

ADOPTION OF IMPROVED HUSBANDRY PRACTICES BY CROSSBRED OWNERS IN TRIBAL AREA OF SOUTH GUJARAT

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ABSTRACT

The present study was conducted in the Dang district of Gujarat. Total 150 respondents were interviewed for the questionnaire prepared about scientific animal husbandry practices followed by them and constraints in adoption of those practices. The findings indicated that majority of farmers were following good breeding practices, but there is a problem of availability of timely A.I. facility in interior area. Farmers were much aware about clean milk production also, and that may be because of regular awareness programs run by dairy cooperative and government. Though, they were not following regular grooming practices. Crossbred cattle owners were not following regular hoof trimming, disbudding and ecto-parasite control practice. Because of unavailability of timely vaccination, schedule of vaccination was also not followed properly. Moreover this, farmers felt too high prices of concentrate mixture.

Key words: Breeding, Clean milk production, Healthcare, Constraints

Gujarat is a one of the leading states in milk production and marketing in India and proverbially known as “Milk bowl of India”. In Gujarat, in-milk cattle, buffalo and goat population are 66.71 lakhs. Crossbred cows are 4.59 lakhs in number and they contributed about 14.15 lakhs tones of milk production per year according to sample survey by Government of Gujarat². On account of various promotional schemes by Government for dairy development in tribal area, livestock development in the Dang [district has come up where the major population is tribal. Understanding livestock management practices followed by farmers is essential to identify strength and weaknesses of rearing system and to formulate suitable remedies⁵. The present information available on dairy animal management in Dang district is based on assumptions, casual observations, experience and reports of some specialist and professional workers. This is not

adequate to serve as the basis on which valid guidelines for introducing scientific management practices for improvement in dairy husbandry can be framed. Keeping these facts in mind, the present study was planned to delineate information on the dairy animal management practices like breeding, clean milk production and healthcare management followed by the farmers of Dang district of South Gujarat.

MATERIALS AND METHODS

The Dang is the smallest district in Gujarat having only one taluka (Ahwa). Majority of the population is tribal and illiterate¹. A field study was conducted to document the information on breeding, clean milk production and healthcare management practices followed by the crossbred dairy animal owners of this region. Fifteen villages having functional dairy co-operative societies primarily managed by tribal women (Gurukul, Ugachichpada, Borignavtha, Koylipada, Malin, Chirapada, Khatal, Kasturaba, Jamlapada, Khambhala, Ghubdiya, Hindala, Ghadhavi, Bhisya and Chinchvihir) were selected and from each village 10 respondents were selected randomly. Thus, the entire sample consisted of 150 respondents. While selecting respondents due care

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was taken to ensure that they were equally distributed in the village and truly stand for animal management practices existing in the area. The selected farmers were interviewed and the preferred information was collected with the help of predesigned and pretested questionnaire. A simple adoption scale was used in the present study¹³. The score of individual practice was converted into percentage. With the help of mean (X) and standard deviation (S.D.) of acquired score of individual milk producers, they were categorized into three level of adoption as Low (Below mean – S.D.), Medium (Mean \pm S.D.) and High (Above mean + S.D.). Constraints faced by crossbreed owners were measured as other variable. The problems were on four continuums namely very much, much, less and not at all which were scored as 3, 2, 1 and 0, respectively. Mean scores for each problem were computed and ranking was done accordingly⁴.

RESULTS AND DISCUSSION

Breeding practices

Almost all crossbreed owners have a preference of artificial insemination to crossbreed cattle which is higher than the findings by^{4,7,15,18} whereas, present finding was more similar to work done by¹². Majority of the farmers were following regular pregnancy diagnosis after 3 months and calling veterinarian for the treatment of repeat breeder animals (Table 1) which is again disparity with the findings by^{7,15} but is in with the findings observed by⁴. The regular treatment of repeat breeders may be due to fertility improvement program was running by dairy cooperatives and government. The practice of subsequent breeding within 2-3 months of calving was followed by majority of farmers which is somewhat similar to the findings recorded by¹² but the finding is not in line with^{4,18}. Overall 92 percent of dairy animal owners adopted medium level (adoption score 9.95 to 12.35) of scientific breeding practices and remaining 8% low level (adoption score <9.95) as shown in table 2.

Clean Milk Production practices

Majority farmers were not following grooming practices to their animals before milking and they were also not aware about benefits of grooming. Except grooming, farmers are aware about clean milk production practices viz. washing of teat/udder, cleanliness of milker, cleaning of milking utensils (Table 1) which are partially similar to the findings noted by¹⁴. According to the survey out of 150 respondents, 66.67 percent were following knuckling method for milking, 32 percent were following full hand milking, and 1.33 percent was following strip method for milking. These findings are quite in consonance with¹⁴. About 73.33 % farmers were selling milk to milk cooperative society and 26.67 % farmers were keeping some amount of milk for house hold purpose or private sale apart from selling in milk society. This milk marketing pattern is found just reverse than Rajasthan¹⁰. About 74 percent farmers follow medium level of scientific clean milk production practices whereas 17.3 and 8.6 percent of the farmers had low and high adoption score for this practice, respectively (Table 2).

Health care practice

The results of the health care practices adopted by the respondents are presented in Table 1. It was observed that about one-third (32.7 %) of the respondents followed regular vaccination schedule against seasonal diseases similar to the findings revealed by¹¹ and in contrast to observed by^{4,12} but majority of them were following regular deworming which is in contrast to findings reported by^{7,12,15}. Majority farmers were not following hoof trimming and disbudding practice. These results are lesser than the findings observed by¹¹. There was a major problem of ectoparasites because they do not follow regular ectoparasiticide treatment to animal as well as animal shed which is again in line with the observation by¹² but, disparity with the findings recorded by¹⁵. Majority of crossbreed owners (77 percent) adopted medium level of health care practice followed by low level (13 percent) and then high level (10 percent) of health care practice (Table 2), which is similar to the work done by⁸.

Improved husbandry practices by crossbred owners

Constraints in adoption of breeding and health care practices including economic problems

Major constraints in adoption of studied animal husbandry practices faced by crossbred owners of Dang district, were unavailability of timely A.I. facility at each village, poor facility of timely vaccination against diseases and high cost of concentrate mixture. Somewhat similar problems

on animal husbandry practices were also found by^{6,17}. The findings of problems in breeding and healthcare are in line with¹⁶. Earlier workers have also concluded that poor veterinary service is one of the constraints felt by cattle owners³. Findings of economic problems in animal husbandry are in agreement with⁹. Workers revealed that about 42.5 percent cattle owners perceive high cost of concentrate³.

Table 1: Extent of adoption of breeding, clean milk production practices and health care practices by cross breed owners (N = 150)

Sr. No.	Practices	CA	O	NA
		Score		
		3	2	1
Breeding practice:				
1	Breeding of animal with Artificial Insemination	150 (100)	0 (0)	0 (0)
2	Pregnancy diagnosis between 60 to 90 days after service	125 (83.3)	18 (12)	7 (4.7)
3	Treatment of repeat breeders by veterinarian	136 (90.7)	7 (4.7)	7 (4.7)
4	Subsequent breeding within 60 to 90 days of calving	89 (59.3)	47 (31.3)	14 (9.3)
Clean milk production practice:				
1	Splashing of water on teat/udder before and after milking	149 (99.3)	1 (0.7)	0 (0)
2	Washing of hand before milking	136 (90.7)	7 (4.7)	7 (4.7)
3	Keeping dry period for minimum 2 months	116 (77.3)	17 (11.3)	17 (11.3)
4	Cleaning milking utensils before milking	121 (80.7)	3 (2)	26 (17.3)
5	Grooming of animal before milking	13 (8.7)	15 (10)	122 (81.3)
Health care practice:				
1	Vaccination against F.M.D/ H.S.	49 (32.7)	86 (57.3)	15 (10)
2	Deworming of animal	116 (77.3)	22 (14.7)	12 (8)
3	Practices to control ectoparasite	12 (8)	20 (13.3)	118 (78.7)
4	Regular treatment of sick animal	125 (83.3)	6 (4)	19 (12.7)
5	Isolation of sick animals from healthy one	6 (4)	6 (4)	138 (92)
6	Regular hoof trimming of animal	5 (3.3)	1 (0.7)	144 (96)
7	Disbudding of crossbreed calves	50 (33.3)	5 (3.3)	95 (63.3)

(Figures in parenthesis indicate the percentage)

CA = Continued Adoption; O = Often; NA = Not Adopted

Table 2: Distribution of crossbreed owners according to breeding practices, clean milk production practices and healthcare practices adopted by them (N = 150)

Practices	Category	Score	Frequency	Percentage
Breeding practice	Low	below 9.95	12	8
	Medium	9.95 to 12.35	138	92
	High	above 12.35	0	0
CMP practice	Low	below 10.48	26	17.3
	Medium	10.48 to 14.36	111	74
	High	above 14.36	13	8.6
Healthcare practice	Low	below 10.32	19	12.6
	Medium	10.32 to 15.37	116	77.3
	High	above 15.37	15	10

Table 3: Problems faced by crossbred cattle owners in adoption of improved animal husbandry practice (N = 150)

Sr. No.	Constraints	Mean Score \pm S.E.	Rank
Problems in breeding practices:			
1	Unavailability of timely AI facility at village level	0.35 \pm 0.067	I
2	Lack of faith in AI	0.00 \pm 0.00	III
3	Lack of trained person for AI	0.08 \pm 0.026	II
Problems in health care practices:			
1	Poor facility of timely vaccination against diseases	1.29 \pm 0.073	I
2	Lack of proper veterinary services for treatment of animal	0.69 \pm 0.061	II
3	Lack of specific treatment which can minimize the infertility problem	0.23 \pm 0.049	III
Economic problems:			
1	Lack of loan facility	0.10 \pm 0.035	VI
2	High rate of interest on loans	0.72 \pm 0.051	V
3	High cost of milch animal	2.25 \pm 0.048	II
4	High cost of Byre construction	1.15 \pm 0.056	IV
5	High cost of concentrate mixture	2.27 \pm 0.038	I
6	Non-remunerative price of milk	1.37 \pm 0.068	III

CONCLUSION

For breeding practices almost all farmers follow artificial insemination for breeding of crossbreed animals. Majority of crossbreed owners (74 %) follow middle level of clean milk production practices. But they are not using grooming practices regularly for animal which is much beneficial for animals to keep them healthy. About

77 percent farmers follow middle level of health care practices and do not follow regular vaccination to animals. Major problem felt by crossbreed owners in reproductive practices was unavailability of timely A.I. services. Farmers are not getting timely vaccination facility. Farmers also felt that there was very high cost of concentrate mixture and crossbreed cattle in market.

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