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Housing and Feeding Management of Buffaloes Husbandry

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INTRODUCTION

In the housing Management of buffaloes first of all it should be kept in mind that such a place is available to the buffaloes, where it is possible to extract clean milk conveniently it is also important to consider in detail all the arrangements made for the comfort of the animals from the health and productivity point of view. Proper arrangement should be made that every buffalo gets its share get complete food and clean drinking water. The housing management of a cattle ranch is determined according to the following factors:

- Climate of the area
- Nature of soil
- Total area
- Ratio of farm area and pasture
- Number of animals
- Available Labor
- Slop of the area

At present there are three systems of milk production are prevalent, which can be differentiated from each other in terms of description.

These systems are as follows:

1. **Gaushala System**: In the system, milking is done at the same place where the animals are kept.
2. **Separate room system of milking**: In this system the animals are kept in cattle yards or any other available house, but for milking the animals are taken to a separate room located near the dairy.
3. **Open Space** or **Bronze System**: No accommodation is provided in this system. Buffaloes stay in the field where milk is taken out of them by making a moving arrangement of milking or by hanging. The construction plan of such animal sheds needs special attention.

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Here buffaloes are milked indoors throughout the year and fodder is also provided indoors winter, because of its configuration, construction and other consideration of permanent equipment, the health of the animal, the hygienic quality of the milk, the cost of work and labor, and the initial it has a significant impact on construction and subsequent maintenance.

Cattle shed

It is and integral and main unit of the animal house. Therefore, it is necessary to make it in such a place, from where the road and pasture can be easily reached It should also be easy to reach dairy and pasture. Availability of pure water is essential for milk production location of animals shed relatively.

It should be high, so that the slope of the drains can be made easily and the cattle carts do not have to move towards the height to transport the manure.

Indoor configuration

Buffalo housing can be made in single or double row in case of rearing more than twenty buffaloes; preference should be given to double row buffalo housing.

The route to and from the double cowsheds should be from the middle. Intermediate route of access andby facing the buffaloes towards the walls, they get clean air through the windows, by such arrangement. The dung falls only on one side and labor is saved by using dung removal cart.

Internal measurement of animal sheds.

Width: Passage for walkway 4ft., 3 ft for removal of dung, 5 ft. for thaan, feed lane (optional) 3 ft., total width of buffalo house 15 to 18 feet and total width of double buffalo house should be 30 to 33 feet.

Length: The length of the buffalo habitat depends on the number of buffaloes. For buffaloes of average height should be a width of 3 feet 6 inches between each manger. On this basis, normally 7 feet would be required for each buffalo in case of keeping 20 buffaloes in length; on an average 140 feet (20x7) space will be required.

Height: The height of the inner parts of the walls should not exceed 8 feet. The height of the mounter should be 15 feet or 16 feet, the height of the thaan should be 6 inches. The inner surface of the walls should be solidly plastered with cement, so that dirt and dust do not go away.

Doorways should be 7 feet high & 50 feet wide.

Flooring: The floor of the station should be covered with grooved plaster, so that the floor can be cleaned easily and it is not slippery. The surface of the floor should have a slope of 1 to 15 inches from the manger to the dung drain.

Indoor exhaust system: There should be an open exhaust drain, it should be built behind the walls along the length of the animal shelter, it should be opened in an open gully trap located outside the animal shelter. Gully traps are attached to some other place of disposal.

Manger. It should be made of some hard, impermeable and acid and alkali resistant material. Its composition should be such that it can be easily cleaned. A separate sand (26x89)of glass can also be made. Additionally, a raised concrete joint at the rear should be 3 feet width 4 inches in height at the rear 9 inches from the back.

Isolation Rooms: In each dairy farm, those suffering from communicable diseases orbrought from outside for the first time. It is necessary to arrange a suitable room for the isolation of the animals and keep in quarantine for 14 days at least.

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Diet Management

An ideal diet should contain all the nutrients in proper amounts. Animal food should be digestible tasty and nutrients and it should give satisfaction to the animal. It is very important to have healthy animal feed.

Foods should be odorless, digestible as well as contain a balanced amount of minerals and vitamins. The diet should be pure, succulent, full of green fodder and free from toxicsubstances.

Principles of animal nutrition

It is appropriate to give fodder to the animals at an interval of 12 hours in the morning and evening. The amount of green fodder in the diet should be about 70 percent. Green fodder should be out Animals should be fed according to the standard, because different food is required for each category. The feed material should not be changed abruptly, otherwise the animal may suffer from indigestion. Pregnant animal should be given 1.2 kg per day. Additional feed can be given up to 15 days before sowing in animal food 1/3 dry matter and 2/3 Part of green fodder or silage should be mixed. The quantity of feed can be increased or decreased according to the requirement of the animal.

The following ingredients are used to make good feed grains.

1. Cereals: Maize, Mylo, Barley, Rich polish, Wheat, Maize bran etc.

2. Cake and Powder cottonseed, Groundnut, Sunflower, Soybean, Mustard, Rye, Castor etc. cake.

3. Chunni and Husk: Arhar, Urad, Moong, Rice Bran etc.

4. Fodder Crops: Cowpea, Jowar, Maize, Bajra, M.P. Chari, Fenugreek, Berseem, Oat, Lucerne, Napier, Guinness and Pathagrass etc.

Animals with medium milk production capacity are fed sufficient amount of leguminous (two-parted) green fodder, they do not need to be rationed up to the level of daily production of 3 liters of milk.

Table 1: Protein contents in animal feed ingredients

Oil Cake	Percent	Bran	Percent
Peanut	40-45	Gram	40-45
Binoula	28-35	Wheat	16-18
Mustard	38-40	Rice	16-18
Linseed	30-35	Maize	10-12
Soybean	40-50	Fish Meal	65-70
		Corn Gluten	45-47

- Every milch or pregnant animal should be fed 1/10 of its body weight daily.

It is beneficial to give 70 percent of the total fodder in the form of green fodder.

- 95.97 percent of the required "total dry matter (TDM) should be dry and green fodder and the remaining 3.5 percent should be nutritious concentrate mixture or grain.

Crop Rotation

In order to grow green fodder throughout the year, mixed farming should be promoted by producing green fodder along with cereals. Apart from this, if possible, mixed farming of perennial grass and seasonal fodder should also be encouraged. Overlapping method and relay cropping method can be adopted for intensive fodder production.

Overlapping Method: Under this method, green fodder is used for 3 consecutive years is produced. In this method, one crop grows and the other crop is dormant is. The major crop rotation under this is Between + Japanese Mustard (April-June) + Hybrid Napier (June-October) + Cowpea + Hybrid Napier (October-June).

Relay cropping method: Under this method 3 or 4 fodder per year harvest.

The crop rotation of this method is as follows:

- Maize + Cowpea + Senjimethi + Berseem + Mustard

Sudan **Diet Management**

- grass + Cowpea + Berseem + Oats
- Hybrid Napier + Lucerne
- Maize + Cowpea + Jowar + Cowpea + Berseem + Mustard

Mustard + Bajra + Cowpea + Berseem + Oats

Table 2 Fodder calendar for obtaining green fodder throughout the year

Sl. No.	Month	Available Green Fodder
01.	January	Berseem, Lucerne, Oats, Peas, Carrots, Turnips, Grams, Cucumbers
02.	February	Berseem, Lucerne, Oats, Peas, Turnips, Napier, Cucumbers
03.	March	Seji, Pea, Guinea grass, Lucerne, berseem, metha, bunchgrss.
04.	April	Luceme, Berseem, Napier, Guinea grass, metha, bunchgrass.
0.5	May	Maize, Jowar, Cowpea, Luceme, Berseem, Elephant grass, Guinea grass.
0.6	June	Maize, Luceme, Elephant grass, Guniea grass, Bunchgrass.
0.7	July	Jowar, Maize, Guar, Cowpea, Luceme, Elephant grass, Guinea grass.
0.8	August	Maize, Guar, Jowar, Napier, Guinea grass, Cowpea, Chives.
0.9	September	Sudangrass, Maize, Sorghum, Guinea grass, Guar, Cowpea, Chives.
10.	October	Soybeans, Sudangrass, Luceme, Elephant grass, Cowpea, Maize.
11.	November	Luceme, Napier, Maize, Guinness, Carrot, Soybean
12.	December	Berseem, Luceme, Oat, Carrot, Napier, Gram, Cucumber

By adopting this method, green fodder is available throughout the year and the fertility of the land increases with pulse crops. By adopting fodder cropping cycle and arranging adequate water manure etc. for their production, the yield of green fodder can be obtained in sufficient quantity.