

## **Feeding and housing management practices of dairy animals in district Varanasi, Uttar Pradesh**

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### **Abstract**

A field survey was conducted to acquire the first hand information bovine herd management in rural and urban areas of Varanasi district. The information on feeding and housing management practices was collected using structured schedule from 160 households rearing cattle and buffalo each from rural and urban area. Wheat straw was used as dry fodder by 86-98% of farmers in rural and urban areas. In urban areas, 91.8% farmers fed concentrate round the year while in rural areas, only 70.62% farmers followed this practice. None of the farmers used silage and hay making. Results revealed the 60.62% of the rural farmers shared their residence with the animals. Brick floor was observed in 56.25 and 63.12% houses, respectively in rural and urban areas.

**Keywords:** Green fodder, concentrates, mineral salt.

### **Introduction**

Indian agriculture continues to be dominated by the belief that its base is crop production. Importance of this enterprise is beyond dispute since food grain fulfils the first basic need by providing calories for sustenance along with employment of the country's large population. Having achieved a level of self sufficiency in cereal production, the base of farming needs to be broadened to enhance the quality in the daily diet also from animal protein. The national commission on agriculture also observed that next to agriculture dairy is the most important subsidiary occupation in India.

Qualitative and balanced proper feeding results in optimum milk production. To utilize the feeding material more efficiently, housing management becomes very important factor because housing helps to maintain neutral zone, in which animals are more productive. The present study was conducted to gather the information regarding existing housing and feeding practices adopted by the farmers of Varanasi district and to provide help in adoption of scientific management practices in concerned area.

### **Materials and Methods**

A multistage stratified random sampling procedure was adopted for selection of panchayats and wards during 2009 and 2010. Varanasi district which include 8 blocks viz Sawapuri, Harhuwa, Pindra, Baragav, Araziline, Kashi Vidyapith, Chiraigawn and Cholapur. For rural area study, 8 village panchayats were selected randomly from each block. Whereas for urban areas 8 wards were selected randomly from Varansi mahanagar for the study of urban areas. All the farmers who were rearing at least one milch cattle or buffalo were selected for the study. A total of 320 cattle and buffalo farmers were selected from rural and urban areas (160 cattle and buffalo rears from each area). From rural area, 20 cattle and buffalo rears were selected from each village panchayat and 20 from each ward urban areas. Cattle and buffalo rearers were categorized on the basis of land holding as land less (0 ha), marginal (0 < 1 ha), small (1- 2 ha), medium (2 < 4 ha) and large (4 ha and above). The data were collected through personal interviews using the structured schedule.

### **Results and Discussion**

The method of feeding concentrate was mixing it with fodder which was practiced by 73.75 and 86.87% farmers, respectively, in rural

and urban areas. Similar findings were observed in Rajasthan, where nearly three-fourth households fed the concentrate after soaking it in water and then mixed with the available roughages and this was offered to the bovines in milk (Gupta *et al.* 2008). Similar findings were also observed by Malik (1997) in the home tract of murrhah and Kumar *et al.* (2005) in the breeding of Nili-Ravi buffalos and in Nagpur district of Maharashtra (Kavathalkar *et al.* 2007). Improving feed quality

by adding jaggery was practiced by 31.87% of rural farmers while use of other feed supplement were negligible. In rural and urban areas 98.12 and 89.37% dairy farmers respectively gave green fodder after chopping but 10.62 % farmers from urban areas also feed green fodder as such (Table 1). This might be due to the shortage of labour or ignorance about advantages of feeding chopped fodder.

**Table 1 Feeding management practices followed by dairy farmers**

SN	Characteristics / Categories	Rural bovine dairy farmers		Urban bovine dairy farmers	
		Number	Percent	No.	Percent
1.	Method of feeding concentrate				
	Mixed with fodder	118	73.75	139	86.87
	Separately	40	25.00	11	6.87
	At the time of milking	02	1.25	10	6.25
2.	Feeding more concentrate during pregnancy	146	91.25	119	74.37
3.	Increased feed quality of crop residue	18	11.25	51	31.87
4.	Use of feed supplement	7	4.37	12	7.50
5.	Feeding green fodder				
	After chopping	157	98.12	143	89.37
	Given as such	3	1.88	17	10.62
6.	Feeding concentrate whole	113	70.62	147	91.87
7.	No. of times of feeding				
	Once	3	1.87	0	00
	Twice	24	15.00	121	75.62
	Thrice or more	133	83.12	39	24.37
8.	Feeding fodder and concentrate timely	131	81.87	153	95.62
9.	Dry fodder mostly fed				
	Wheat straw	137	85.62	156	97.5
	Paddy straw	8	3.00	2	1.25
	Both	15	9.37	2	1.25
10.	Grazing practice followed	71	44.37	33	20.62
11.	Feeding of common salt	142	88.75	140	87.50
12.	Feeding of mineral mixture	10	6.25	25	15.62

In urban areas 91.87% dairy farmers fed concentrate round the year but in rural areas only 70.62% followed this practice. The cost factor may be involved in urban areas where high cost of green fodder prohibited farmers from feeding it to their animals. In rural areas, farmer fed their animals thrice or more (83.12%) but in urban areas animals were fed twice only, which may be

due to the high cost of feed and feeding in urban areas. Feeding two or three times a day is a good practice, which has also been recommended by Thomas & Sastry (1991). Wheat straw was the best choice as dry fodder and was fed by 85.62 and 97.5% farmers in rural and urban areas, respectively. Animals were allowed to graze by only 44.37 and 20.62% farmers in rural and

urban areas, respectively. However, common salt feeding was practiced more than 85% landless farmers across the rural and urban areas. Mineral mixture feeding was not a common practice in any area of the study. However, in urban areas 15.60% of the farmers fed mineral mixture irregularly. Similar observations were made by Malik & Nagpal (1998) and Kalyankar *et al.* (2008).

Rural farmers (16.62%) shared their residences (Table 2) were higher in urban areas (58.12%) and this was in contrary to finding of Gupta *et al.* (2008) in Rajasthan and Roy *et al.* (2007) in rural areas of West Bengal, where on an average 86% and 82% households, respectively, provided separate stall within or without the human dwellings. As far type of floor was concerned, 56.25 and 63.12% houses had brick floor in rural and urban areas, respectively. Majority of the animal houses (55 to 75%) had full wall. It was also notice that respondents kept their animals at different places viz., inside the shed, in open and under tree depending upon the season and environmental conditions. As far type of wall is concerned, in urban areas 94.38% wall of houses were pucca, and rural areas 58.75% houses had pucca wall, respectively. This shows some improvement in urban areas.

Roof of the houses in rural areas were of khaprail 56.87%, thatched in 15% and RCC 15.63% of farmers house but in urban areas 25.62% houses were thatched, 23.75% houses of RCC and tin each and only 10.62% of khaprail. This might be due to good economic status of the urban farmers. In 85% of urban houses, ventilation was in fairly good condition and this was 35.62% in rural houses, respectively. In rural areas 20.62% of animal houses were having good ventilation, which was comparatively higher than other areas. Size and height of the houses were optimum in 72.5% and 91.88% of the farmers in rural and urban areas, respectively. In rural areas 71.25% farmers were using sugarcane leaves and 15.62% using straw as bedding material in urban areas 30.00% were using straw and 20.62 % using sugarcane leaves. Others were using different types of bedding material like sawdust, khomees and other waste dry fodders. The present study indicated that feeding practices were comparatively better in rural areas followed by urban areas. Farmers were not making silage and hay. However, common salt feeding was in practice but mineral mixture feeding among farmers were negligible. The housing practices were better in rural areas followed by urban areas.

**Table 2 Housing management practices followed by dairy farmers**

SN.	Characteristics /Categories	Rural bovine dairy farmers		Urban bovine dairy farmers	
		Number	Percent	No.	Percent
1.	Type of house				
	Part of residence	97	60.62	93	58.12
	Separate	63	39.38	67	41.88
2.	Type of floor				
	Kuccha	56	35.00	30	18.75
	Bricked	90	56.25	101	63.12
	Cemented	14	8.75	29	18.13
3.	Wall of house				
	Full	121	75.62	88	55.00
	Half	30	18.25	61	38.12
	No wall	9	5.63	11	6.88
4.	Type of wall				
	Kuccha	66	41.25	9	5.62
	Pucca	94	58.75	151	94.38

*Table Contd....*

5.	Type of roof				
	Thatched	24	15.00	41	75.62
	Kuccha	14	8.75	18	11.25
	Tin	3	1.87	37	23.13
	RCC	25	15.63	38	23.75
	Asbestos	3	1.87	9	5.63
	Khaprail	91	56.87	17	10.62
6.	Ventilatin inhouse				
	Poor	26	16.25	4	2.50
	Fairly Good	57	35.62	136	85.00
	Good	33	20.62	2	1.25
	No provision of ventilation	44	27.50	18	11.25
7.	Size of house				
	Optimum	116	72.50	147	91.88
	Not optimum	44	17.50	13	8.12
8.	Use of bedding materials in winter				
	Sugarcane leaves	114	71.25	33	20.62
	Straw	25	15.62	48	30.00
	No. of bedding	21	13.13	79	49.38

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