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Milk Producers Perceptions on Constraints in Milk Production in Maharashtra State

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The study on constraints faced by farmers in the operation and management of dairy activities in milk production was conducted in the Vidarbha and Marathwada region of Maharashtra State for the year 2022-23. These regions of Maharashtra State were purposively selected due to low milk production and productivity compared to other regions of the State. Data were randomly collected from 410 milk producers of Bhandara, Yavatmal, Nanded and Latur districts of Vidarbha and Marathwada region of Maharashtra State. About 52.20 percent of milk producers belongs to the small, 30.98 percent to the medium and 6.63 percent to thelarge herd size category of milk producers. Garret's ranking method was used to priorities the constraints. The serious constraints perceived by the milk producers were the shortage of quality feed and fodder round the year, high cost of concentrates,unavailability of veterinary facilities, unavailability of labour, lack of knowledge on improved management practices, shortage of green fodder round the year, unstable pricing policy, inadequate credit facilities, lack of information ongovernment scheme and marketing of milk and milk products.

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1. INTRODUCTION

India's dairy industry has expanded significantly since Operation Flood began in the 1970s. India's per capita milk production increased at a much faster rate than the country's overall Recommended Dietary Allowance, and by 2018-19, it had reached 387 grams per person per day. Since the productivity of indigenous breeds is particularly low in most of the country's states, milk output is growing at a rate of more than 5 percent per year and has the potential to develop at an even higher rate for a long time. Increasing milk production in the future should focus on boosting productivity and shifting towards a food system strategy. To achieve this goal, advancements must be made in the quality of livestock breeds, feeding materials and practices, as well as maintenance and animal health. Both efficiency and competitiveness gain from a rise in productivity. Boosting livestock production necessitates advancements in animal nutrition, breeding methods (such as artificial insemination), animal husbandry, and health care. At present, milk is priced solely based on its fat content. It will be beneficial to build measurements and standards around other qualities like SNF, similar to what was done with fat.

Since the beginning of the green revolution, dairy industry growth has consistently outpaced crop sector growth, as reported [1]. Evidence suggests that the white revolution in India has been more successful than the green revolution. There are still many resource-poor farmers in the country that depend on rain-fed farming to make ends meet, and this is especially true in the Vidarbha and Marathwada regions of Maharashtra. Recurring droughts and uneven rainfall distribution in recent years have had a negative impact on agricultural output, revenue, and employment. Sixty-eight percent of the country is currently at risk of drought, with nearly a third of that region being chronically at risk (rainfall is less than 650 mm) every year. Drought-prone districts have an irrigation rate of only 29percent, well below the national average of 41percent [2]. Dairy animals contribute significantly to the total milk pool, although their productivity is low in dry farming circumstances. Dairy farming's potential in the arid zone could help resource-starved farmers avoid leaving their communities in pursuit of work in the city. In addition, this industry has the potential to significantly contribute to the promotion of a redistributive effect on income in favour of disadvantaged groups. In order to provide economic information that can be used for forecasting development operations in the dairy sector, understanding the constraints that farmers face in the dairy industry is crucial.

With these considerations in mind, the current study set out to determine the primary problems encountered by dairy farmers so that the results might be used for the improvement of the milk sector especially in Vidarbha and Marathwada areas of Maharashtra State [3].

2. MATERIALS AND METHODS

The Vidarbha and Marathwada regions of Maharashtra State were chosen on purpose since it has lower milk output and productivity than other regions of the state.The data were collected for the year 2022-23. The milk producers of Bhandara, Yavatmal, Nanded, and Latur, two districts each from the Vidarbha and Marathwada regions of the Maharashtra State, were randomly selected for data collection.About 52.20 percent of milk producers are considered small, 30.98 percent medium, and 6.63 percent large in terms of the size of their herds.Two districts each from the Vidarbha and Marathwada regions were selected for the study. Two blocks were randomly selected from each district. And, from each block, three villages were chosen randomly. Accordingly, a total of 410 participants were selected for the investigation. Ten constraints were identified prior to the development of the structured interview schedule, and respondents were asked to rank the perceived severity of each constraint. The Garrett ranking technique (Garrett and Woodworth, 1969) was used to analyze the farmers' perspectives on the numerous constraints in dairy farming. The following equation was utilized to determine the percent position of each rank.

$$\text{Percent position} = \frac{100\ (\text{Rij} - 0.05)}{\text{Nij}}$$

Where,

Ri j - Rank gave for the i^{th}factor by the j^{th} individual.

Ni j - Number of factors ranked by the j^{th}individual.

The data were collected on rank-wiseconstraintand then Garret's value was

multiplied by the table value. The total score was calculated by multiplying the value of the Garret by the respondents' ranking. In addition, Garret's score was computed by dividing the total score by the number of respondents, and his ranking was determined by the highest score.

3. RESULTS AND DISCUSSION

Milk producer challenges in the study area were identified through observation and discussion. Farmers have difficulties with dairy farming and operations. Dairy farming in the region had a lot of challenges. The Garret rating system was used to prioritize the constraints in order to determine their relative importance.

3.1 Shortage of Quality Feed and Fodder Round the Year

The research area's dairy farmers' biggest and first constraint was shortage of high-quality fodder year-round (75.36 mean score). Fodder includes green, dry, and concentrated. It was observed that milk producers face a shortage of feed and fodder due to small and fragmented land holdings, lack of irrigation facilities, quality fodder seeds, and lack of storage facilities etc. Since fodder crops require more irrigation, the region's lack of irrigation facilities was the main cause of the fodder shortage.

3.2 High Cost of Concentrates

Concentrate costs were the second-ranked constraint with a 70.01 mean score for themajority of respondents. Milk producers purchase concentrates in higher price to meet nutritional requirements to maintain the milk production of milch animal. This may be due to a lack of dependable local suppliers, which raises prices, input providers hoarding supplies to create an artificial shortage in the market, and local vendors manipulating the company's price tag. It was observed that local suppliers' profit motives, desire to create a market shortage, manipulation of the company's price tag and lack of government-approved shops [4].

3.3 Unavailability of Veterinary Facilities

The majority of respondents believed that the susceptibility of crossbred animals to disease. The lack of veterinary facilities close to the village, the high cost of obtaining veterinary services at the doorstep, and a lack of knowledge of improved management practices, were the most significant factors ranking constraint third with amean score of 63.55. Limited AI facility was the most important constraint. It was also noted the inaccessibility of a resource, specifically a veterinarian, in the region. Farmers had to go 10–15 km with their animals to find a veterinary doctor because there was no veterinary clinic in the village [2]. The study also reported that shortage of veterinary doctors or attendants as one of the most significant obstacles to dairy production in India [5].

Table 1. Identification of the constraints faced by different herd size categories of dairy farmers

Sr. No	Particulars of Constraints	Mean Score			Overall	
		Small	Medium	Large	Mean Score	Rank
1	Shortage of quality feed and fodder round the year	75.26	74.75	76.06	75.36	1
2	High cost of concentrates	69.81	70.48	69.75	70.01	2
3	Unavailability of veterinary facilities	63.40	63.53	63.72	63.55	3
4	Unavailability of labour	59.58	59.37	59.12	59.36	4
5	Lack of knowledge on improved management practices	51.86	51.89	52.61	52.12	5
6	Shortage of green fodder round the year	47.59	46.8	45.9	46.76	6
7	Unstable pricing policy	41.73	41.46	41.42	41.54	7
8	Inadequate credit facilities	35.55	36.17	36.15	35.96	8
9	Lack of information on Government Scheme	29.82	29.88	30.01	29.9	9
10	Marketing of milk and milk products	22.60	22.25	22.35	22.4	10

3.4 Unavailability of Labour

The Table 1 shows constraints in dairy farming, with labour shortage ranking fourth with a mean score of 59.36. It was found that dairy farming was labour-intensive that requires ayear-round labour supply for grazing, stall feeding, shade cleaning, watering, animal washing, milking and selling milk. Rural people believed working in agriculture was linked to low self-esteem, therefore many moved to cities for a better life balance and education. It was observed that MNREGA (Mahatma Gandhi National Rural Jobs Guarantee Scheme) encourages people to leave agriculture for social assistance due to its better compensation [6].

3.5 Lack of Knowledge on Improved Management Practices

Knowledge of dairy farming practices improves milk productivity, production efficiency, and profitability. The majority of respondents had anaverage understanding of better dairy farming practices, ranking fifth with a mean score of 52.12. The majority of respondents had little scientific knowledge of improved management practices such as care and management of newborn calves, the proportion of concentrate feeding tothe milking animal, preparing concentrate feed with local ingredients, therequirement of dry and green for the milking and dry animal, and knowing when to artificially inseminate the animal etc [7].

3.6 Shortage of Green Fodder Round the Year

Feed and fodder rank sixth with 46.76 mean scores. There was a disparity between the demand and the supply of green fodder. The study found that milk producers provide large quantities of concentrate to maintain the milk production of milch animals, which increases milk prices per litre [8]. Green fodder productionwas affected due to poor irrigation, poor fodder seeds, and poor fodder farming practices. This study observed that small and fragmented land holdings and alack of information on the fodder development programs were indicated as the key reasons for not growing fodder crops in their field.

3.7 Unstable Pricing Policy Unstable Pricing Policy

With a 41.54 mean score, milk procurement pricing uncertainty was the seventh constraint. The Dairy Co-operative Society, theprivate dairy sector decides milk procurement pricing twice a year for flush and lean periods. Due to market rivalry, milk procurement agencies raise or lower prices, shocking milk producers. The milk producer didn't comprehend the Fat and SNF quantities that determined the purchase price per litre.

3.8 Inadequate Credit Facilities

Inadequate financial facilities were the eighth most severe constraint in the investigation, scoring 35.96. It may be due to a lack of rural banking services or milk farmers' ignorance of present facilities. Milk producers are having credit difficulty for buying milch animals, machinery, construction of sheds (term loans) and fodder storage etc.

3.9 Lack of Information on Government Scheme

Lack of Government Scheme information ranks nineth among constraint with a mean score of 29.90. Milk producers were unaware of the various Government schemes to increase milk production and productivity, such as subsidies provided for buying animals, fodder seeds, sheds, machinery, bulk milk coolers (BMCs), etc.

3.10 Marketing of Milk and Milk Products

The research also found that marketing milk and milk products ranked tenth constraints with a score of 22.40. The respondents said the milk producer experienced difficulties by the distant location of the milk procurement centre, the price fluctuation, delay in payment and milk spoilage were the constraints in the marketing of milk and milk products [9-15].

4. CONCLUSIONS

According to the study's findings, the biggest problems for milk producers in the Vidarbha and Marathwada regions of Maharashtra State were shortage of quality feed and fodder round the year (75.36 mean score) followed by the high cost of concentrates (63.55) and the lack of veterinary facilities (63.55). These feed is one of the most crucial factors in milk production in the area under consideration.As a result, the availability of dry and green fodder may be increased by the development of fodder crops under various government initiatives. However, one of the major issues in the region of the study

was the relatively high cost of concentrates. Milk producers may be able to get their hands on concentrates at reasonable prices via the dairy cooperative society's procurement centre. Additionally, efforts should be made to make available timely and adequate veterinary facilities at all procurement centres in order to increase milk production in the study area.

Despite these challenges, dairy farming in Maharashtra State's Vidarbha and Marathwada regions has to be strengthened immediately by expanding veterinary facilities and training facilities at the number of procurement centers and guaranteeing that farmers receive a fair price for their products consistently.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Chand R. India's White revolution; Achievement and Next phase NITI working paper. 2023;001/2023;
2. Bhawar RS, Dixit PK, Sivaram M. Constraints faced by the dairy farmers in production and marketing of milk in northern dry zone of Karnataka. Indian J Dairy Sci. 2020;73(3):274-9.
   DOI: 10.33785/IJDS.2020.v73i03.014
3. Adhikari B, Chauhan A, Bhardwaj N, Kameswari VLV. Constraints faced by dairy farmers in hill region of Uttarakhand. Indian J Dairy Sci. 2020;73(5): 464-70.
   DOI: 10.33785/IJDS.2020.v73i05.012
4. Meena DK, et al. Constraints perceived by the dairy farmers about fodder production in Rajasthan state of India. Indian J Dairy Sci. 2017;70(2):244-6.
5. Sharma A, Kumar S, Kandpal NK. Constraints faced by dairy farm women: A study in Nainital District of Uttarakhand. Indian Res J Extension Educ. 2018;18: 86-90.
6. Vaishnavi P, Manisankar G. Labour scarcity in agriculture: a review. The Pharm Innov J. 2022;SP-11(4):2087-90.
7. Ansari PKM. Dairy farmers' knowledge of improved dairy farming practices: A study in Kumaon division of Uttarakhand. The Pharm Innov J. 2023;12(1):2944-8 32, 13-33.
8. Nagrale BG, Datta KK, Chauhan AK. An analysis of constraints faced by dairy farmers in Vidarbha region of Maharashtra. Indian J Dairy Sci. 2015;68(4):390-4.
9. Jangid BL, Rohilla PP. Constraints in adoption of improved animal husbandry practices in ARID fringes of Rajasthan. Indian J Agric Econ. 2004;59(3):618.
10. Bardhan D, Sriwastava RSL, Dabas YPS. Study of constraints perceived by farmers in rearing dairy animals. Indian J Dairy Sci. 2005;58(3):214-8.
11. Dixit PK, Singh RV, Dhaka JP, Sajeesh MS, Arvind Kumar MK. Economic analysis of milk production in Kerala – A spatial analysis. Asian Econ Rev. 2006;48(3): 405-16.
12. Singh KhR. Economics of milk production and marketed surplus in Imphal District of Manipur [M.Sc. thesis]. Karnal, Haryana: NDRI (Deemed University); 2006.
13. Lalrinsangpuii MR, Priscilla L. Economics of milk production and its constraints in Mizoram. Indian J Dairy Sci. 2016;69:5.
14. Adhikari B, Chauhan A, Bhardwaj N, Kameswari V. Constraints faced by dairy farmers in hill region of Uttarakhand. Indian J Dairy Sci. 2020;73(5):464-70.
    DOI: 10.33785/IJDS.2020.v73i05.012
15. Sharma H, Makwana MC, Kalamkar SS. Constraints faced by the members of organised and unorganized sector of milk producers in Gujarat. Livest Sci (ISSN online 2277-6214). 2021;12(1): 23-30.
    DOI: 10.33259/JLivestSci.2021.23-30

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