

A STUDY ON DIFFERENT HOUSING PRACTICES OF BUFFALOES IN BIDAR DISTRICT OF KARNATAKA

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Abstract: Dairy farming is one of the important activities among the rural farmers. It provides sustainable income and reduces unemployment to a large number of the rural poor. The study on housing management practices of buffaloes was purposively conducted in Bidar district of Karnataka since it has got predominant buffalo based dairy production system. Bidar and Humnabad taluks were randomly selected for the study. A total of 180 buffalo farmers were selected for the study. An exploratory research design and multistage random sampling technique was applied for the study and data were collected using a structured interview schedule. The study revealed that majority of the farmers (61.67%) tied their buffaloes beside their house. Galvanized iron sheet roofing was provided by 72.22 per cent farmers and had single line housing system (80%). The manger was not provided by majority (54.44%) of the farmers and used to feed on the ground. Nearly 75 per cent of the farmers did not provide drainage facility in the house. Significant number (71.12%) of farmers provided adequate floor space to the buffaloes. Similarly, majority of the farmers (52.22%) provided adequate light and ventilation in the house. The management care during summer (41.67%) and cold (91.67%) was not generally practiced by major portion of the farmers of all the categories. There was a considerable gap existing between recommended scientific management practices and the existing management practices. Younger generation farmers have to take interest in dairy activity, for which suitable extension strategies should be developed. Training programmes on improved management practices will help the farmers to overcome certain management problems like heat stress and infections. Adoption of suitable and scientific housing strategies in buffalo farming will substantially help in increase of production as well as income generation.

Keywords: Buffaloes, Housing, Management, Bidar, Karnataka.

INTRODUCTION

India is endowed with the largest livestock population in the world. Animal Husbandry is helpful in generating gainful employment in the rural sector, particularly among the landless labourers, small and marginal farmers and women by supplementing their family incomes. Livestock farming requires less capital and the management and production expenses are low compared to agriculture. Hence animal husbandry is carried out by all farmers regardless of their economic status and development of livestock sector would be more inclusive (Planning

commission, 2012). India continues to be the largest producer of milk in the World. Karnataka state stands 6th in livestock population in India and in milk production stands 11th in the country i.e. 4.3 per cent to the total India's milk production. Hence, dairying has become an important source of income for millions of rural families and has assumed an important role in providing employment and income generating opportunities (BAHS, 2013). Dairying is rural land based servicing and gender neutral enterprise. It offers more favorable opportunity of employment and provides constant source of income for rural farm households.

In addition to the fact that India has more buffaloes than any other country of the world and it is homeland for the best milch breed in the world. As per 19th Livestock census, 2012 (GOI, 2014) India's livestock sector is one of the largest in the world with a holding of 11.6% of world livestock population which consists 57.83% of world buffalo population. In India, contribution of buffalo in total livestock population is 21.23% which increased at the rate of 3.19% during the last inter-censal period. Buffalo contributes 19% of total meat production in India (BAHS, 2014). Buffalo has inherent ability to produce milk with high milk fat content ranging from 6 to 8.5 per cent. Because of its higher milk fat contents, buffalo milk is preferred over cow milk and it fetches better price in the market (Khan *et al.*, 2010). The country had 38.193 million buffaloes in milk. Perusal of milch animal population in the state vis a vis nation implied that Karnataka state comprised about 4.58 percent of buffaloes in milk (BAHS, 2013). The Murrah, Bhadawari, Jaffarabadi, Surti, Mehsana, Nagpuri and Nili Ravi are the important breeds. Improved breeds like Surti and Murrah breeds dominate among the introduced breeds whereas, Pandarapuri and Jafrabadi are rarely found. Although the economic contribution of livestock seems to be quite substantial in the agricultural economy as well as in the national economy, the farmers who raise buffaloes are yet ignorant of scientific management practices. Genetic potentiality of the livestock and its production depends mostly on the managerial practices (Gupta *et al.*, 2008).

In Bidar district, buffalo dairy farming is more predominant hence the study was conducted to explore the different housing practices for buffaloes in Bidar district. The results of the study will help in understanding the different housing management practices followed by farmers and also to educate them the strengths and weaknesses in the housing management and to formulate suitable housing regime for the animals.

MATERIALS AND METHOD

The study was conducted in the state of Karnataka which is having considerably high density of livestock population and Bidar district is purposively selected for the study since it has got predominantly buffalo based dairy production system. Two taluks viz; Bidar and Humnabad were randomly selected for the study. Ninety buffalo farmers were selected randomly from each of the two taluks under study, thus, a total of 180 buffalo farmers were selected.

The study adopted an exploratory research design and multistage random sampling technique was used for selection of respondents. The interview schedule for the livestock farmers was developed and pre tested before administering in the main sample area. Rapport with the respondents was very essential and also played an important role in eliciting accurate responses from the respondents throughout the investigation. Keeping this in view prior to the collection of data rapport building was done and collected the information. Data was collected through informal and friendly visits to the farmers' homes and farms in the early hours of the day. The data collected were subjected to statistical analyses to know the distribution of respondents according to selected variable of the study.

RESULTS AND DISCUSSION

Housing management practices for buffaloes

The distribution of buffalo farmers based on different housing management practices was depicted in the Table 1. It revealed that, 76.67 per cent, 65 per cent and 61.67 per cent of the small, medium and overall farmers housed their buffaloes beside their house whereas, 56.67 per cent of the large farmers had separate animal shed. It could be attributed to the fact that, housing beside their house would reduce the cost of construction. The results differ with the findings of Vijay *et al.* (2008), who reported that majority of the farmers had separate shed for animals. In case of roof type, galvanized iron sheet was provided to the shed by majority of the small (68.33%), medium (71.67%), large (76.67%) and overall farmers (72.22%). This might be due to the reason that galvanized iron sheet were cost effective and easily affordable by the farmers. Sinha *et al.* (2010), in their study reported similar findings.

The results also revealed that single line housing system was provided by majority of the farmers belonging to categories small (88.33%), medium (81.67%), large (70%) and overall farmers (80%). It could be attributed to the fact that, single line housing will be cost effective for construction of shed. The results were in line with the findings of Ahiwar *et al.* (2010). The majority of the small (60%), medium (55%), large (48%) and overall farmers (54.44%) did not provide manger for feeding their buffaloes. This could be due to lack of knowledge

among the farmers regarding the benefits of manger in terms of hygiene and minimum wastage of feed. Similar observations were made by Sabapara *et al.* (2010).

Table 4.5: Distribution of buffalo farmers based on housing management

Sl. No.	Housing management	Farmers							
		Small (n=60)		Medium (n=60)		Large (n=60)		Overall (T=180)	
		F	%	F	%	F	%	F	%
1	Housing of buffaloes								
	a. Beside the house	46	76.67	39	65.00	26	43.33	111	61.67
	b. Separate shed	7	11.67	18	30.00	34	56.67	59	32.78
	c. Below the shade of tree	5	8.33	3	5.00	0	0.00	8	4.44
	d. Open area	2	3.33	0	0.00	0	0.00	2	1.11
2	Type of roof provided								
	a. Asbestos sheet	0	0.00	2	3.33	13	21.67	15	8.34
	b. Pucca roof	0	0.00	3	5.00	1	1.66	4	2.22
	c. Thatched roof	12	20.00	8	13.33	0	0.00	20	11.11
	d. Galvanized iron sheet	41	68.33	43	71.67	46	76.67	130	72.22
e. No roof	7	11.67	4	6.67	0	0.00	11	6.11	
3	System of housing								
	a. Single line	53	88.33	49	81.67	42	70.00	144	80.00
	b. Head to head system	0	0.00	2	3.33	12	20.00	14	7.78
	c. Tail to tail system	0	0.00	5	8.33	6	10.00	11	6.11
d. Nil	7	11.67	4	6.67	0	0.00	11	6.11	
4	Manger facility								
	a. Kucha	16	26.67	12	20.00	13	21.67	41	22.80
	b. Pucca	8	13.33	15	25.00	18	30.00	41	22.80
	c. Nil (Feeding without manger)								
	i. On the ground	28	46.67	24	40.00	5	8.33	57	31.70
ii. On concrete floor	2	3.33	1	1.67	10	16.67	13	7.20	
iii. Bamboo basket	0	0.00	0	0.00	2	3.33	2	1.10	

	iv. Iron drum	0	0.00	2	3.33	7	11.67	9	5.00
	v. On ground + Iron drum	6	10.00	6	10.00	5	8.33	17	9.40
	Feeding without manger								
	Total	36	60.00	33	55.00	29	48.00	98	54.40
5	Drainage facility								
	a. Yes	6	10.00	16	26.67	23	38.33	45	25.00
	b. No	54	90.00	44	73.33	37	61.67	135	75.00
6	Adequate floor space								
	a. Yes	53	88.33	34	56.67	41	68.33	128	71.12
	b. No	7	11.67	26	43.33	19	31.67	52	28.88
7	Adequate light and ventilation								
	a. Yes	36	60.00	25	41.67	33	55.00	94	52.22
	b. No	24	40.00	35	58.33	27	45.00	86	47.78
8	Summer management								
	a. Sprinkling of water on buffaloes	2	3.33	17	28.33	20	25.00	39	21.67
	b. Fan	0	0.00	0	0.00	2	3.33	2	1.11
	c. Spreading of grass on the top of roof	0	0.00	4	6.67	10	16.67	14	7.77
	d. Sprinkling of water on buffaloes + Spreading of grass on the top of roof	19	31.67	12	20.00	15	0.00	46	25.56
	e. Sprinkling of water on animals + Fan	0	0.00	0	0.00	2	3.33	2	1.11
	f. Sprinkling of water on buffaloes + Wallowing tank	0	0.00	0	0.00	2	3.33	2	1.11
	g. No any measure	39	65.00	27	45.00	9	48.34	75	41.67
9	Cold management								
	a. Providing bedding material	0	0.00	3	5.00	5	8.33	8	4.44
	b. Providing heat source	0	0.00	0	0.00	3	5.00	3	1.67

c. Closing the shed with curtain	0	0.00	1	1.67	3	5.00	4	2.22
d. No any measure	60	100.00	56	93.33	49	81.67	165	91.67

The drainage in the stall was not provided by majority of the small (90%), medium (73.33%), large (61.67%) and overall farmers (75%) in the study area. The respondents in the study area gave preference to earthen floor, as it remained cheaper but the earthen floor is highly prone to worm problem. The results were similar with the findings of Bainwad *et al.* (2007), Sinha *et al.* (2010) and Sabapara *et al.* (2010), where majority of the farmers did not provide drainage facility in their shed. It was evident from Table 1 that, higher percentage of the small (88.33%), medium (56.67%), large (68.33%) and overall farmers (71.12%) provided adequate floor space to the buffaloes. The findings indicated that, adequate floor space was provided to the buffaloes. The similar findings were noted by Sinha *et al.* (2010), and findings were contrary with the findings of Ahiwar *et al.* (2010). About 60 per cent, 55 per cent and 52.22 per cent of the small, large and overall farmers respectively, provided adequate light and ventilation in the shed. But in case of medium farmers, majority (58.33%) did not provide adequate light and ventilation in the shed. The findings indicated the awareness of farmers towards provision of light and ventilation. The above findings were in partial agreement with findings Bainwad *et al.* (2007), where cent percent of the farmers provided good ventilation. Similar findings were reported by Sinha *et al.* (2010) and Ahiwar *et al.* (2010).

Regarding the summer management in buffaloes, majority of the small (65%), medium (45%), large (48.34%) and total farmers (41.67%) did not practice any management practices to protect buffaloes from extreme heat in summer. Exposure of buffaloes to extreme heat leads to stress in the buffaloes, which increases the sensitivity to many diseases. The findings confirm that, majority of the farmers were not aware of protecting the buffaloes from extreme heat. Sabapara *et al.* (2010) reported similar findings in their study. The Table also revealed that, none of the small farmers and majority of the medium (93.33%), large (81.67%) and overall farmers (91.67%) took any management care to protect buffaloes from extreme cold. This shows that, very few farmers were aware of protecting their animals against inclement weather. The findings were similar with the findings of Sabapara *et al.* (2010).

CONCLUSION

The present study conducted on housing practices of buffaloes in Bidar district revealed that majority of the small (76.67%), medium (65%) and overall farmers (61.67%) tied their

buffaloes beside their house, whereas, large farmers (56.67%) had separate buffalo shed. Galvanized iron sheet roofing was provided by 72.22 per cent farmers and had single line housing system (80%). The manger was not provided by majority (54.44%) of all the group farmers and used to feed on the ground by small (77.78%) and medium (40%) and overall (31.67%), whereas, large farmers fed on concrete floor (34.48%). Nearly 75 per cent of the farmers of all the groups did not provide drainage facility in the house. Significant number (71.12%) of all the group farmers provided adequate floor space to the buffaloes. Similarly, majority of the small (60%), large farmers (55%) and overall farmers (52.22%) provided adequate light and ventilation in the house, but to the contrary to these findings, majority of the medium farmers (58.33%) did not provide adequate light and ventilation in the house. The management care during summer (41.67%) and cold (91.67%) was not commonly practiced by major portion of the farmers of all the groups. There was a considerable gap existing between recommended scientific management practices and the existing management practices. More younger generation farmers have to take interest in dairy activity, for which suitable extension strategies should be developed for involving the younger generation. Training programmes on improved management practices will help the farmers to overcome the certain management problems like heat stress, infections etc. Adoption of suitable and scientific housing strategies for different types of animals in buffalo farming will substantially help in increase of production as well as income generation.

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