleaned thoroughly. Further it improves blood circulation.

8. Control of flies

Files are stalls are serious nuisance to milch animals. Cleanliness and hygienic maintenance of stalls keep the files away.

9. Regularity and daily operations

As far as possible grooming feeding, watering, washing, exercising, etc. should be scheduled and be followed without any interruption.

10. Kindness in handling

The animals should be handled gently because rough behaviors, shouting and beating of lactating and buffaloes, may causes lowered milk production on the day which is an economic loss to the owner.

11. Shelter

Milch animals should be protected from extreme climatic conditions like severe that and cold by providing good housing and shelter management.

12. Culling

Uneconomical and surplus dairy cows and buffaloes should be identified and disposed off. Other reasons for removal are low production, udder troubles, sterility, abortions, death, old age, dairy purposes etc.

13. Clipping

The hair coat of buffaloes and extra growth of hair from switch of tail in cows and buffalo should be clipped as and when required in order to keep the ticks and lice away.

14. Control of vices

The common vices like kicking, suckling their own teats or teats of other cows, licking and naval sucking are observed frequently in cattle and rarely in buffaloes that may be because of mismanagement or lack of feed, water or space etc. If the cow of buffalo has developed some bad habits, then these should be corrected timely and gently.

15. Spraying

Dipping is generally not practiced in India for milch dairy cattle. Tick infestation over udder in cattle and lice infestation in stall fed buffaloes, is frequently observed. Spray with 0.5 per cent DDT or 0.1 per cent lindane efficiently destroys lice and ticks.

16. Collection, storage and utilization of manure

The dung of cattle and buffaloes is rich in nitrogen, phosphorus, potassium and other minerals of high manorial value.. Dung cake may be used as fuel for cooking food. The important preparation of dung are compost, dung cake and now a days, it may be used in the bio-gas plant when gas is used for fuel and the digested slurry is used for manure.

17. Drying off cows

It is generally considered that a cow should remain dry for a period before calving, for four principal reasons

- To rest the organs of milk secretion.
- To permit the nutrients in the feed to be used to developing the foetus instead of producing milk.
- To enable the cow to replenish in her body the stores of minerals which have become depleted through milk production.

- To permit her to build up a reserve of body flesh before calving.

Length of dry period

Cows should always be in at least a medium state of flesh at time of calving. For this reason, thin cows should have longer dry periods than those carrying more flesh. For cows which are well fed and are in good condition at the time of drying off, it is suggested that the dry period should be 40 to 80 days, the shorter period being for low producers. Thin cows should remain dry for longer periods. Practical experience has shown that cows denied of a dry period will give less milk in the following lactation than those allowed a period of rest.

Methods of drying

Three methods of drying off a cow are in use:

- Incomplete milking
- Intermittent milking, and
- Complete cessation

Incomplete milking

Dairyman who follow this system do not extract all the milk from the udder at milking time for the first days after the drying-off period has began, later they milk intermittently but never completely. After the production decreases to only a few liters daily, milking is stopped.

Intermittent milking

Under the procedure, the cow which is to be dried off will be milked once a day for a while, then once in every next day, and finally milking will be stopped altogether.

Complete cessation

From practical observations it has been found that complete cessation of milking can be recommended safely with cows producing as much as 10 liters of milk per day. In drying a cow by this method, the udder fills until pressure increases enough to stop secretion inside the udder. After the cessations of secretion, the milk is gradually re-absorbed from the gland until it becomes completely dry. The cow should not be milked during the stage of re-absorbed as this releases the pressure within the gland and secretion is again initiated, resulting in a prolonged period of drying off.