

Original Research Article

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Existing Management Practices of Buffaloes Owners in Udaipur District of Rajasthan, India

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ABSTRACT

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A field survey was conducted to collect the relevant information on buffaloes managerial practices followed by 3932 responded in 22 villages of Udaipur district of Rajasthan. Closed type of house was provided by 48.50 % of the framers. Kaccha type of roof and floor were observed in 92.20% and 96.77% of the houses, respectively. Provision of urine drainage facility was found only in 1.01% and well ventilation found 87.82 % of animal shed. Majority of farmers provided green fodder to their buffaloes. None of the farmers practiced silage making. Concentrates was fed to the buffaloes at the time of milking only. Feeding of mineral mixture was provided by only 31 % of the farmers to their buffaloes.

Introduction

India has one of the largest livestock population in the world, accounting 56 percent of the world buffalo population and 16 percent cattle population (18th Livestock Census). Buffaloes play a critical role in the intensification of agriculture in farming system. The animals ensure the farmers socio-economic security. Therefore, proper housing along with feeding management practices play a very significant role in exploiting real potentials of dairy animals (Sinha *et al.*, 2009). Proper housing reduces the energy

wastage in maintaining thermo neutral zone as well as reduces the incidence of diseases. It is generally agreed that an animal fail to prove its potential for higher production when fed at low levels.

A livestock management practice followed by the farmers is crucial to identify the strengths and poor animal rearing system and to advise appropriate intervention policies. The present study was undertaken together information regarding to existing housing and feeding

practices adopted by the farmers of different villages of Udaipur district of Rajasthan.

Materials and Methods

The field survey was conducted on 3942 farmers to collect the information related to management and feeding practices in 22 villages of Udaipur district of Rajasthan. In all villages surveyed more than 80 % farmers were keeping buffaloes in 6 villages and 50-80 % in 10 villages depleting that majority of the farmers in villages kept buffaloes. The selected farmers were interviewed and collect the desired information with help of pre-tested questionnaire.

Results and Discussion

The management practices of housing and feeding followed by all the farmers were studied and each of these practices has been described in following sub-section.

Housing management practices

The perusal of the results revealed that majority (66.33 %) of the farmers kept their animals during night time followed by housing during day (33.62 %). The most of the farmers (51.50 %) had open type and rest of the farmers closed type animal house. Among the all respondents 92.20 % farmers had kuccha type of roof for their animal housing. These houses are mainly made up of locally available material like bamboo, forest wood, plastered with mud mixed with cow dung. Similar finding was reported by many researchers (Sahu, 2001; Bainwal *et al.*, 2007; Kalyankar *et al.*, 2008).

As for as location of shed is concerned, 56.87 percent owners kept their animal near or part of residence as compared to separate houses (43.13 %). Purpose of keeping animals near to residence area would be to save cost of

constructions of house as income becomes a limiting factor to spend anything on animal housing. Majority of the respondents kept kuccha (96.77 %) floor in their shed and only 19.76 % had provision of urine drainage facility. These findings are in closed conformity with the results of Kumar *et al.*, (2006). Farmers had the belief that animal feel comfortable on kuccha floor during standing and sitting. The rest of animal houses i.e. 3.23 % have pucca floor. Further reported by Patel *et al.*, (2005), Choudhary *et al.*, (2006) in North Gujrat and Singh *et al.*, (2007 b) in Rajasthan in their survey observed that most of the animal houses had kuccha floor. It is general observation that pucca floor is better than earthen floor for animals to keep them free from worms problems and also from hygienic point of view. The farmers under these study showed awareness is less about these problems and mainly they gave preference to earthen floor, as it remained cheap and comfortable to animals. The majority of animal houses kuccah roof, which might be due to easy availability of material locally and also might be influenced by traditional practices. Peculiarity in roof type found was special type designed to suit the heavy rainfall in Udaipur of Rajasthan state. Similar finding was reported by Singh *et al.*, (2007 b) in their survey region.

Pucca drainage facility of urine was found in only 1.01 % of animals shed, while remaining 98.99 percent had no drainage facility and urine soaked by earthen floor of animal shed as given in table 1. The result is in agreement with the findings of Patel *et al.*, (2006), Choudhary *et al.*, (2006) and Bainwal *et al.*, (2007) but their respondents showed slightly higher number in providing pucca drain. Contrary to this Modi (2003) reported very high (82 %) of respondents provided pucca drain. This shows the degree of awareness of dairy owners of Sabarkantha district.

To protect the animals from extreme weather i.e. sever cold and hot by making a half height of boundary wall (65.29 %) and with good ventilation (87.82 %). This shows that farmers are aware to protecting their animals against inclement weather.

Feeding management practices

Lucerne was the main green fodder about 85.43% of respondents for feeding to buffaloes followed by 11.24% farmers not to fed cultivated green fodder to their animals. Majority of respondents growing legume fodders as compared to non-legumes. Green fodder feeding by the respondents in the present study area is higher. Similar finding

was also reported by Swaroop and Prasad (2007). It may be due to the availability of more irrigation facility in the study area. Not a single farmer practiced for silage making because of lack of knowledge. Around 56.80% of farmers fed their buffaloes mixed type dry fodder and rest of jowar (24.21%) and maize karbi (11.47%).

Our results (Table 2) indicated that majority (57.25%) of the respondents have not practiced for feeding grain and rest of used grain in concentrate mixture for feeding. Among these respondents majority of farmers fed barley (34.41%) to their animals followed by maize, jowar, mixed and wheat.

Table.1 Housing management practices followed by dairy owners

Categories	Frequency	Percent
<i>Housing during</i>		
Day	1322	33.62
Night	2608	66.33
Both (Day & Night)	2	0.05
<i>Type of house</i>		
Open	2025	51.50
Closed	1907	48.50
<i>Type of roof</i>		
Kuccha	3662	92.20
Pucca	308	7.80
<i>Isolation</i>		
Separate	1695	43.13
Part of residence	2335	56.87
<i>Type of Floor</i>		
Kuccha	3803	96.77
Pucca	127	3.23
<i>Boundary wall height</i>		
Full	1252	31.87
Half	2566	65.29
Biological fencing	122	2.84
<i>Sanitary condition of shed</i>		
Good	777	19.76
Poor	3155	80.24
<i>Provision of urine drain</i>		
Yes	40	1.01
No	3892	98.99
<i>Well ventilated</i>		
Yes	3453	87.82
No	479	12.18

Table.2 Feeding management practices followed by dairy owners

Categories	Frequency	Percent
<i>Green fodder availability</i>		
Lucerne	3359	85.43
Berseem	29	0.73
Jowar	00	00.00
Lucerne + Berseem	102	2.60
Berseem + Jowar	00	00.00
Not to fed	442	11.24
<i>Dry fodder availability</i>		
Jowarkarbi	952	24.21
Bhusa	147	3.73
Maize karbi	451	11.47
Local grass	149	3.80
Mixed	2233	56.80
<i>Concentrate feeding</i>		
<i>Seed grain</i>		
Barley	1353	34.41
Maize	204	5.20
Jowar	79	2.01
Wheat	22	0.55
Mixed	23	0.58
None	2251	57.25
<i>Cakes</i>		
GNC	74	1.88
Mustard	279	7.09
Cotton seed	63	1.60
Till	47	1.19
None	3469	88.22
<i>Oil seed</i>		
Yes	3149	80.09
No	783	19.91
<i>Readymade feed</i>		
Yes	964	24.52
No	2968	75.48
<i>Processing of concentrate fed</i>		
Soaked	459	11.67
Cooked	2727	69.35
Raw	157	4.00
Soaked + Cooked	689	17.52
<i>Feeding of concentrates</i>		
Mixed with fodder	2	0.05
Alone	3930	99.95
<i>Time of feeding concentrates</i>		
At time of milking	3932	100.00
Other time	00	0.00
<i>Special feeding before calving</i>		
Yes	3774	95.98
No	158	4.02
<i>Feeding of extra mineral mixture</i>		
Yes	1219	31.00
No	2713	69.00
<i>Feeding of extra salt</i>		
Yes	747	19.00
No	3185	81.00

Practice of concentrate feeding with cakes is not common in the area of survey. Readymade compound buffalo feed was provided by 24.52% of the farmers whereas 75.48% of the farmers provided only home produced ingredients as concentrate to feed their buffaloes. Home prepared concentrate mixture constituted crushed grain of barley mixed with oil cakes. These findings are in line with Bhuyan *et al.*, (2004) and Garget *et al.*, (2005) and contrary to Singh *et al.*, (2004). Regarding to pretreatment of concentrate mixture 69.35% of the respondents cooked concentrate mixture followed by soaking and cooking concentrate mixture before feeding.

All most 100% of respondents were feeding (Table 2) concentrate to lactating buffaloes at the time of milking. Only 0.05% of the farmers fed concentrate mixture mixed with fodder. The data of concentrate feeding to advanced pregnant buffalo was encouraging i.e. 95.98% of the respondents were feeding concentrate mixture as a special ration to advanced pregnant buffaloes which are essential because green fodder availability round the year was very low and possibility of green fodder production throughout the year was also less. The present findings are encouraging than reported by Grag *et al.*, (2005) and Kumar *et al.*, (2006).

Only 31 and 19 percent of the respondents fed mineral mixture and common salt to their buffaloes, respectively, a finding in agreement with the reports of Malik *et al.*, (2005), Kumar *et al.*, (2006) and Nagalakshmi *et al.*, (2007).

It can be concluded based on present study indicated that adoption of scientific housing and feeding management practices was poor in survey area. Majority of animal houses were open type and had kaccha floor, used earthen plates with thatched for roofing material supported on wooden poles. Pucca

drainage facility of urine was found in only 1.01% of animal shed. Not a single farmer practiced for silage making. Mineral mixtures were provided by only 31% of farmers and only 19% respondents were provided salt to their buffaloes. There are few aspects where they followed management practices properly to certain extent but most of the housing and feeding practices needs to be improved a lot in this area.

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