

FEEDING AND MANAGEMENT PRACTICES ADOPTED BY BUFFALO FARMERS UNDER WATERSHED AREA

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ABSTRACT

During the study the data were collected from 200 rural buffalo farmers from different twenty villages under the watershed area of Parbhani district in Marathwada state. The maximum green (8.69), dry fodder (5.22) and concentrate (3.19) Kg, respectively made available to milch buffaloes was found in large farmers (F₃) under watershed area owners provides their buffaloes for grazing during day and tie them at night (100 per cent), provide kaccha shed (77.50 per cent) with kaccha flooring (92.00 per cent) and part of residence (59.50 per cent). Before milking cleaning of udder, milk utensils, shed floor, shaving of buffaloes adopted by cent percent farmers. Due to availability of purebred he buffalo breeding bulls all buffalo owners used natural service method of breeding and were also well aware about adoption of vaccination (95.00 per cent).

INTRODUCTION

Agriculture and livestock enterprises act as a complimentary to each other. The cattle and buffaloes have remained as corner stones of Indian farming since time immorial as draft and milk stock. Buffalo is the animal of poor countries with very high density of livestock and human population and with poor feed resources (Mudgal *et al.*, 1995). The low productivity of buffalo is mainly due to lack of proper knowledge for balance feeding. Farmers from the rural area feed their buffaloes with roughages and concentrate but they do not have consciousness about quality and quantity of feed and also do not follow proper management practices which lead the dairy business uneconomical. In the present investigation evaluation of different feeding and management practices followed by the rural buffalo owners under watershed area is aimed at and in that direction completed the study.

MATERIAL AND METHODS

In the present study information was collected by arrangement of survey from the rural buffalo farmers under the watershed area of Parbhani district in Maharashtra state. Under the watershed area twenty villages were randomly selected and within these villages

200 buffalo farmers are personally interviewed. The data was recorded regarding feeding practices of buffaloes about quantity of green fodder, dry fodder and concentrates provided by different categories of farmers. The farmers are delineated into four categories according to land holdings *viz.*, F₁ - Small (Up to 2.00 hectares), F₂ - Medium (2.10 to 4.00 hectares) and F₃ - Large (Above 4.00 hectares). The Animal Husbandry practices being followed by buffalo farmers were studied and information regarding management practices like housing, clean milk and health cover production were collected. Collected data were statistically analysed as per the methods given by Panse and Sukhatme (1985).

RESULTS AND DISCUSSION

Feeding practices followed by buffalo farmers

In order to maintain the production and quality of milk the suitable proportion requirement of green fodder, dry fodder and concentrate was calculated and presented in Table 1. The perusal of Table 1 revealed that the milk production/day/buffalo and total feeding directly increases as the land holding of farmer increases (F₃). It was observed that to harvest 1 kg of milk/day/buffalo the owner

Table 1. Feeding practices followed by buffalo owners in watershed area

Sr. No.	Category of owners	Code	Average milk yield/day/animal (kg)	Total feeding			Average feed/kg of milk yield		
				Green fodder	Dry fodder	Concentrate	Green fodder	Dry fodder	Concentrate
1	Small farmers (Up to 2.00 ha)	F ₁	3.90	4.48	4.88	1.95	1.15	1.25	0.50
2	Medium farmers (2.10 to 4.00 ha)	F ₂	4.75	6.55	4.27	2.85	1.38	0.90	0.60
3	Large farmers (Above 4.00 ha)	F ₃	5.50	8.69	5.22	3.19	1.58	0.95	0.58

supplied 1.25, 1.38 and 1.58 kg of green, 1.15, 0.90 and 0.95 kg of dry fodder and 0.50, 0.60 and 0.58 kg of Concentrate by F₁, F₂ and F₃, respectively. It is interesting to note that total quantity of concentrate feeding was highest in F₃ (3.19 kg) where as average feeding of concentrate per kg of milk production was found highest in F₂ (0.60 kg/kg of milk). The finding of Baxi (1999) for supply of roughages and concentrates per kg of milk production in Maharashtra are in agreement with the present findings.

Management practices adopted by buffalo farmers

Management, health cover and breeding have the most crucial role in improving every aspect of buffalo performance. The information on management practices adopted and health cover provided by buffalo owners is generated from the survey conducted and presented in Table 2. It is observed from Table 2, that the buffalo owners in this watershed area rear their buffaloes only to meet the daily needs. All owners send their buffaloes for grazing during day and tie them during night (100 per cent) and stall-feeding were not observed. Mostly housing is economical i.e. Kaccha shade (77.50 per cent), with kaccha flooring (92.00 per cent), housed in part of owners residence (59.50 per cent) and full ventilation (100.00 per cent). Sanitary condition in majority of buffalo houses found clean (93.00 per cent) but minimum pucca drain for urine (9.50 per

cent). These types of housing pattern were also observed by Patil (1999) and Kalyankar (2001).

It is observed that hundred per cent owners cleaned their milking utensils, washed udder before milking, cleaning of shed and shaving of buffaloes regularly. Whereas regular washing of floor was done by 90.00 per cent owners and proper vaccination programme adopted by 95.00 per cent owners. Patil (1999) also observed the similar health and sanitation practices adopted for buffalo raising by dairy farmers.

The survey study revealed that not a single buffalo owner used artificial insemination. This might be due to lack of insemination facility in this tract in time when the buffaloes come in heat. Further the farmers might be having quality (phenotypically and genotypically) breeding bulls of required breeds for this purpose, Narwal *et al.* (1996) and Patil (1999) studied the adoption of husbandry practices followed by buffalo farmers in this breeding tract. Thombre *et al.* (2002) also observed inadequate Artificial Insemination facilities and difficulties in detection of heat at right time in Marathwadi buffaloes, which are in the line of present findings.

It can be concluded from the findings that the milk production per day per buffalo increases as the land holding of owners increases. The farmers in this area do not rear their buffaloes for commercial milk production. Generally all the farmers adopt natural breeding method for their buffaloes.

Table 2. Management Practices, Health and Sanitation and breeding method adopted by buffalo owners in watershed area

Sr. No.	Particulars	Relevant details	Frequency	Percentage
1	Housing			
1.1	Confinement	Only day	-	-
		Only night	200	100
		Both day/night	-	-
1.2	Provision of shade	Kaccha	155	77.5
		Pucca	45	22.5
1.3	Situation of house	Part of residence	119	59.5
		Seperate	81	40.5
1.4	Flooring	Kaccha	184	92
		Pucca	16	8
1.5	Construction	Full walled	48	24
		Half walled	152	76
1.6	Ventilation	Well	200	100
		Not	-	-
1.7	Sanitation	Clean	186	93
		Not clean	14	7
1.8	Drain for urine	Pucca	19	9.5
		No pucca	181	90.5
2.	Health and sanitation			
2.1	Cleaning of milking utensils	Yes	200	100
		No	-	-
2.2	Udder washed before milking	Yes	200	100
		No	-	-
2.3	Regular cleaning of shed	Yes	200	100
		No	-	-
2.4	Washing of floor	Yes	180	90
		No	20	10
2.5	Removing of hairs/shaving - regular	Yes	200	100
		No	-	-
2.6	Vaccination	Yes	190	95
		No	10	5
3.	Breeding			
3.1	Breeding method	Natural service	200	100
		Artificial insemination	-	-

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