

Socio Economic Study on Housing and Health Management Practices of Buffalo Farming in Phulera Block of Jaipur District, Rajasthan

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ABSTRACT: The current study entitled 'A socio-economic survey on housing management practices and health buffalo farming in Phulera Block of Jaipur District, Rajasthan' was conducted for 2019-20 with a sample of 80 respondents. With regard to housekeeping procedures a large number (60.00 percent) respondents kept their pets inside the living room. None of the respondents had a pucca-covered floor. The 82.50 percent respondents fixed the shed wall with bricks and mortar followed by 17.50 percent grass. The largest number of respondents had a pucca can (56.25 percent). Ninety percent of respondents followed the habit of grooming their buffalo. About 38.75% of respondents built a water tank at the animal shelter. Most of the 70.00 percent of respondents followed the grazing methods of pregnant animals. The results showed that 61.25 percent of respondents identified buffalo before giving birth and 82.50 percent provided bedding for pregnant buffaloes. Only 75 percent of respondents had adequate light in the animal field. In terms of health care procedures the results revealed that 68.75 percent of the owners treat their animals for a thousand first and then veterinarians. The majority of 76.25 percent of respondents did not vaccinate their animals against diseases. About 67.50 percent of owners separate sick animals from healthy ones. Many 90.00% of owners have left the carcasses of animals outside the city. The majority of 97.50 percent control flies with grass smoke.

Keywords: Housing, managemental practices, animals, health.

INTRODUCTION

The livestock sector plays an important role in shaping the rural economy of India. It is a major ongoing program that generates income for rural households. Livestock and crop husbandry are two important aspects of agroforestry that contribute to the agricultural economy that leads to sustainable and integrated agriculture. On average, animal husbandry contributes about 30 percent of the country's gross domestic product (GDP), and the contribution is very high in tropical and subtropical areas where normal crop production remains a sport due to the uncertainty and low rainfall.

Livestock plays an important role in agriculture and the rural economy in developing countries. They not only produce direct food, they also provide essential resources for crop farming. Many farms in developing countries are too small to justify having a tractor or use, and one that can be done by animal power or human activity.

Animals are an important link in the nutrient cycle, replenishing nutrients in the soil in ways that plants can easily use. They can bring in nutrients from pastures

and herds and focus on the vegetation area with their manure and urine. Animal manure and urine that people in developed countries consider being the most important fertilizer in developing lands. Few small holder farmers can afford to buy enough mineral fertilizer. Animals give farmers reason to plant legumes as pastures and cover crops that protect the soil and restore structure and fertility.

India is the world's largest milk producer by producing 187 million tons of milk in the year 2018-19 (FAO). The number of buffalo in India is estimated at 109.85 million, comprising about 57 percent of the world's total buffalo.

Animal husbandry is a major economic activity for rural people, especially in the arid and desert regions of Rajasthan. Livestock development contributes significantly to job creation and poverty reduction in rural areas. Livestock contributes a significant amount of renewable energy to agriculture, about half of cattle and 25 percent of buffaloes used for work and agriculture.

India has only 2.4 percent of the world supporting about 16.65% of the world's population and 20% of the

world's livestock. India is ranked first with buffalo, second with cattle and goats, third with sheep, the world's population. It has about 57% of buffaloes, 16% cattle, 20% goats and about 5% of the world's livestock (Srivastava *et al.*, 2009). The country is endowed with several breeds of cattle (50), buffalo (17), sheep (44), and goat (34) (ICAR-DPR, Hyderabad).

About 8 percent of G.D.P. Rajasthan is sponsored by the Livestock sector only. The sector has great potential for self-employment in rural areas where investment is very low per unit. Therefore, livestock development is an important means of prosperity in rural areas. According to the 2020 stock market for 2019, there are 56.8 million livestock (including cattle, buffaloes, sheep, goats, horses and ponies, mules, donkeys, camels and pigs) and 14.6 million poultry (Rajasthan Department of Animal Husbandry, Government., Livestock I -The 2019 Census). Animal husbandry is the second most important business for farmers in the Jaipur region. According to the latest animal statistics for 2012, the region is home to a large herd of wildlife including 634941 cattle, 1073386 buffaloes, 229948 sheep and 837094 goats. Other environmental and social factors such as the availability of design space and affordable staff also support business in the region. Livestock sector is an important source of livelihood in Rajasthan for rural people and earns the average farmer's income. Cattle farming are a process of converting available food and fodder products into milk and other products.

Efforts should be made to gather and integrate all available information. Few efforts are known to provide systematic research on buffalo management in rural areas. Available information and general text on the topic are based on assumptions, general observations, information and reports of specific experts and professional staff. This is not enough to serve as the basis for practical guidelines for developing systems for the delivery of advanced and scientific management systems and for solving problems encountered.

RESEARCH METHODOLOGY

The study was conducted in Phulera tehsil, a deliberately selected Jaipur district of Rajasthan. The district is made up of 13 tehsil, from which one tehsil was selected (Malik and Nagpaul 1998). In addition, four selected regions have been identified in tehsil. In each region, 20 respondents were selected. Thus, the entire sample contains 80 respondents from four selected regions in Phulera tehsils. The list of buffalo owners in selected houses was prepared with the assistance of the districts of Sarpanch and Patwari in a selective manner in all categories, divided into three categories according to the size of the herd. Small, medium and large.

Rank based quotient (RBQ) Based on the standards provided to farmers, the rank based quotient (RBQ) for each step is calculated at the village level on a formula (Sabarathnam and Vennila 1996).

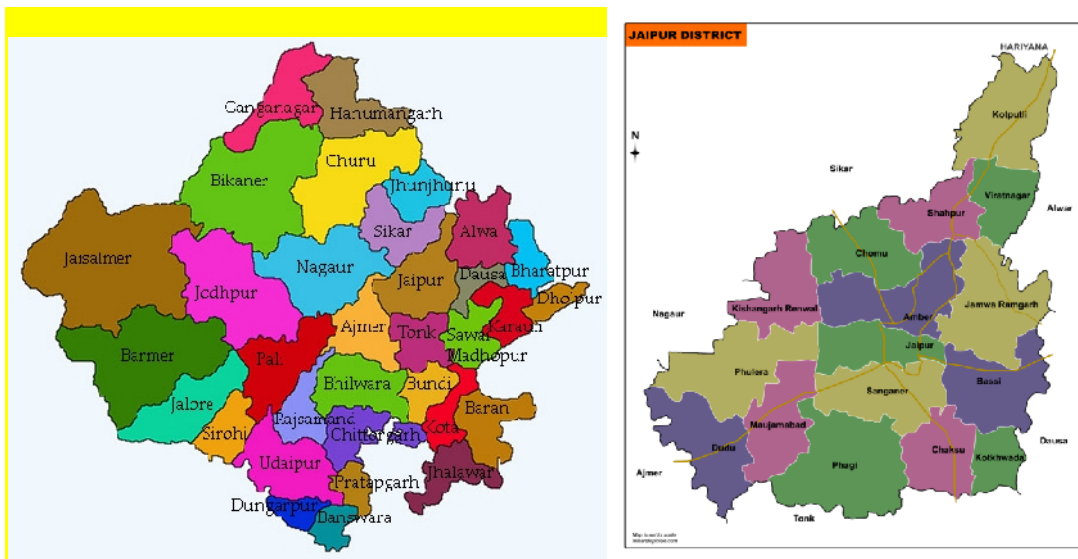


Fig. 1. Research area Phulera block.

RESULTS AND DISCUSSIONS

A. Existing housing management practices

The overall results in Table 1 showed that the majority (60.00 percent) of respondents kept their animals inside the living room. Roy *et al.* (2007) followed by the living room division by 40.00 percent. Chi-square figures are 0.3497. The p-value is 0.839582. The result is not relevant to $p < 0.05$. All respondents had a cacao floor in their buffalo shed and only 40.00 percent had a

drainage ditch. Respondents had a pucca floor. About 53.75 percent of the farmers had slopes down the barn. Chi-square figures are 0.0982. The p-value is .9521. The result is not relevant to $p < 0.05$.

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About 53.75 percent of the farmers had slopes down the barn. Chi-square figures are 0.0982. The p-value is .9521. The result is not relevant to $p < 0.05$ (Handa and

Gill 1986; Bainwad *et al.* 2007). Details regarding the roof shade feature approximately 43.75% of respondents had a flat roof followed by 56.25% who had a flat roof. Chi-square figures are 0.4379. The p-value is 0.803365 (Ahirwar *et al.*, 2009). The result is not relevant to $p < .05$. About 20 percent of respondents use grass in the buffalo shed. Chi-square figures are 2,284. The p-value is 0.683689. The result is not relevant to $p < .05$. Only 22.50 per cent and only 57.50 per cent respondents used a stone slab and asbestos for roofing, respectively (Roy *et al.*, 2007). Brick and mortar concrete materials were used by 82.50 percent of the respondents and bricks and mortar and grass were used by 00.00 and 17.50 percent of the respondents respectively in making the shed wall in the study area. That 77.50 percent of respondents used the manger to feed and 56.25 percent of the farmers had a pucca boat followed by 27.50 percent of wood and 16.25 percent of the feed to the animals (Garg *et al.*, 2005). Chi-square figures are 1.3717. The p-value is 0.8491. The result is not relevant to $p < .05$. 90.00% of respondents trained buffalo. Chi-square figures are 0.148. The p value is 0.928667. The result is not relevant to $p < .05$. About 63.75% of respondents use sand as a bedding material during the winter. In rural

areas, 73.30% of farmers use sugarcane leaves and 13.3 percent use grass as abiding in winter. Chi-square figures are 1.2297. The p-value is 0.540721. The result is not relevant to $p < .05$. Findings from the current study revealed that 61.25 percent of respondents classified buffalo before giving birth. Chi-square figures are 0.0527. P value says 0.974011. The result is not relevant to $p < .05$. There was no separate breeding box but farmers separated their buffalo 2-3 days before breeding other animals in the same shed and 82.50 percent of the respondents provided bedding for pregnant buffaloes. Chi-square figures are 1.3028. The p-value is 0.521309. The result is not relevant to $p < .05$. About 75.00 percent of respondents had appropriate lighting provision in animal sheds. Chi-square figures are 0.3419. The p-value is 0.842872. The result is not relevant to $p < .05$ (Divekar and Saiyed 2010; Singh *et al.*, 2014).

The results of the current study revealed that the existing housing management systems do not comply with the recommended management procedures. There are lacunas especially in relation to the drainage ditch, shed area, feeding pens for the disabled and the lack of science buffalo barn (Raquib *et al.*, 2009).

Table 1: Existing housing management practices.

Practices	Households (Herd size)			Overall	2 Value
	Small	Medium	Large		
1. Location of shed:					
a. Inside dwelling house	9	21	18	48(60.00)	0.35^{NS}
b. Separate from dwelling house	7	15	10	32(40.00)	
2. Type of floor:					
a. Kutcha	20	35	25	80(100)	—
b. Pucca	0	0	0	00	
3. Slope in floor:					
a. Yes	8	22	13	43(53.75)	0.10^{NS}
b. No	6	20	11	37(46.25)	
4. Drainage channel/pit:					
a. Yes	5	18	9	32(40.00)	0.32^{NS}
b. No	8	24	16	48(60.00)	
5. Features of roof of shed:					
a. Flat	7	22	16	45(56.25)	0.44^{NS}
b. sloppy	6	19	10	35(43.75)	
6. Roof material in shed:					
a. Thatch	1	9	6	16(20.00)	2.28^{NS}
b. Asbestos \ tin	9	20	17	46(57.50)	
c. Stone slab	4	9	5	18(22.50)	
d. Bricks and mud	0	0	0	00.00	
7. Materials used in walls:					
a. Thatch	3	6	5	14(17.50)	—
b. Brick and lime/cement	15	33	19	66(82.50)	
c. Brick in mud	0	0	0	00	
8. Manger feeding:					
a. Yes	13	30	19	62(77.50)	0.09^{NS}
b. No	4	8	6	18(22.50)	
9. Type of manger					
a. Kutcha	2	7	4	13(16.25)	1.37^{NS}
b. Pucca	8	20	17	45(56.25)	
c. Wooden	6	9	7	22(27.50)	
10. Ventilation					
a. Yes	9	35	25	69(86.25)	0.23^{NS}
b. No	2	5	4	11(13.75)	

11. Do you practice grooming of buffaloes					
a. Yes	12	37	23	72(90.00)	0.14 ^{NS}
b. No	1	4	3	8(10.00)	
12. provision of water trough in shed					
a. Yes	6	15	10	31(38.75)	0.05 ^{NS}
b. No	9	25	15	49(61.25)	
13. Bedding material used on the floor in winter season					
a. Yes	11	25	15	51(63.75)	1.23 ^{NS}
b. No	3	15	7	29(36.25)	
14. Do you practice grazing for advanced pregnant animals					
a. Yes	9	28	19	56(70.00)	0.28 ^{NS}
b. No	5	11	8	24(30.00)	
15. Do you segregate buffalo before calving					
a. Yes	9	25	15	49(61.25)	0.05 ^{NS}
b. No	6	15	10	31(38.75)	
16. Do you provide any bedding material to pregnant buffalos					
a. Yes	7	35	24	66(82.50)	1.30 ^{NS}
b. No	3	7	4	14(17.50)	
17. Proper light provision in animal shed					
a. Yes	9	30	21	60(75.00)	0.34 ^{NS}
b. No	4	10	6	20(25.00)	

B. Existing health care management practices

It was observed in Table 2 that 68.75 percent of respondents received their sick animal treatment for a thousand first and then a veterinarian. Only 31.25 percent of buffalo breeders are treated by their veterinarian. Chi-square figures are 0.1705. The p value is 0.918288. The result is not relevant to $p < .05$. Regarding the H.S. Vaccine, F.M.D. and B.Q. Only 13.12 percent of respondents were recorded to apply these practices to their animals. Chi-square figures are 0.2799. The p-value is 0.869405. The result is not relevant to $p < 0.05$ (Mathur *et al.*, 2001).

Regarding the practice of killing worms, very few respond i.e. 16.25 percent kill worms in their animals regularly. Chi-square figures are 0.5545. The p-value is 0.757874. The result is not relevant to $p < 0.05$. About 67.50 percent of respondents separated a sick animal from a healthy animal while the remaining 32.50% of respondents were unaware of the practice. Chi-square figures are 0.2228. The p-value is .894576. The result is not relevant to $p < 0.05$. Most (90.00 percent) of buffalo breeders used to leave the carcasses of animals outside the house for decay/ vultures. Chi-square figures are 0.0437. The p-value is .978378. The result is not relevant to $p < 0.05$. These findings are in line with the observation of Rathore *et al.* (2009) and are not in

accordance with the observations of Malik and Nagpaul (2000).

66.25 percent of respondents cleaned the water tank and boat during the week. Only 26.25 percent and 7.50 percent respondents clean one day each day, respectively. Chi-square figures are 2.3709. The p-value is 0.667891. The result is not relevant to $p < 0.05$. About 75.00 percent of buffalo farmers clean their livestock daily. Chi-square figures are 0.2921. The p value is 0.990321. The result is not relevant to $p < 0.05$. 97.50 percent of respondents used grass/fume smoke to control flies/mosquitoes. Although, (27.50 percent) followed the ectoparasites approach. Chi-square figures are 0.4657 (Malik and Nagpaul 2000). The p value is 0.792256. The result is not relevant to $p < 0.05$.

According to study respondents, the availability of veterinary facilities and general assistance is inadequate. The results showed that the majority of respondents did not follow the recommended procedures for managing their health care such as vaccinating their animals, routinely removing worms. It is because of ignorance of the importance of these practices. It will only happen if the government provides adequate veterinary services in the most rural areas (Yasser *et al.*, 2009).

Table 2: Existing health care management practices.

Practices	Households (Herd size)			Overall	2 Value
	Small	Medium	Large		
1. Who is consulted for treatments of sick animals					
a. Veterinary Doctor/stockman	6	11	8	25(31.25)	0.17 ^{NS}
b. Quack first then veterinary Doctor/stockman	11	25	19	55(68.75)	
2. Vaccinate animal against diseases:					
a. Yes	3	9	7	19(23.75)	0.28 ^{NS}
b. No	9	33	19	61(76.25)	
3. Practiced deworming measures:					
a. Yes	2	7	4	13(16.25)	0.55 ^{NS}
b. No	9	30	28	67(83.75)	
4. Do you Isolate the sick animals from healthy ones:					
a. Yes	8	26	20	54(67.50)	0.22 ^{NS}

b. No	5	13	9	26(32.50)	
5 How do you Disposal of dead animals:					
a. Deep burrial	1	4	3	8(10.00)	0.04^{NS}
b. Leave as such for decay/vultures	11	35	26	72(90.00)	
6. Cleaning interval of water trough and mangers:					
a. Daily	1	3	2	6(7.50)	2.37^{NS}
b. Alternate day	3	8	10	21(26.25)	
c. Weekly	7	30	16	53(66.25)	
7. At what interval do you clean animal shed					
a. Daily	9	30	21	60(75.00)	0.29^{NS}
b. Alternate day	2	8	5	15(18.75)	
c. Weekly	1	2	2	5(6.25)	
8. what measures do you adopt to control Flies/Mosquitoes					
a. Smoke of waste grass	13	35	30	78(97.50)	—
a. Electric fan	0	1	1	2(2.50)	
9. what measures do you adopt to control Lice/Ticks					
a. Manual	3	10	9	22(27.50)	0.47^{NS}
b. Dusting of insecticide	9	30	19	58(72.50)	

Different Constraints' Rank Based Quotient (RBQ) Values. According to the rank based quotient (RBQ) values the researcher easily identified the most critical obstacle at the regional level. Obstacles with a high RBQ value can be displayed as the most difficult obstacles.

As can be seen from the results, the farmer's negligence in vaccinating animals was one of the challenges buffalo farmers faced on a compact RBQ basis. The RBQ value for this restriction was 62.12.

Lack of knowledge about ways to kill worms has been a third-ranked obstacle in the study area.

Suggestions for suitable buffalo management practices in the Phulera block Jaipur:

1. It contains a large amount of gamma globulins that the cow produces antibodies against antigens during its lifetime including those that fight many biological organisms that produce disease.

2. It contains high levels of minerals and vitamin A which are important in fighting disease. Ingestion of colostrum significantly increases calf survival.

3. It will be very helpful to inject colostrum for the first 15-30 minutes followed by a second dose for about 10-12 hours.

CONCLUSION

Research shows that the majority of respondents does not follow the recommended procedures for housing, health & care management. The majority of respondents following the results of existing milk management practices showed that 78.75 percent of respondents followed the milking process. With regard to housekeeping procedures a large number (60.00 percent) respondents kept their pets inside the living room. In terms of health care procedures the results revealed that 68.75 percent of the owners treat their animals for a thousand first and then veterinarians. The majority of 76.25 percent of respondents did not vaccinate their animals against diseases. Most respondents do not follow recommended health care, milking, home management procedures. Basically the importance of RBQ One of the difficulties was the failure to vaccinate animals buffalo owners face in Phulera tehsils.

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Conflict of Interest. None.

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