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Constraints in dairy husbandry being perceived by the dairy farmers in Sabarkantha district of Gujarat

Praveen Pilaniya, PM Desai and Rohitash Kumar

Abstract
The study was conducted in purposively selected "Sabarkantha" district of Gujarat. The district is comprised of eight talukas, out of which three clusters were selected randomly. The selected clusters were Himmatnagar, Prantij and Idar. Further, five villages from each selected cluster were identified. From each village, 10 respondents were selected randomly. Thus, the entire sample size consisted of 150 respondents from selected fifteen villages in three clusters of the district. It was observed that constraints perceived by dairy farmers according to RBQ value the constraints for providing good sheds for animals were high interest rate on burrowed capital (28.66 per cent) and lack of adequate space (24.66 per cent), whereas for feeding practices there were high cost of feed (30.66 per cent), lack of knowledge of balancing ration (24.66 per cent), lack of awareness about treatment of poor quality straw to improve its nutritive value (16.66 per cent), non-availability of green fodder round the year (12.0 per cent) and lack of knowledge about silage preparation (11.33 per cent). It was suggested that simultaneous and cumulative efforts be made by the govt. and related agencies to overcome these constraints.

Keywords: Constraints, dairy farmers, dairy husbandry

Introduction
Animal Husbandry is making a significant contribution to the national economy and socio-economic development in the country. India is the world's largest producer of dairy products by volume, accounting for more than 13.0 per cent of world's total milk production, and it also has the world's largest dairy herd. Earlier in the year 2000 India was neither an active importer nor an exporter of the dairy product but the country was self-sufficient. The Indian dairy sector is also different from other dairy producing countries as India places its emphasis on both cattle and buffalo milk. In the year 2010, the National Dairy Development Board has drawn up a National Dairy Plan (NDP) that proposes to nearly double India's milk production by the year 2020. This plan will endeavor to increase the country's milk productivity, improve access to quality feeds and improve farmer access to the organized market. These goals will be achieved through activities that focus on increasing cooperative membership and growing the network of milk collection facilities throughout India (Indian Mirror, 2011) [2].

Livestock rearing is an integral part of agriculture in India as well as in many developing countries since centuries. The Indian dairy industry has made a remarkable progress in the last three decades with unprecedented growth in milk production. Cattle and buffalo play a major role in the Indian economy by producing milk which is the largest agricultural commodity in India.

Gujarat has around 5.23 per cent of cattle and 9.55 per cent of buffalo population of the country (Anonymous, 2014b). It contributed around 10.3 million tonnes (7.80 per cent) of milk to the total milk pool of India and per capita, milk availability was 476 g/day during the year 2012-13 (Anonymous, 2014a). However productivity per milking animal is very low i.e. wet average in indigenous cows, crossbred cows and buffalo were 1.98, 6.75 and 4.50 kg/day, respectively (Hegde, 2006). This low production in India is mainly due to lack/low level of knowledge about improved dairy husbandry practices by dairy farmers (Khyalia *et al.*, 2015). Gujarat is an important state in milk production and marketing in India on a co-operative dairy system basis and proverbially known as "Milk bowl of India" (Stall, 2006 and Singh *et al.*, 2008). This credit was achieved owing to the development of a wide network of a co-operative dairy system based on Anand pattern.

Considering the vitality of above facts in mind, the present study was conducted in Sabarkantha district was selected on the basis of Animal husbandry and dairying is the second most important enterprise next to the agriculture for the farming community. Study entitled "Constraints in dairy husbandry being perceived by the respondents" was conducted.

Research Methodology

The study was conducted in purposively selected "Sabarkantha" district of Gujarat. Sabarkantha district possesses eight talukas namely Khedbrahma, Vadali, Vijayanagar, Idar, Himmatnagar, Prantij, Poshina and Talod. Out of which three clusters namely Himmatnagar, Prantij and Idar were selected randomly. Further, five villages from each selected cluster were identified. From each village, 10 respondents were selected randomly. Thus, the entire sample size consisted of 150 respondents from selected fifteen villages in three clusters of the district. Data were collected by the investigator through personal interview technique with the help of semi-structured interview schedule and the collected data were tabulated and inferences were drawn by using appropriate statistical measures.

Result and Discussion

Various management practices are important for the health and production of dairy animals. There are some constraints varying from area to area and farmer to farmer. Hence an attempt was made to study the management constraints of dairy animal owners. The respondents were asked about the nature and type of constraints faced by them in adoption of various management practices. On the basis of rank based quotient (RBQ) values the researcher can easily identify the most serious constrain at studied area. The constraints having higher RBQ value may be indicated as more serious constraints. The results are presented in Table 1.

Constraints on housing

The results of constraints on housing are presented in Table 1 indicates that the adoption of improved housing were: Ist high-interest rate (28.66 per cent), IInd lack of adequate space (24.67 per cent), IIIrd high construction cost (20.0 per cent), IVth lack of credit facility (17.33 per cent) and Vth lack of own capital (9.33 per cent). As the majority of the respondents in the survey area were middle class farmers belonging to general category they could not provide adequate housing to their dairy animals. The present results are contradictory to the results of Mohi and Bhatti (2006a) [6] who revealed that the biggest constraints of housing practices was lack of capital encountered by 68.70 per cent farmers, the problem of labour was faced by 52.50 per cent whereas lack of space (48.30 per cent), lack of time to manage scientific shed (44.20 per cent) and lack of knowledge (36.70 per cent) were the other constraints expressed by dairy farmers. Patel *et al*. (2013) [7] found lack of own capital (77.50%) to construct a buyer due to low level income and high cost of construction (72.50%) forbid the tribal's to construct a proper shelter for the livestock. Lack of farmer friendly credit facility of public financial institutions forced the farmers (10.0 per cent) to depend on the local money lenders, who charged exorbitant interest on loan. High interest rate on farm loans (13.75 per cent) and lack of space for construction of house (12.50 per cent) are additional constraining factors faced by the tribal's for constructing a proper animal house.

Constraints on feeding

The results of constraints on feeding are presented in Table 1 indicates that the improved feeding management of dairy animals were: Ist high cost of feed (30.66 per cent), IInd lack of knowledge of balanced ration (24.66 per cent), IIIrd lack of awareness about treatment of poor quality straw to improve its nutritive value (16.66 per cent), IVth non- availability of green fodder round the year (12.0 per cent), Vth lack of knowledge about silage preparation (11.33 per cent) and VIth Lack of availability of fodder crop seeds (4.66 per cent). The veterinary officers of area concerned and extension workers of dairy co-operative union working on dairy development programs must target the dairy farmers regarding scientific feeding practices to dairy animals through extension and training programs. They should conduct on farm trials as well as front-line demonstrations (FLD) of high yielding varieties of fodders and conduct related training program to upgrade their knowledge level in improving feeding practices under the guidelines of concerned scientists of Krishi Vigyan Kendra for making low cost balanced ration from the available resources, so that cost of milk production can be minimized and dairy farmers get proper market for their milk. The present results are in accordance with the results reported by Lokhande *et al.* (2012) [3] who found that among small category of farmers, the major constraint experienced by 86.36 per cent of respondents was high cost of concentrates feeding, feeds and fodder, followed by lack of credit supply for the purchase of cattle feed and mineral mixture (81.82 per cent). Minor constraints which were experienced by this category of farmers included disinterest in feeding animals due to low price of milk, lack / shortage of availability of High Yielding Varity (HYV) fodder seeds, and poor resources for green fodder cultivation. Equbal *et al.* (2013) revealed that lack of credit facilities for purchase of feeds, fodders and mineral mixture was major constrain faced by respondents. This might be due to their low income and high cost of feeds. Another major constrain was non-availability of land for green fodder cultivation because most of the respondents were small, marginal farmers and landless agricultural labours. Inadequate resources for balanced feeding were assigned third rank as their resources were limited. Lack of information about balance feeding was also important constrain as perceived by the respondents.

Constraints on milking

The results of constraints on milking are presented in Table 1 indicates that the constraints faced by respondents were: Ist the non-remunerative price for milk (58.0 per cent), IInd the high cost of utensils (18.66 per cent), IIIrd lack of preservation facilities for milk (14.66 per cent) and IVth lack of knowledge in clean milk production (8.66 per cent) were least experienced constraints. It is therefore, necessary that dairy development department must conduct skill oriented long term training programs for the production of value added milk products and about better management of milch animals coupled with importance and techniques of clean milk production so that they get remunerative prices from their milk. The present findings are in accordance with the results reported by Manoharan *et al.* (2003) [4] who observed that the major constraints faced by farmers in dairy farming were low price for milk (69.60 per cent). However, present results are contrary to the results of Meena and Fulzele (2004) [5] who observed that (83.33 per cent) of the respondents had lack of knowledge about clean milk production practices. Umar *et al.* (2011) [9] found that 72.0 per cent of respondents had poor knowledge about clean milk production and lack of dairy

cooperative societies are various constraints perceived by dairy farmers in adopting improved dairy farming practices.

Constraints on breeding

Breeding is one of the important pillars of production. Regular calving results in economical maintenance of dairy animals. However, in the survey area the constraints observed were Ist low conception rate through A.I. (40.66 per cent), IInd repeat breeding problems in dairy animals (30.66 per cent), IIIrd lack of knowledge of heat detection (14.0 per cent), IVth lack of availability of insemination in time (6.00 per cent), Vth belief that pregnancy diagnosis through rectal palpation is harmful to pregnant animals (5.33 per cent) and VIth lack of improved bulls for breeding in villages (3.33 per cent) were faced constraints. The present findings are in agreement with the findings of Mohi and Bhatti (2006a) [6] who observed that 82.0 per cent of the dairy farmers expressed poor results of A.I. to be major constrain. These results are contrary to the results of Tailor *et al.* (2012) [8] who found that major constraints in animal breeding was repeated breeding of milch animals. This is might be due to lack of balanced feeding of the milch animals. Lack of pedigree bulls for natural services and inadequate knowledge about artificial insemination were found to be the second and third major constraints, respectively. Poor services available at artificial insemination centres were ranked fourth. Patel *et al*. (2013) [7] The major constraints were repeat breeding (70.0 per cent), low conception rate through artificial insemination (67.50 per cent), followed by the belief that rectal palpation of animals for pregnancy confirmation would harm the animal and the fetus (40.0 per cent), lack of availability of insemination service in time (26.25 per cent), lack of improved bulls for breeding in villages (10.0 per cent) and lack of knowledge of signs of heat (3.75 per cent).

Constraints on health care

The results of constraints on health care are presented in Table 1 indicates that the respondents faced constraints related to the health care were: Ist problem of mastitis in dairy animals (42.0 per cent), IInd inadequate knowledge of diseases and their control (23.33 per cent), IIIrd non-availability of vaccine in time (23.0 per cent), IVth distant location of veterinary hospital (7.33 per cent), Vth high cost of veterinary medicine (6.00 per cent) and VIth veterinary doctor do not visit villages frequently. During a discussion with them it came to the notice that in general, the animals remain fairly healthy except for mastitis, which is a real problem. The constraints in clean milk production are suggestive of their fairly high level of knowledge in this aspect. This means that they know the practice but could not follow it properly. Thus, there is a need for training in this sphere of management to bring down the incidences of mastitis. All other constraints are of lower magnitude and are not really troubling them to any great extent. These results are in agreement with the results of Patel *et al*. (2013) [7] who found inadequate knowledge of diseases and their control (57.0 per cent) the most important health constraints, the problem of mastitis in crossbred cows (53.33 per cent) and high cost of veterinary treatment (52.50 per cent) were the other constraints. However, present results are contradictory to the results of Yadav *et al*. (2014) who observed high cost of treatment of diseased animal as the major health care constraints having magnitude of 93.67 per cent. They explained that this might be due to veterinary officers charging high fees for doorstep service. Lack of knowledge about animal diseases and their control and non-availability of animal health service provider in villages were considered as moderately serious constraints among tribal livestock owners of study area having RBQ of 77.66 per cent and 59.83 per cent, respectively. Distant location of veterinary health centre and high incidence of diseases among livestock were found to be less serious constraints (45.00 per cent).

Table 1: Distribution of the dairy animal owners according to constraints faced by them of various management practices.

Sr. No.	Particulars	Frequency	Per centage	Rank
A.	Constraints on Housing			
1.	Lack of own capital	14	09.33	V
2.	Lack of credit facility	43	17.33	IV
3.	High-interest rate	30	28.66	I
4.	Lack of adequate space	37	24.66	II
5.	High construction cost	26	20.00	III
B.	Constraints on Feeding			
1.	High cost of feed	46	30.66	I
2.	Lack of knowledge of balance ration	37	24.66	II
3.	Lack of availability of fodder crop seeds	7	04.66	VI
4.	Non-availability of green fodder round the year	18	12.00	IV
5.	Lack of awareness about treatment of poor quality straw to improve its nutritive value	25	16.66	III
6.	Lack of knowledge about silage preparation	17	11.33	V
Sr. No.	Particulars	Frequency	Per centage	Rank
C.	Constraints on Milking			
1.	Non-remunerative price for milk	87	58.00	I
2.	High cost of utensils	28	18.66	II
3.	Lack of preservation facilities for milk	22	14.66	III
4.	Lack of knowledge in clean milk Production	13	08.66	IV
D.	Constraints on Breeding			
1.	Lack of knowledge of heat detection	21	14.00	III
2.	Low conception rate through A.I.	61	40.66	I
3.	Repeat breeding problems in crossbred Animals	46	30.66	II
4.	Lack of availability of insemination in Time	9	06.00	IV
5.	Belief that PD through rectal palpation is harmful to pregnant animals	8	05.33	V

6.	Lack of improved bulls for breeding in Villages	5	03.33	VI
E.	Constraints on Health care			
1.	Problem of mastitis in dairy animals	63	42.00	I
2.	High cost of veterinary medicine	9	06.00	V
3.	Non-availability of vaccine in time	31	20.66	III
4.	Inadequate knowledge of diseases and their control	35	23.33	II
5.	Distant location of veterinary hospital	11	07.33	IV
6.	Veterinary doctor do not visit village frequently	1	0.66	VI

Conclusion

According to RBQ value the constraints for providing good sheds for animals were high interest rate on burrowed capital (28.66 per cent) and lack of adequate space (24.66 per cent), whereas for feeding practices there were high cost of feed (30.66 per cent), lack of knowledge of balancing ration (24.66 per cent), lack of awareness about treatment of poor quality straw to improve its nutritive value (16.66 per cent), non-availability of green fodder round the year (12.0 per cent) and lack of knowledge about silage preparation (11.33 per cent). Low conception rate through A.I. (40.66 per cent) and the repeat breeding (30.66 per cent) were the constraints of breeding, while a non-remunerative prices for milk (58.0 per cent), high cost of utensils (18.66 per cent), lack of preservation facilities for milk (14.66 per cent) and lack of knowledge of clean milk production (8.66 per cent) were the constraints of milking. The problem of mastitis in dairy animals (42.0 per cent), inadequate knowledge of diseases and their control (23.33 per cent) and non-availability of vaccine in time (20.66 per cent) were the constraints of health care practices.

References

1. Eqbal MS, Singh MK, Khan N. Constraints Faced by Tribal Dairy Farmers Regarding Dairy Farming Practices in Lohardaga District of Jharkhand. International Journal of Scientific Research. 2013; 2(6):546-548.
2. Indian Mirror. Indian Dairy Industry, 2011. Retrieved 17 June 2011, from http://www.indianmirror.com/indianindustries/dairy.html
3. Lokhande JP, Jha SK, Vaidya MD. Constraints perceived by the dairy farmers in adoption of scientific dairy farming practices. Journal of Dairying, Foods & HS. 2012; 31(1):42-46.
4. Manoharan R, Selvakumar KN, Pandian ASS. Constraints in milk production faced by the farmers in Pondicherry Union Territory. Indian J Anim. Res. 2003; 37(1):68-70.
5. Meena HR, Fulzele RM. Constraints experienced by the Meena tribes in the adoption of improved dairy farming practices. J Dairying, Foods & Home Sci. 2004; 23(2):94-99.
6. Mohi AK, Bhatti JS. Constraints encountered by dairy farmers in adoption of improved dairy farming practices. Journal of Dairying, Foods & HS. 2006 a; 25(1):47-50.
7. Patel NB, Saiyed LH, Rao TKS, Rana R, Modi RJ, Sabapara GP. Status and constraints of dairying in the tribal households of Narmada Valley of Gujarat. Indian Science Reporter. 2013; 7(3):83-89.
8. Tailor R, Meena GL, Sharma L, Sharma FL. Constraints faced by the tribal farmers in dairy farming in Udaipur district. Rajasthan Journal of Extension Education. 2012; 20:187-189.
9. Umar J, Kumar B, Kumar S. Constraints perceived by farmers in adopting scientific dairy farming practices in Madhuni district of Bihar. Research Journal of Agricultural Sciences. 2011; 2(1):142-145.
10. Yadav ML, Rajput DS, Chand S, Sharma NK. Constraints in livestock management practices perceived by tribal livestock owners of Banswara district of Rajasthan. Indian Research Journal Extension Education. 2014; 14(4):37-41.