

Constraints Perceived by Dairy Farmers in Urban - Peri Urban Areas of South Gujarat

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Abstract

The present study was carried out to analyze the constraints perceived by the dairy farmers in urban and peri urban areas of south Gujarat. The required information collected through personal interview by five point agreement scale method. It was analyzed by Mann and Whitney test in SPSS showed that all constraints were non-significant between two regions. Analyzed data revealed that main constraints related to housing faced by dairy farmers were high cost of construction with mean score (4.30±0.07). Main feeding related constraints were high cost of feed with mean score (4.75±0.07). Lack of insemination facility in time (3.55±0.17) was main constraints in breeding practices. Main constraints faced by dairy farmers in relation to milking management were high production cost of milk (4.05±0.13). In health care related constraints problems of mastitis (3.93±0.17) were main constraints.

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1. Introduction

India possesses large number cattle and buffalo with accounting highest milk production 105.42 million ton although per capita milk production is very less (Rajpoot, 2018). The low productivity of animal was main circumstances with average of 987 kg / lactation in Indian cow which is lower than world average of 2038 Kg/ lactation (Patil *et al.*, 2009). To increase production level from dairy animal farmer needs to adopt scientific dairy husbandry practices (Srinivas and Ramesha, 2017). However, there are several constraints which are vary from area to area are main hindrance for profitable dairy farming (Rathava *et al.*, 2019). By knowing the constraints faced by dairy farmers the productivity of animal can improved (Sarita *et al.*, 2017). Hence the effort made to investigate the constraints faced by the commercial dairy farmers of urban and peri-urban to improve dairy husbandry practices.

2. Material and Methods

The present study was conducted in urban and peri urban region of Navsari of South Gujarat. The area fall in 8 km radius to Navsari was consider as urban area whereas, the areas falls in 16 km radius minus urban area was considered as peri-urban area. From urban and peri urban 6 village selected randomly in both area. Twenty each farms from urban and peri-urban area which are

having total herd strength at least 20 adult units of either cattle or buffalo were selected randomly from prepared list. The data was collected from dairy farm owners by questionnaire. The constraints faced by farmers of both regions were recorded in 5 point agreement scale i.e 1, 2, 3, 4 and 5 for strongly disagree, disagree, neutral, agree and strongly agree, respectively. Constraints faced by dairy farmers recorded on five point agreement scale were analyzed by Mann and Whitney test in SPSS to know significant difference between two regions. The mean score and descriptive statistics for each constraint were analyzed, arranged according to mean score it is arranged in descending order.

3. Results and Discussion

The data is presented Table 1. The most important overall constraints identified were high cost of feed, high cost of construction, lack of adequate space for construction of shed, lack of availability of green fodders round the year and high production cost of milk. All the constraints were statistically non-significant between two study areas.

It is inferred from the Table 1 that among main housing constraints high cost of construction was main constraint with mean score (4.30±0.07) followed by lack of adequate space for construction of shed (4.28±0.1) and high interest rate (3.48±0.11) were least constraint.

Table 1: Mean score of constraints collected on likert agreement scale faced by dairy farmers

Sr. No.	Constraints	Score Mean \pm S.E	Mann-Whitney U		Rank of constraint	
			Value	Asymp. Sig. (2-tailed)	Within category	Overall
Housing constraints						
1	Lack of own capital	3.78 \pm 0.12	168.00	0.331	III.	VII
2	Lack of credit facility	3.38 \pm 0.16	194.00	0.848	V.	XI
3	High interest rate	3.48 \pm 0.11	195.00	0.882	IV	X
4	Lack of adequate space for construction of shed	4.28 \pm 0.10	187.00	0.683	II	III
5	High cost of construction	4.30 \pm 0.07	200.00	1.000	I	II
Feeding constraints						
6	High cost of feed	4.75 \pm 0.07	180.00	0.471	I	I
7	Lack of knowledge of balancing ration	2.53 \pm 0.15	170.00	0.387	V	XIX
8	Lack of knowledge of silage preparation	3.38 \pm 0.17	169.50	0.380	III	XI
9	Lack of availability of green fodders round the year	4.18 \pm 0.11	164.00	0.289	II	IV
10	Lack of knowledge about enrichment of straw	3.23 \pm 0.22	169.50	0.395	IV	XIII
11	Lack of irrigation facilities	1.45 \pm 0.09	170.00	0.346	VI	XXIX
Breeding constraints						
12	Lack of knowledge of heat detection	2.78 \pm 0.19	198.00	0.956	III	XV
13	Low conception rate through A.I.	2.80 \pm 0.18	194.00	0.866	II	XIV
15	Repeat breeding problems	2.63 \pm 0.20	173.00	0.448	IV	XVII
16	Lack of insemination facility in time	3.55 \pm 0.17	160.00	0.262	I	IX
17	Misconception about rectal palpation for PD	2.03 \pm 0.09	191.00	0.769	V	XXV
18	Lack of bulls for natural service	1.55 \pm 0.11	195.50	0.890	VI	XXVIII
19	Problem in detecting silent heat	2.63 \pm 0.16	192.00	0.817	IV	XVIII
Milking constraints						
20	Not getting expected price for milk	3.25 \pm 0.16	186.50	0.703	II	XII
21	High cost of utensils	1.93 \pm 0.14	178.00	0.526	IV	XXVI
22	Lack of preservation facilities for milk	2.25 \pm 0.13	190.50	0.771	III	XXII
23	Lack of knowledge about clean milk production	1.93 \pm 0.13	191.50	0.807	IV	XXVI
24	Lack of awareness about quality milk production	1.70 \pm 0.10	194.00	0.857	V	XXVII
25	High production cost of milk	4.05 \pm 0.13	193.00	0.840	I	V
Health care constraints						
26	Lack of knowledge about isolation of animal	2.35 \pm 0.16	190.00	0.778	V	XXI
27	Problems of mastitis	3.93 \pm 0.17	191.00	0.798	I	VI
28	High cost of veterinary treatment	3.75 \pm 0.17	174.50	0.466	II	VIII
29	Non availability of vaccine in time	2.23 \pm 0.15	199.50	0.989	VI	XXIII
30	Inadequate knowledge about deworming	2.70 \pm 0.18	186.00	0.690	III	XVI
31	Distant location of veterinary hospital	2.48 \pm 0.19	194.00	0.866	IV	XX
32	Lack of knowledge about disease control	2.13 \pm 0.20	192.50	0.831	VII	XXIV

Rao *et al.* (2013) told that lack of own capital and lack of credit facility were main constraints in dairy farmers this result are opposite to present finding it might be due to the present finding was conducted on urban and peri urban region whereas that study was in rural area. High capital and high cost of construction are always an issue for farmers when they want to start a dairy as enterprise. Long term loans and subsidies through bank and government can solve the constraints of shelter for dairy animals.

Among feeding constraints that high cost of feed was a major constraint (4.75 \pm 0.07) followed by lack of availability of green fodders round the year (4.18 \pm 0.11), lack of knowledge of balancing ration (2.53 \pm 0.15) and

lack of irrigation facilities (1.45 \pm 0.09) were least important constraints regarding feeding. The result finding was in agreement with Gami *et al.* (2012) and Sarita *et al.* (2017) they concluded that high cost of feed and non availability of green fodder around the year were prior constraint in feeding. While Pata *et al.* (2018) shown poor irrigation facility are main constraint which are not relevant with present result. This may be due to the fluctuation in region to region as south Gujarat fall under heavy rainfall zone and having perennial irrigation facility. Looking to the constraints regarding feeding aspects there is a need to educate the farmers about enrichment of fodder as well as balanced and economical feed preparation.

The major constraints related to breeding were lack of insemination facility in time (3.55 ± 0.17) and low conception rate through A.I (2.8 ± 0.18). Misconception about rectal palpation for pregnancy diagnosis and lack of bulls for natural service was least important constraint. This finding is relevant with Pata et al. (2018). In their study they observed that unavailability of timely A.I. facility at village followed by lack of knowledge of breeding management and repeat breeding problem. Earlier, Gami et al. (2012) reported that repeat breeding problem followed by low conception rate through A.I. and belief that pregnancy diagnosis through rectal palpation is harmful for pregnant animals were main constraints which are not agreement with this result. The incidence of repeat breeding is very high in dairy animals especially in crossbred cow and buffaloes which leads to increased calving interval in the animals. The summer stress is one of the important reasons for increased calving interval in buffaloes due to silent heat problem.

Data in Table 1 revealed that major constraint in related to milking practices were high production cost of milk (4.05 ± 0.13) and not getting expected price for milk (3.25 ± 0.16). Lack of awareness about quality milk production (1.7 ± 0.10) was least observed constrain. This result was supported by Rao et al. (2013) who reported that non remunerative price of milk and lack of preservation facilities for milk was main constraints in milking practices. Farmers having inadequate of knowledge about importance of clean milk production and utility of value added dairy products.

Data shown in Table 1 indicated that the constraint faced by problems of mastitis (3.93 ± 0.17), high cost of veterinary treatment (3.75 ± 0.17), inadequate knowledge about deworming (2.7 ± 0.18), distant location of veterinary hospital (2.48 ± 0.19). Whereas least constraint

were lack of knowledge about isolation of animal (2.35 ± 0.16), non availability of vaccine in time (2.23 ± 0.15) and lack of knowledge about disease control (2.13 ± 0.20). The result are in accordance with Rao et al. (2013) and Sarita et al. (2017) who observed that problems of mastitis in cross bred cow and high cost of veterinary medicine were main constrain in health management. Pata et al. (2018) concluded that unavailability of on time veterinary services for treatment and lack of veterinary services for treatment were main constraints. These results were not supporting present finding. High cost of veterinary medicine is a worldwide phenomenon. Thus, there is a need of training in this sphere of management to bring down the incidences of diseases.

It is inferred from the Table 1 that based on mean score highest high cost of feed (4.75 ± 0.07), high cost of construction (4.3 ± 0.07), lack of adequate space for construction of shed (4.28 ± 0.10), lack of availability of green fodders round the year (4.18 ± 0.11) and high production cost of milk (4.05 ± 0.13) were emerged as top five constraints. Whereas lack of irrigation facilities (1.45 ± 0.09), lack of bulls for natural service (1.55 ± 0.11), lack of awareness about quality milk production (1.7 ± 0.10), high cost of utensils (1.93 ± 0.14) and lack of knowledge about clean milk production (1.93 ± 0.13) were not much important constraints for dairy farm owners.

4. Conclusion

It is concluded from the study that high cost of feed was most prior constraints in dairy farms followed by high cost of construction, lack of adequate space for construction of shed, lack of availability of green fodders round the year and high production cost of milk.

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