

Original Research Article

Milk producer's perceptions on constraints in milk production in Maharashtra state

Abstract:

The study on constraints related to difficulties faced by farmers in the operation and management of dairy activities in milk production was conducted in Vidarbha and Marathwada region of Maharashtra State. The region purposively selected due to low milk production and productivity compared to other region of State. Data were collected from 410 randomly selected milk producers of Bhandara, Yavatmal, Nanded and Latur two districts each from Vidarbha and Marathwada region of Maharashtra State. About 52.20 per cent of milk producer's belongs to small, 30.98 per cent medium and 6.63 per cent large herd size category of milk producer's. Garret ranking method was used to priorities the constraints. The serious constraints perceived by the milk producer's were non-availability of quality feed and fodder round the year, high cost of concentrates, unavailability of veterinary facilities, Unavailability of labour, Lack of knowledge of improved management practices, Lack of availability of green fodder round the year, Unstable pricing policy, Inadequate credit facilities, Lack of information of Government Scheme and marketing of milk and milk products.

Key words - Constraints, milk producer's, dairy farmers, milk production

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 gram per person per day. Since the productivity of India's milch animals 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

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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 measurement 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 by Ramesh Chand (2023). 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 region 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 29 per cent, well below the national average of 41 per cent (Bhavar, 2020). 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 to the improvement of the milk sector in the especially in Vidarbha and Marathwada areas of Maharashtra State.

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 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

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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 (Vidarbha and Marathwada) were selected for 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. 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.

$$\text{Percent position} = \frac{100 (R_{ij} - 0.05)}{N_{ij}}$$

Where,

R_{ij} - Rank given for the i th factor by the j th individual.

N_{ij} - Number of factor ranked by the j th individual.

The data were collected on rank-wise constraint and then Garrett's value was multiplied by the table value. Total score was calculated by multiplying the value of the Garrett by the respondents' ranking. In addition, Garrett's score was computed by dividing the total score by the number of respondents, and his ranking was determined by the highest score.

Result and Discussion

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

Non-availability of quality feed and fodder round the year

The research area's dairy farmers' biggest and first constraint was lack of availability of high-quality fodder year-round (75.36 mean score). Fodder includes green, dry, and concentrated. It was observed that milk producer facing 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.

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	Non- availability 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 of improved management practices	51.86	51.89	52.61	52.12	5
6	Lack of availability 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 of 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

High cost of concentrates

Concentrate costs were the second-ranked constraint with a 70.01 mean score for majority of respondents. Milk producers may buy concentrated to meet milch animals' nutritional requirement due to the high cost of concentrates (BabitaAdhikari et al., 2020). 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. DK Meena et al. (2017) found similar results and hypothesised that local suppliers' profit motives, desire to create a market shortage, manipulation of the company's price tag, and lack of government-approved shops.

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Unavailability of veterinary facilities

The majority of respondents believed that the susceptibility of crossbred animals to disease. 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 mean score 63.55. Limited AI facility was the most important constraint. Bhawar et al. (2020) noted that 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. Similarity was observed with the findings of Sharma et al. (2018), who identified a lack of veterinary doctors or attendants as one of the most significant obstacles to dairy production in India.

Unavailability of labour

Table 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 year-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. Vaishnavi and Manisankar (2022) reported that MNREGA (Mahatma Gandhi National Rural Jobs Guarantee Scheme) encourages people to leave agriculture for social assistance due to its better compensation.

Lack of knowledge of improved management practices

Knowledge of dairy farming practices improves milk productivity, production efficiency, and profitability. The majority of respondents had average understanding of better dairy farming practices, ranking fifth with a mean score 52.12. The majority of respondents had little scientific knowledge of improved management practices such as care and management of newborn calf, proportion of concentrate feeding to milking animal, preparing concentrate feed with local ingredients, requirement of dry and green of milking and dry animal, and knowing when to artificially inseminate the animal etc. [These results were in the line of Pooja Karki and Ansari, MA (2023)].

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Lack of availability 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.. RS Bhawar et al (2020) observed that milk producers provide large quantities of concentrate to maintain the milk production of milch animal, which increases milk prices per liter. Green fodder was affected due to poor irrigation, poor fodder seeds, and poor fodder farming practices. This study observed that small and fragmented land holdings and lack of information of the fodder development programs were indicated as the key reasons for not growing fodder crops in their field.

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, private dairy sector deciding 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.

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 a credit difficulty for buying milch animals, machineries, construction of sheds (term loans) and fodder storage etc.

Lack of information of Government Scheme

Lack of Government Scheme information ranks ninth among constraints 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.

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 marketing of milk and milk products.

Conclusions

According to the study's findings, the biggest problems for milk producers in the Vidarbha and Marathwada region of Maharashtra State were non-availability 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 results indicate that 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 the 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 on to make available timely and adequate veterinary facilities at all procurement centre in order to increase milk production in the study area.

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

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