Int.J.Curr.Microbiol.App.Sci (2020) Special Issue-11: 3057-3063

International Journal of Current Microbiology and Applied Sciences
ISSN: 2319-7706 **Special Issue-11 pp. 3057-3063**
Journal homepage: http://www.ijcmas.com

Original Research Article

Constraint in Production and Marketing of Milk in Rural Areas of Bikaner District in Rajasthan

Dropati Saran*, Madhu Sharma and Vikram Yogi

Department of Agricultural Economics, College of Agriculture, SKRAU, Bikaner, India
**Corresponding author*

A B S T R A C T

In spite of high livestock population and total milk production in India, per animal average milk production is low. Along with low milk production per animal, there are many other constraints not letting potential of milch animals be achieved. Production and marketing of milk in rural areas. The importance of rearing milch animals becomes more important in arid and rainfed agro-ecosystem for sustainable income generation. The present investigation was done in Bikaner district of Rajasthan to identify constraints in production and marketing of milk in rural areas of Rajasthan. The Bikaner district of Rajasthan was selected for the study purposively for having largest cattle population in Rajasthan. Out of eight *tehsils* in Bikaner district, one *tehsil* having highest cattle population in each of three distinct types of irrigation conditions was selected purposively. Total 180 farmers were selected from the six selected villages. Infertility problem, unavailability of high genetic merit bull and poor conception rate through artificial insemination were the major breeding constraints. Non remunerative price for the milk, Inability to market for value-added products and exploitation by middle man were the marketing constraints. High cost of cattle feed and mineral mixture, high cost of cross-breed cow and less economic returns were the financial constraints. Technical and other constraints as perceived by the milch animal households were unavailability of emergency veterinary services, lack of improved equipments, irregular & inadequate supply of cattle feed. Solution of many constraints can be solved by the making producer groups.

Keywords

Livestock population, Constraints in milk production, Feed cost, Marketing of milk

Introduction

Animal husbandry is a very important component of Indian agriculture supporting livelihood to more than two-thirds of the rural population. Livestock rearing is one of the most important economic activities in the rural areas and are a regular source of cash income for rural households, especially to marginal and small farmers. It provides farm yard manure playing complementary role to crop production, supplementary income to the family as well as employment, especially to farm women.

There are large inter-regional and inter-state variations in milk production as well as per capita availability in India. Uttar Pradesh was the largest milk producer in the country with about 16.3 per cent of milk, followed by Rajasthan (12.6 %), M.P. (8.5%), A.P (8.0%) and Gujarat (7.7 %) (Govt. of India, 2018). There is great agro climatic diversity in India and there also exist difference in production

potential of bovine population due to agro climatic conditions and many other factors like status of dairy farming practices, agricultural preferences and socio-economic importance of milk production etc. the importance of rearing milch animals become more important in arid and rainfed agro-ecosystem for sustainable income generation.

Rajasthan is considered as 'Denmark of India'. The total bovine population in Rajasthan was 27.60 million numbers in 2019. It has increased by 13 per cent over the previous census previous (2012). The total milk production in Rajasthan was 23.68 million tonnes in 2018-19, and ranked second in India. Animal husbandry is a major economic activity contributing approximately 11.19 percent to the total GSDP of the state in 2018-19. The state is second highest in milk production in the country. Of the total milk produced, 53 per cent is buffalo milk, 36 per cent is cattle milk and 11 per cent is goat milk (https://www.nddb.coop/information/ stats).

In spite of high livestock population and total milk production in India, per animal average milk production is low. A serious issue of low productivity has been playing a major role in dairying in India from a very long time. Along with low milk production per animal, there are many other constraints not letting potential of milch animals be achieved.

Increasing productivity of milch animals and profits by various means will be of great importance in near future and especially when the privatization has increased the more dairies in private sector and also there is increasing pressure on natural resources. In future area under agriculture will also be decreasing due to urbanization and increasing milk production and profit realization will be more needed with more scarce resources.

Looking to these facts about agriculture in Rajasthan, especially the Bikaner district representing canal irrigated, tubewell irrigated as well as rainfed areas the present investigation was done in Bikaner district to identify constraint in production and marketing of milk in rural areas where rearing milch animals with crop production is most common farming system.

Materials and Methods

As shown in table 1, Bikaner district of Rajasthan is having largest cattle production and has higher Indigenous Cattle population, and livestock production in the area is second largest enterprise after crop production.

There are three distinct types of agricultural situations in Bikaner district viz., canal irrigated, tubewell irrigated and unirrigated. Out of eight 8 *tehsils* in the district, one *tehsil* having highest cattle population in each of three distinct types of irrigation conditions was selected purposively having highest cattle population. Loonkarnasar *tehsil* in canal irrigated area was selected having highest number of cattle and buffaloes, likewise Nokha *tehsil* was selected in tubewell Irrigated area and Kolayat *tehsil* was selected in un-irrigated area. From each *tehsil* two villages were selected randomly. Two villages from each *tehsil* were selected out of which one village was selected randomly from the villages within the radius of 25 km of *tehsil* headquarter and other village was selected randomly from the villages outside the 25 km radius from *tehsil* headquarter. In each of the selected village, thirty farmers were selected randomly from list of farmers rearing at least two adult milch animals. Therefore, total 180 farmers were selected from the six selected villages.

Primary data relating ranking of constraints were collected from selected farmers by

personal interview method using a well-designed and pre-tested interview schedule. The data were collected for the year 2018-2019. Secondary data relevant for the study were collected from the data published by Directorate of Animal Husbandry and Veterinary Services and the Directorate of Economics and Statistics, Government of Rajasthan.

To identify the various constraints in production and marketing of milk, first of all the various constraints was identified from review of literature then validation of the questionnaire was done by experts in the field and thereafter finalization of constraints was done after pilot testing. Listing of constraints was done under four categories:

Breeding management constraints

Financial Constraints

Marketing Constraints

Technical and other constraints

The data was analyzed with Garrett ranking method, respondents was asked to assign the rank for all constraints and the outcome of such ranking was converted into score value with the help of the following formula:

Per cent position= 100 (Rij – 0.5)/ Nj

Where, Rji = Rank given for the ith variable by the jth respondent (i=1,2,3…….) factor by the j^{th} (j=1,2,3……..)

Nj = number of variables ranked by the jth respondent

Once the per cent positions were found, the per cent position of each rank was converted to scores by referring to table given in garret and woods worth (1969).Then the scores for each factor was summed over the number of sample farmers who ranked that factor.

Results and Discussion

Constraints imply the problems or difficulties faced by farm households rearing milch animals while adopting day-to-day animal milk production and marketing practices for their dairy enterprise.

Breeding management constraints

The results of the table 2 shows the responses of farmers about rank given to different breeding management constraints. Infertility problem, unavailability of high genetic merit bull and poor conception rate through artificial insemination were the major production constraints faced by the rearers of milch animal, with top three ranks respectively. The other two constraints ranked fourth and fifth were unable to bring the buffalo to the AI Center/Hospital and non-availability of AI facilities.

Financial constraint

Financial constraints faced in milk production and marketing are presented in the table 3. High cost of cattle feed and mineral mixture, high cost of cross-breed cows and less economic returns were the financial constraints having top three ranks, respectively by the respondents. High cost of fodder seed and high charges for insurance were other two constraints ranked in next positions by the milk producers. Inadequate money and lack of loan facility and low provision of loan in society or government for purchasing cattle and high charges of emergency veterinary services, and delay in payment of milk were the other minor constraints by the respondents.

Table.1 Top six districts of Rajasthan for total number of cattle population

S.No.	Districts	Total Cattle Population	Indigenous Cattle Population
1	Bikaner	1194729	1064552
2	Jodhpur	1069027	980639
3	Barmer	905199	903639
4	Udaipur	831496	751285
5	Bhilwara	705423	565403

Source: Livestock Census 2019, Government of India (2019)

Table.2 Breeding management constraints faced by respondents

S.No.	Constraints	Garrett score	Rank
1.	Infertility problem	64.29	1
2.	Unavailability of high genetic merit bull	57.55	2
3.	Poor conception rate through artificial insemination	46.06	3
4.	Unable to bring the buffalo to the AI centre/Hospital	45.53	4
5.	Non availability of AI facilities	34.60	5

Table.3 Financial constraints faced by respondents

S.No.	Constraint	Garrett score	Rank
1.	High cost of cattle feed and mineral mixture	72.88	1
2.	High cost of cross-breed cow	69.62	2
3.	Less economic returns	63.16	3
4.	High cost of fodder seed	57.86	4
5.	High charges for insurance	48.23	5
6.	Inadequate money and lack of loan facility	42.35	6
7.	Low provision of loan in society or govt. for purchasing cattle	35.20	7
8.	High charges of emergency veterinary services	33.07	8
9.	Delay in payment of milk	23.47	9

Table.4 Marketing constraints faced by respondents

S.No.	Constraint	Garrett score	Rank
1	Un remunerative price for the milk	74.31	1
2.	Inability to market for value-added products	73.47	2
3.	Exploitation by middle man	72.12	3
4.	Problems of transportation	68.94	4
5.	Irregular payment for milk by co-operative societies	67.61	5
6.	Lack of awareness in marketing strategy	67.06	6
7.	Distance to the milk societies	65.87	7

Table.5 Technical and other constraints faced by respondents

S.No.	Constraints	Garrett score	Rank
1	Unavailability of emergency veterinary services	63.89	1
2.	Lack of improved equipments	63.02	2
3.	Irregular & inadequate supply of cattle feed	61.80	3
4.	Lack of knowledge about cheap & scientific housing of animal	48.72	4
5.	Low average milk yield of the milk animals	37.07	5
6.	Unavailability of cattle feed and fodder seed on credit	36.37	6
7.	Unavailability of green/ dry fodder throughout the year	36.09	7

Marketing Constraint

The results in table 4 indicate that un remunerative price for the milk, Inability to sell value-added products and exploitation by middle man were the constraints ranked first, second and third, respectively by the respondents in marketing of milch animal milk production. Problems of transportation and Irregular payment for milk by co-operative societies were the other two marketing constraints ranked fourth and fifth by the respondents. Two other minor marketing constraints were lack of awareness in marketing strategy and distance to the milk societies.

Technical and other constraints

Constraints as perceived by the milch animals households in the technical constraints including other miscellaneous constraints are summarized in table 5. It was noted that majority of the farmers believed unavailability of emergency veterinary services, lack of improved equipment, irregular & inadequate supply of cattle feed were the major feeding management constraints faced by the household of milch animal, with top three ranks respectively. The other feeding constraints were lack of knowledge about cheap & scientific housing of animal, low average milk yield of the milk animals, unavailability of cattle feed and fodder seed on credit and unavailability of green/ dry fodder throughout the year as other constraints in milk production.

In all categories Infertility problem, unavailability of high genetic merit bull and poor conception rate through artificial insemination were the major breeding management constraints faced by the farmers. Non remunerative price for the milk, Inability to market for value-added products and exploitation by middle man were the major constraints in marketing of milk. Major financial constraints were high cost of cattle feed and mineral mixture, high cost of cross-breed cow and less economic returns. Major technical and other constraints faced by the milch animal households were unavailability of emergency veterinary services, lack of improved equipments, irregular and inadequate supply of cattle feed.

Based on the results it is recommended that farmers should be trained about better breads and better management practices. More work can be done to make that channel efficient

and more responsive to the problems of farmers like delays in payments, less and much variation in prices due to fat content frequently which farmers don't understand much. The government or private sector can do much to solve the problems of households rearing milch animals in infertility problem, unavailability of high genetic merit bull and poor conception rates. Unavailability of market for value-added products and exploitation by middle man could be minimized by forming aggregator groups or by forming an FPO. FPO or producer groups can also help in other problems like providing emergency veterinary services, arranging improved equipments and supply of cattle feed.

References

Government of India (2014) 19th livestock census 2012 All India Report, Ministry of Agriculture, Department of Animal Husbandry, Dairying and Fisheries, Government of India, New Delhi.

Government of India (2018) Basic animal husbandry and fisheries statistics. Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture and Farmers Welfare, New Delhi.

Government of India (2019)Basic Animal Husbandry Statistics. Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Government of India, New Delhi.

Government of India (2019) State wise and item wise estimates of value of output from agriculture and allied sectors, Central Statistics Office, Ministry of Statistics and Programme implementation, Government of India

Kadam, R. P., and Wangikar, S. D., (2008) Constraints in adoption of dairy management practices. *Agriculture Update*, 3 (3): 395-397.

Khoveio, Michael, L.L., Jain, D.K. and Chauhan, A.K., (2012) Economics of milk production and its constraints in Nagaland. *Indian Journal of Dairy Sciences*, 65(6):520-526.

Kolekar, D.V., Meena, H.R. and Bangar, Y.C., (2013) Constraints perceived by the contract farmers and integrating firm under contract dairy farming. *Tamil Nadu Journal Veterinary and Animal Sciences*, 9 (2):104 –112.

Meena, D. K., Ram, H., and Chand, S., (2012) Constraints perceived by the farmers in adoption of improved animal husbandry practices. *Journal of progressive agriculture*, 3(2): 41-43.

Mohi, A. K., and Bhatti, J. S., (2006) Constraints encountered by dairy farmers in adoption of improved dairy farming practices. *Journal of Dairying, Foods and Home Sciences*, 25(1): 47-50.

Pandian, A., Selvakumar, K. N., Prabu, M., and Senthilkumar, G., (2010) Prioritising the constraints in milk production:-The Farmers' Perception. *Journal of Dairying, Foods and Home Sciences*, 29(1): 19-22.

Patil, A. P., Gawande, S. H., Nande, M. P., and Gobade, M. R., (2009) Constraints faced by the dairy farmers in Nagpur district while adopting animal management practices. *Veterinary World*, 2(3): 111.

Rajendran, K. and Mohanty, S., (2004) Dairy Co-operatives and Milk Marketing in India: Constraints and Opportunities. *Journal of Food Distribution Research*, 35(2): 34-41.

Rathore, R. S., Singh, R., Singh, V. P., and Kumar, R., (2009) Constraints perceived by the buffalo owners in adoption of recommended buffalo management practices. *Progressive*

Agriculture, 9(1): 121-129.

Sarker, D. and Ghosh, B. K., (2010) Constraints of milk production a study on cooperative and non-cooperative dairy farms in West Bengal. *Agricultural Economics Research Review*, 23(2): 303-314.

Singh, B. P., and Chauhan, J. P. S., (2000) Study of constraints perceived by member milk producers of MPCS. *Journal of Dairying Foods and Home Sciences*, 19(2): 118-121.

Suresh, J., Raghuram, P., Veerbrahmaiah, K. and Ravi, V., (2013) Constraints on dairy entrepreneurs in Chittor district of Andhra Pradesh. *Andhra Agriculture Journal*, 60(3):686-689.

Tariq, M., Mustafa, M.I., Iqbal, V. and Nawaz, H., (2008) Milk marketing and value chain constraints. *Pakistan Journal of Agriculture Science*, 45(2): 195-200.

Uma, S., Fulzele, R. M. and Shantanu, K., (2003) Constraints in adoption of improved dairy farming practices in Uttaranchal hills. *Indian Journal of Dairy Bioscience*,14(1):48-57.