

Constraints Perceived in Dairy Husbandry Practices by Livestock Farmers in Northern Telangana State

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ABSTRACT: An investigation was carried out in Karimnagar, Kamareddy, Jagtial, and Peddapalli districts of Northern Telangana to evaluate the dairy herd structure, species owned and socio-economic profile of dairy farmers through survey and personal interview with the help of a pretested semi-structured questionnaire. Data were collected from 240 dairy farmers randomly selected from 24 villages of 8 mandals in 4 districts. The study revealed that non-remunerative price for milk (69.17%) was the main constraint followed by repeat breeding problems in dairy cattle (62.08%), distant location of veterinary hospital (61.25%), lack of own capital (49.58%), non-availability of green fodders round the year (47.08%), lack of irrigation facilities (45.84%) and high construction cost (32.92%). A few farmers in the study area identified high cost of veterinary medicine (26.25%), non-availability of veterinarian / paravet (22.08%) and lack of knowledge in clean milk production (15.83%) as major constraints. The results of the study indicated that capacity building of stake holders is to be framed and conducted to educate and create awareness on production of value-added milk products, good dairy husbandry practices, especially about feeding, breeding and health care. Frequent infertility treatment camps should be organized at village and crossbred animals should be made available from government farms at a reasonable price. Milk chilling facility should be provided at village level and periodical visits to modern dairy farms may help them to optimize productivity from dairy animals so that they get round the year remunerative prices from the produced milk.

Key words: Constraints, dairy farmer, districts, Telangana

Introduction

Dairying in India is more about livelihoods to millions of smallholders than simply a business, due to a stable cash flow and its contribution towards nutritional security for families owning milch animals. Animal husbandry sector is an important component of India's economy in terms of income, employment and foreign exchange earnings. Dairy husbandry practices play a vital role in the improvement of livestock production and productivity. India had 302.79 million bovine population in 2019 and milk is India's single largest agricultural commodity (Anonymous, 2019). Presently India is the leading milk producer in the world with total milk production of 187.75 MMT during 2018-19, ensuring 394 gram/day per capita availability of milk (Narwaria *et al.*, 2019). The value of the Indian market for milk and milk products is expected to grow at 15% annually of which the contribution of milk products like cheese, paneer, fermented milk products, butter and ghee would be significant. Telangana state is currently depending on neighbouring states to meet the daily milk requirements, and efforts are being taken up to become self-sufficient through rearing of milch cattle and buffaloes. Dairy farming in the state is undergoing dramatic changes, driven by both supply and demand factors. The low production of Indian dairy animals is mainly due to lack of awareness and low adoption of improved dairy husbandry techniques by farmers (Patel and Sabapara, 2019). Keeping in view the above facts, the present study was undertaken to evaluate the constraints perceived by the dairy farmers of North Telangana.

Materials and Methods

The present study was conducted in Karimnagar, Kamareddy, Jagtial and Peddapalli districts of Northern Telangana. These four districts have been purposively selected as they are potential districts for milk production as assured veterinary and milk marketing facilities are there. Two mandals/towns from each district (Thimmapur and Kothapalli mandals, Ramareddy and Rajampet mandals, Pegadapally and Malyal mandals and Sultanabad and Eligedu mandals from Karimnagar, Kamareddy, Jagtial and Peddapalli districts, respectively) and three villages from each mandal were selected making up a total of 24 villages. Ten dairy farmers were randomly selected from each village, thus making 240 respondents, as followed by Rajashekar *et al.* (2018). While selecting respondents, due care was taken to ensure that they were evenly distributed in the village and truly represented as per the objective of the study.

A pretested semi-structured questionnaire in precise language was employed for collecting data through interview and face to face discussion with the dairy farmers duly avoiding ambiguous, dichotomous and non-variant items for proper interpretation. The respondents were interviewed one at a time. Before collecting the data, objectives of the study were lucidly explained and careful attempt was made to develop rapport with them. The geographic profile of the study area is presented in Table 1.

Table 1: Features of the study districts

Sl. No	Parameters	Karimnagar	Kamareddy	Jagtial	Peddapalli
1.	Area (km ²)	2,128	3,652	2,419	4,614
2.	Latitude and Longitude	18.43694° N, 79.124167° E	18.3240° N, 78.3343° E	18.7909° N, 78.9119° E	18.6162° N, 79.3832° E
3.	Average rainfall (mm)	907	994	901	614
4.	Average temperature (°C)	27.7	26.3	27.6	24.3
5.	Population	1,005,711	972,685	985,417	795,332
6.	Literacy (%)	69.16	56.51	77.53	68.00
7.	Soil type	Sandy loam and red chalkas interspersed with black cotton soils	Red loamy soils, medium black soils and deep black soils	Sandy loam and red chalkas interspersed with black cotton soils	Sandy loam and red chalkas
8.	Animal husbandry	Rearing of dairy, sheep, goat, pig and poultry			
9.	Fodder grown	APBN-1, CO-1, CO-4, jowar, maize	APBN-1, CO-1, CO-4, jowar, maize	APBN-1, CO-1, CO-4, jowar, maize	APBN-1, CO-1, CO-4, jowar, maize
10.	Crops grown	Cotton, maize, chilli, groundnut, paddy, wheat, sugarcane, turmeric, pulses	Paddy, sugarcane and maize	Paddy, maize, cotton, turmeric, groundnut and chilies	Paddy, cotton, maize

The questions in the schedule about constraints faced by the dairy farmers were presented to them in precise language to ensure that they perceived the questions correctly. Answers obtained from farmers were recorded instantly along with personal observations. The information obtained from the individual respondents for all the statements was recorded and tabulated as per the objectives concerned and simple tabular analysis was followed and the number of livestock owners indicating the same constraint was counted in frequency and then converted into percentage for analyzing the data.

Results and Discussion

The constraints faced by dairy farmers in Karimnagar, Kamareddy, Jagtial and Peddapalli districts are shown in order of their importance (Table 2). Non-remunerative price for milk (69.17%) was a major constraint as reported by the farmers. The same constraint was reported by Rajpoot *et al.* (2018). Non-remunerative milk prices might be due to the high cost of milk production. The next major constraint faced by farmers was repeat breeding problems (62.08%). These findings are in agreement with the those of Rajasekhar (2018). This problem might be solved by conducting fertility camps frequently in the

study areas. Distant location of the veterinary hospital (61.25%) was found to be another major constraint and the same is in accordance with the findings of other researchers (Manoj Kumar *et al.*, 2013 and Priyanka Kushram, 2017).

Lack of own capital was perceived as a problem by 49.58 per cent of the dairy farmers, and non-availability of green fodders round the year by 47.08 per cent. Lack of own capital problem was higher in the Karimnagar (56.66%) than that in Peddapalli, Kamareddy, and Jagtial (38.33%) districts. Similar observations were reported by Sabapara (2014) and Malivad *et al.* (2016). This might be due to poor water resources available in the study area. This can be overcome by the adopting fodder conservation practices during flush seasons in the study area. Lack of irrigation facilities was also expressed as a constraint by 45.84 per cent of the dairy farmers. This was similar to the observations of Sabapara (2014).

The study also revealed that the high construction cost of dairy sheds (32.92%) is one of the constraints. This finding is in agreement with the reports of Sabapara (2014), Princejot *et al.* (2015), Malivad *et al.* (2016) Priyanka Kushram (2017) and Rajpoot *et al.* (2018). The high cost of veterinary medicine

Table 2: Constraints perceived by the dairy farmers

S. No.	Constraints	Karimnagar N=60 (%)	Kamareddy N=60 (%)	Jagtial N=60 (%)	Peddapalli N=60 (%)	Overall N=240 (%)	Rank
1.	Lack of own capital	34 (56.66)	30 (50.00)	23 (38.33)	32 (53.33)	119 (49.58)	IV
2.	High construction cost	17 (28.33)	22 (36.67)	25 (41.67)	15 (25.00)	79 (32.92)	VII
3.	Non-availability of green fodders round the year	29 (48.33)	30 (50.00)	28 (46.67)	26 (43.33)	113 (47.08)	V
4.	Lack of irrigation facilities	30 (50.00)	28 (46.67)	23 (38.33)	29 (48.33)	110 (45.84)	VI
5.	Repeat breeding problems in dairy cattle	49 (81.66)	32 (53.33)	27 (45.00)	41 (68.34)	149 (62.08)	II
6.	Non-availability of Veterinarian / Paravet	10 (16.67)	17 (28.33)	12 (20.00)	14 (23.33)	53 (22.08)	IX
7.	Non remunerative price for milk	47 (78.33)	42 (70.00)	36 (60.00)	41 (68.33)	166 (69.17)	I
8.	Lack of knowledge in clean milk production	6 (10.00)	16 (26.67)	7 (11.66)	9 (15.00)	38 (15.83)	X
9.	High cost of veterinary medicine	17 (28.33)	20 (33.33)	9 (15.00)	17 (28.33)	63 (26.25)	VIII
10.	Distant location of veterinary hospital	32 (53.33)	36 (60.00)	45 (75.00)	34 (56.67)	147 (61.25)	III

Figures in parenthesis in the table indicates percentages

(26.25%) was another constraint among health care services in the study area. The present findings are in line with the reports of Khyalia *et al.* (2015) Princejot *et al.* (2015) and Malivad *et al.* (2016). Only a few (22.08%) farmers in the study area indicated the non-availability of veterinary services as a constraint. Similarly, lack of knowledge regarding clean milk production (15.83%), was the least experienced constraint. The present findings are in accordance with the results reported by Sabapara (2014). Low knowledge in clean milk production might be due to low awareness levels of farmers in that area. It is necessary that the dairy development department must conduct skill oriented long-term training programmes for the production of value-added milk products and about better management of milch animals coupled with the importance and techniques of clean milk production. Further, visits to modern organized dairy farms as suggested by Harikrishna (2014) and Hussain *et al.* (2019) may help them to optimize productivity from dairy animals so that they get remunerative prices from produced milk.

Conclusion

In the study area, non-remunerative price for milk was the major constraint followed by repeat breeding problems in dairy cattle, distant location of veterinary hospital, lack of own capital, sparsely available green fodders round the year, lack of irrigation facilities, high construction cost. High cost of veterinary medicine, non availability of veterinarian / paravet and lack of knowledge in clean milk production were not considered as major constraints by majority of the farmers in the study area. Long term skill training programmes (capacity building) need to be framed and conducted for dairy farmers to educate and create awareness on production of value-added milk products, good dairy husbandry practices specially about feeding, breeding and health care. Frequent infertility treatment camps should be organized at village and crossbred animals should be made available from government farms at a reasonable price. Establishment of milk chilling facility at village level and periodical visits to modern organised dairy farms may help the farmers to optimize productivity from dairy animals.

Acknowledgement

The authors would like to thank the authorities of P.V.N.R. Telangana Veterinary University, Dept. of Animal Husbandry, Govt. of Telangana state and Karimnagar Dairy Management for financial assistance for the study.

References

- Anonymous 2019. 20th Livestock Census, Department of Animal Husbandry and Fisheries, Ministry of Animal Husbandry, Govt. of India. Retrieved from <https://dahd.nic.in/sites/default/files/20th Livestock census-2019/All India report.pdf>.
- Harikrishna Ch. 2014. Effect of agricultural advisory and trainings on knowledge and attitude of dairy farmers in Nalgonda, Andhra Pradesh. *Current Advances in Agricultural Sciences*. 6(1): 96-98.
- Hussain J, Choudhury RR and Mili DC. 2019. Study of shelter management of cattle under field conditions in and around greater Guwahati of Assam. *Indian Journal of Animal Production and Management*. 35(3-4): 29-32.
- Khadda BS, Lata K, Jadav JK, Kalash P and Kumar R. 2010. Study on calves management practices in tribal and non-tribal areas of Panchmahals district of Gujarat. *Journal of Progressive Agriculture*. 1(1): 84-86.
- Khyalia NK, Sagar MP, Chander M and Pratap J. 2015. Constraints perceived by the dairy farmers in adoption of scientific dairy farming practices in Sikar district. *Indian Journal of Veterinary Science and Biotechnology*. 11(1): 17-19.
- Malivad YG, Bhatt MR, Dedun VS, and Naik, RM. 2016. Constraints faced by milch animal rearing farmers. *International Journal of Agriculture Sciences*. 8(22): 1448-1449.
- Manoj Kumar, Singh SD, Rajbir Singh, Sangu KPS and Rajeswar Dyal. 2013. Technological adoption gap among Murrah buffalo keepers of Bulandshahr in UP. *Indian Journal of Dairy Science*, 66: 271-274.
- Narwaria US, Singh M and Verma KK. 2019. Effect of false ceiling on microclimatic variables of CB cattle during rainy season. *Indian Journal of Animal Production and Management*. 35(3-4): 91-95.
- Patel PC and Sabapara GP. 2019. Milking management practices followed by dairy farmers in tribal areas of Valsad district of Gujarat. *Indian Journal of Animal Production and Management*. 35(3-4): 42-47.
- Princejot S, Bhatti JS, Hundal JS and Kansal SK. 2015. Constraints faced by farmers in adoption of dairy as entrepreneurship. *Haryana Veterinarian*. 54(1): 67-69.
- Priyanka Kushram. 2017. MVSc Thesis, Knowledge and adoption of improved cattle farming practices in Jabalpur District (M.P).
- Rajasekhar M, Rajanna Neeradi and Mahender Mallam 2018. Housing and health care management practices of dairy farmers in urban and peri-urban areas of Telangana. *Journal of Animal Research*. 8(3): 467-472.
- Rajpoot JS, Kirad KS, Badaya AK, and Chauhan SS. 2018. Constraints faced by dairy farmers while adopting animal management practices in Dhar district of Madhya Pradesh, India. *International Journal of Current Microbiology and Applied Sciences*. 7(1): 3163-3166.
- Sabapara GP. 2014. Study on Dairy Husbandry Practices in Surat District of South Gujrat. Thesis submitted to Vanbandhu College of Veterinary Science and Animal Husbandry Navsari Agricultural University.
- Yadav SP, Paswan PK, Sawant P, and Bhinchhar BK. 2016. Breeding and calf rearing management practices followed in Varanasi district of Uttar Pradesh, India. *Indian Journal Animal Research*. 50(5): 799-803.