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Research Article

Housing and Health Care Management Practices Followed by Gir Cattle Owners for Conservation of Gir Cattle in Ajmer District of Rajasthan

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Abstract | The study was conducted in Ajmer district of Rajasthan, out of 10 tehsils of Ajmer district two tehsils i.e. Bhinay and Bijainagar were selected purposively**.** Further, four villages from each selected tehsil were identified. From each village 20 respondents were selected randomly. Thus, the entire sample consists of 160 respondents. The field survey was conducted to collect the first hand information on existing housing and health care management practices followed by Gir cattle owners in Ajmer district of Rajasthan.All the cattle keepers had kuccha floor in shed and 55 per cent kept their cattle inside dwelling house. About 64.37 per cent of the cattle owners used bedding material during winter season. About 68.13 % of the respondents had less ventilation provision in animal shed. Results indicated that 90.62 per cent of respondents vaccinate their animal against diseases. Majority 97.50 per cent controlled flies by smoke of waste grasses. Only 20.13 per cent of respondents practiced deworming measures. About 25 percent of the owners isolate the sick animals from healthy ones.

Keywords | Management practice, Gir cattle, Conservation, Respondents, Rajasthan

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INTRODUCTION

Livestock contributes a large portion of draft power for agriculture, with approximately half of the cattle population and 25 per cent of the buffalo population being used for work and cultivation along with that Livestock production in Rajasthan is pre-dominantly the endeavor of small holders. More than 80% rural families keep livestock in their households. Livestock farming is practiced traditionally mostly for agricultural operations. Contribution of animal husbandry sector to the GDP of the State has been estimated to be around 9.16 per cent. About 35 per cent of the income to small and marginal farmers comes from dairy and animal husbandry. In arid areas the contribution is as high as 50 per cent.So the study was conducted in Ajmer district of Rajasthan to find out the various existing housing and health care management practices followed by Gir cattle owners.

MATERIALS AND METHODS

The study was conducted in Ajmer district of Rajasthan, out of 10 tehsils of Ajmer district two tehsils i.e. Bhinay and Bijainagar were selected purposively**.** Further, four villages from each selected tehsil were identified. From each village 20 respondents were selected randomly. Thus, the entire sample consists of 160 respondents. The data was collected through the personal interview. The existing housing and health care management practices were separately enlisted. The frequencies were obtained for different housing and health care management practices included in the study. The score of individual practice was converted

into percentage.

RESULTS AND DISCUSSION

The different housing and health care management practices followed by all the 160 Gir cattle owners were studied and each of them has been described in sub points as follows.

Existing Housing Management Practices

Housing management is an important factor as housing helps to encourage the scientific feeding, proper disease control, better care and management along with prevention of animals from adverse climatic conditions and it maintains thermo neutral zone, in which animals are most productive. The result presented in Table 1 shows that majority (55 per cent) of the respondents kept their animals inside dwelling house, followed by 45 per cent of the of respondents who kept their animals separate from dwelling house. These findings recorded in present study, are in agreement with the reports of Manohar et al. (2014), Sabapara et al. (2010) and Sinha et al. (2009).

All the respondents had kuccha floor in their cattle shed and only 19.38 per cent had drainage channel. These findings are in close conformity with the earlier reports of Singh et al. (2014), Kishore et al. (2013), Rathore et al. (2010) , Singh et al. (2008), Bainwad et al. (2007) and Deoras et al. (2004) but are in contrast to findings of Kishore et al. (2013), Uddin et al. (2012), Sinha et al. (2009) who reported that 85.6%, 72.2% and 80% per cent of the respondents had pucca floors. Only around 35 per cent of farmers had slope on floor in cattle shed. These findings are in agreement with Deoras et al. (2004) and in contrary with Kumar et al. (2006).

The data collected regarding feature of roof shade reveals that about 59.38 per cent of the respondents had sloppy roof shed followed by 40.62 per cent who had flat roof shed. Around 59.38 per cent respondents used thatch material for cattle shed. Only 10 and 30.62 per cent of respondents used stone slab and asbestos for roofing the shed, respectively. These results are almost similar to findings of Kishore et al. (2013), Bainwad et al. (2007) but contrary to that reported by Malsawmdawngliana et al. (2016). Brick and lime/cement material were used by 70 per cent of respondents and brick in mud and thatch material is used by 18.13 and 11.27 per cent of respondents respectively in making of wall of sheds in the study area.

Table 1 shows that 94.38 per cent of the respondents used manger for feeding and 64.38 per cent of the farmers had pucca manger followed by wooden 8.75 per cent and kuccha 26.87 per cent manger for feeding of animals. These findings are in close conformity with the earlier reports of Manohar et al. (2014). The present findings are not favoring the findings of Kishore et al. (2013), Sabapara et al. (2010) and Sinha et al. (2009) who reported that majority of feeding manger were *kuccha* in rural areas. All of the respondents practiced grooming of the cattle. About 64.37 per cent of the respondents used sand as bedding material during winter season. The present findings are similar with the earlier findings of Sabapara et al. (2010) and Sinha et al. (2009), who reported that in rural areas, 73.30 per cent farmers were using sugarcane leaves and 13.3 per cent were using straw as bedding material in winter.

Majority (79.38%) of the respondents had not constructed water trough in animal shed. These results are in line with the previous observation of Rathore et al. (2010) and Sinha et al. (2009). About 28.13 per cent of the respondents had proper light provision in the animal sheds. It was mainly due to the lack of electrified houses in rural areas of Ajmer district. The results are in agreement with the findings of Manohar et al. (2014), Rathore et al. (2010) and Deoras et al. (2004). The above findings were contrary to the findings of Malsawmdawngliana et al. (2016).

The result revealed from Table 1 that majority (68.13 per cent) of the animal sheds have less ventilation followed by 31.87 per cent optimum ventilation and zero percent animal sheds have excess ventilation. These findings are in close conformity with the earlier reports of Singh et al. (2014), Tiwari et al. (2009) and Deoras et al. (2004). These results are not in line with the previous observation of Kishore et al. (2013) and Bainwad et al. (2007).

These results of the present study revealed that existing housing management practices are not according to the recommended management practices. There are some lacunas especially with respect to drainage channel, location of shed, defective feeding mangers and lack of scientific cattle shed.

Existing Health Care Management Practices

It was observed from the evaluation Table 2 shows that 78.13 per cent of the respondents got their sick animals treated by quack first then veterinary doctor. Only 21.87 per cent of the cattle owners got treated their sick animals by veterinary doctor/ stockman directly. Regarding vaccination against H.S., F.M.D. and B.Q. only 90.62 per cent of the respondents were recorded to adopt these practices for their animals. Almost similar results were reported by Prajapati et al. (2015), Letha et al. (2013), Sabapara et al. (2010), Tiwari et al. (2009) and Bainwad et al. (2007) but in contrary to the results of Malsawmdawngliana et al. (2016), Rathore et al. (2010), Yadav et al.(2009), Gupta et al. (2008) and Kunzru et al. (1994).

Table 1: Existing housing management practices

Existing practices	Frequency	Percentage
1. Location of shed:		
a. Inside dwelling house	88	55.00
b. Separate from dwelling house	72	45.00
2. Type of floor:		
a. Kutcha	160	100
b. Pucca	00	00
3. Slope in floor:		
a. Yes	56	35.00
b. No	104	65.00
4. Drainage channel/pit:		
a. Yes	31	19.38
b. No	129	80.62
5. Features of roof of shed:		
a. Flat	65	40.62
b. sloppy	95	59.38
6. Roof material in shed:		
a. Thatch	95	59.38
b. Asbestos \ tin	49	30.62
c. Stone slab	16	10.00
d. Bricks and mud	00	00
7. Material used in walls:		
a. Thatch	19	11.87
b. Brick and lime/cement	112	70.00
c. Brick in mud	29	18.13
8. Manger feeding:		
a. Yes	151	94.38
b. No	9	05.62
9. Type of manger:		
a. Kutcha	43	26.87
b. Pucca	103	64.38
c. Wooden	14	08.75
10. Grooming practice of cow:		
a. Yes	160	100
b. No	00	00
11. Bedding material used on the floor in winter season:		
a. Yes	103	64.37
b. No	57	35.63
12. Provision of water trough in shed:		
a. Yes	33	20.62
b. No	127	79.38
13. Ventilation:		
a. Low	109	68.13
b. Optimum	51	31.87
c. Excess	00	00
14. Proper light provision in animal shed:		

a. Yes	45	28.13
b. No	115	71.87

Table 2: Existing health care management practices

Existing practices	Frequency	Percentage
1. Who is consulted for treatment of sick animals:		
a. Veterinary Doctor/stockman	35	21.87
b. Quack first then veterinary Doctor/stockman	125	78.13
2. Vaccinate animal against diseases:		
a. Yes	145	90.62
b. No	15	09.38
3. Practiced deworming measures:		
a. Yes	33	20.63
b. No	127	79.37
4. Isolate the sick animals from healthy ones:		
a. Yes	40	25
b. No	120	75
5. Disposal of dead animals:		
a. Deep burrial	10	06.25
b. Leave as such for decay/vultures	150	93.75
6. Cleaning interval of water trough and mangers:		
a. Daily	06	03.75
b. Alternate day	34	21.25
c. Weekly	120	75.00
7. Cleaning interval of animal shed:		
a. Daily	155	96.87
b. Alternate day	05	03.13
c. Weekly	00	00
8. Measures adopted to control flies/mosquitoes:		
a. Smoke of waste grass	155	97.50
b. Electric fan	04	02.50
9. Measures adopted to control lice/ticks:		
a. Manual	38	23.75
b. Dusting of insecticide	122	76.25
10. Veterinary aid available in village:		
a. Yes	40	25.00
b. No	120	75.00
11. Availability of veterinary facilities:		
a. Good	15	09.37
b. Satisfactory	37	23.13
c. Poor	108	67.50

Regarding deworming practices, very few respondents *i.e.* 20.63 per cent dewormed their animals regularly. The above findings have similarities with the findings of Singh et al. (2016), Malsawmdawngliana et al. (2016), Sabapara et al. (2010) and Yadav et al. (2009) but in contrast with the findings of Prajapati et al. (2015) and Rathore et al. (2010).

About 25 per cent of respondents isolate the sick animal from healthy one whereas remaining 75 per cent of respondents were not aware about this practice. Findings of this study are in accordance with the findings of Prajapati

et al. (2015) and Yadav et al. (2009) but in contrast with the results of Rathore et al. (2010) and Gupta et al. (2008). Majority (93.75 per cent) of the Gir cattle owners used to leave the dead body of animals outside the village as such for decay/vultures. These findings are in line with the observation of Rathore et al. (2010).

Three-fourth of respondents cleaned water trough and manger at weekly interval. Only 21.25 per cent and 3.75 per cent of the respondents cleaned alternate day and daily, respectively. 96.87 per cent of the cattle keepers cleaned their animals shed daily. These findings are in line with the observation of Rathore et al. (2010). Majority (97.50 per cent) of the respondents used smoke of waste grass/fodder to control flies/mosquitoes. Whereas, (23.75 per cent) followed manual method of picking ectoparasites. These findings are in line with the observations of Prajapati et al. (2015) and Rathore et al. (2010).

The number of veterinary hospital (1) and stockman centre (1) existed in the surveyed villages was also very less. The remaining villages where veterinary facilities were not available, the minimum and maximum distance of nearest stockman centre/veterinary hospital were 7 to 30 km. According to the surveyed respondents, the availability of veterinary facilities and assistance in general was not sufficient. The per cent of respondents regarded veterinary facilities as good, satisfactory and poor were 9.37, 23.13 and 67.5 per cent, respectively.

The results showed that most of the respondents had not followed recommended health care management practices like vaccinating their animals, regular deworming. It is due to unawareness about importance of these practices. The scenario will change only when government provides adequate veterinary facilities and awareness regarding proper managemental practices in rural areas extensively.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

AUTHORS CONTRIBUTION

Vikramjit Singh: Main Author (M.V.Sc Research).
Subhash Chander Goswami: Major Advisor.
Vijay Kumar: Advisor.
Poonam Choudhary: Help in Research work.
Arun Kumar Jhirwal: Thesis evaluation.
Mohan Lal Choudhary: Thesis evaluation.
Surendar Singh Nirwan: Help in survey during research.

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