

A STUDY OF CHALLENGES, OPPORTUNITIES AND EXPECTATIONS FACED IN PRODUCTION FUNCTION BY DAIRY PLANTS IN GUJARAT STATE

A. K. MAKWANA¹ & M. D. GURJAR²

¹Associate Professor, SMC College of Dairy Science, Anand Agricultural University, Anand, Gujarat, India

²Assistant Professor, SMC College of Dairy Science, Anand Agricultural University, Anand, Gujarat, India

ABSTRACT

The Indian Dairy cooperative structure has a huge contribution in raising the milk production in the country up to approximately 146 million tonnes in the year 2014-15 from a meagre milk production 17 million tonnes in the year 1951. The present study was conducted to evaluate the Challenges opportunities and expectations of the production department of dairy plants of Gujarat state and information was collected by using a questionnaire. After analyzing the collected data it could be, it can be concluded that the main challenges in the Production area here - Worker attitude a problem in production in dairy plants of Gujarat, lack of Worker Trainings, Worker hygiene a problem in maintaining the standards of final product in dairy plants of Gujarat. The main opportunities in the Production area where - Growth in milk production in the state & the country a good opportunity for Gujarat dairy plants increase the share of organized sector, Development in new technology is a good opportunity for the Gujarat dairy sector to manufacture quality products at lower costs and The increase in the range of products manufactured by Gujarat's dairy plants (including western and traditional Indian dairy products) is a good opportunity for dairy plants for further growth

KEYWORDS: Gujarat Dairy, Cooperative Dairies, Dairy Business & Dairy Processing

INTRODUCTION

Indian Dairy Sector

The Indian Dairy cooperative structure has a huge contribution in raising the milk production in the country up to approximately 146 million tonnes in the year 2014-15 from a meagre milk production 17 million tonnes in the year 1951. The per capita availability of milk in the country has increased to 340 g /day (GCMMF Annual Report 2015-16). Further, milk is the largest agricultural crop in India with market values exceeding Rs 4 lakh crore per annum and the milk group contributes the highest to the total output of our agricultural sector, surpassing the output value of wheat, rice and oilseeds.

India's livestock sector is one of the largest in the world. According to 2012 livestock census data, Gujarat had 9984 thousand cattle and 10386 thousand buffalo population, which comes to around 5.23% and 9.55% of cattle and buffalo population of the country. The daily milk yield per animal in the state for Cow (Crossbreed), Cow (indigenous) and Buffalo is around 9.08 kg/day, 4.19 kg/day & 5.15 kg/day, respectively; whereas that of India is 7.15 kgs, 2.54 kgs and 5.15 kgs for Cow (Crossbreed), Cow (indigenous) and Buffalo respectively. Gujarat is lucky to have good and high-yielding breeds of cattle and buffaloes. Gir and Kankrej breeds of cows and Mahesani, Jafarabadi, Banni and Surti breeds of buffaloes are well known for their high milk yielding capacity. Kankrej bullocks are famous for their "Sawai-chal" and the cows of this breed are good milk producers.

In India, milk production is scattered in a large number of villages in small quantity of two to four liters by milch animals. The average milk production per animal per lactation is around 1400 liters which is much below the world average of 2300 liters. (Rajorhia, G.S.2013) The milk productivity of crossbred cows, Indigenous cows and of buffaloes in India is very low. It is 6.45, 1.97 and 4.3 Kg per day, respectively. The unorganized sector is comprised of numerous small and /or seasonal milk producers/trader (popularly known as halwais).

METHODOLOGY

The study was spread over the entire state and primary data were collected by way of a Questionnaire. The study covered all 26 Districts of Gujarat state. Selection of sample of Dairy Processing Plants (Cooperative & Private): Each district has their own milk processing plant which process and manufacture the products. One middle level manager from all such plants was selected as a respondent.

RESULTS AND FINDINGS

The data obtained by way of questionnaire were analyzed and the following results were found.

Challenges in Production Related Matters

The problems were presented before the respondents in terms of questions and they had to respond to a particular challenge by indicating Yes/ No against the challenge. The final result is given below

Table 1

Challenge No	Challenge Statement (Production) (N=5)	Percentage (%)
2	Is Worker attitude a problem in production in dairy plants of Gujarat?	60
4	Is lack of Worker Trainings a problem in production in dairy plants of Gujarat?	60
1	Is Worker hygiene a problem in maintaining the standards of final product in dairy plants of Gujarat?	40
3	Is Worker efficiency a problem in production in dairy plants of Gujarat?	40
12	Is production planning (in cooperative dairies) are a problem (because of the uncertainty in the quantity demanded by the federation)?	40
14	Is the handling of dairy byproduct- whey is a problem for dairy plants in Gujarat?	40
6	Is equipment related safety a problem in Today's dairy plant?	20
7	Is obtaining & Maintaining ISO certification a challenge in dairy sector?	20
8	Is HACCP implementation a challenge for today's dairy plants?	20
9	Is lack of storage facility of finished products a problem in Gujarat dairy plants?	20
11	Is the skill set possessed by today's Dairy technologists a problem in the Gujarat dairy sector?	20
15	Is the FAT loss in dairy plants of Gujarat unusually high and causing a problem to the dairy plants?	20
5	Is the provision of safety to Workers a problem in production in dairy plants of Gujarat?	0
10	Is the unavailability of packaging materials at right time in production department a frequent problem in dairy plants?	0
13	Is effluent treatment a problem in Gujarat dairy sector?	0
16	IS the Energy consumption per liter of milk processed a problem in dairy plants of Gujarat?	0
17	Is there a management for mental problems in production departments due to the use of SAP software?	0

The main challenges in the Production area were

- Worker attitude a problem in production in dairy plants of Gujarat
- Lack of Worker Trainings
- Worker hygiene a problem in maintaining the standards of final product in dairy plants of Gujarat

Opportunities in Production Related Matters

The opportunities were presented before the respondents in terms of questions and they had to respond to a particular opportunity by indicating yes/ No against the challenge. The final result is given below

Table 2

Sr. No.	Opportunity Statement (Production) (N=5)	Percentage (%)
1	Is the growth in milk production in the state & the country a good opportunity for Gujarat dairy plants increase the share of organized sector?	80
3	Do you think the development in new technology is a good opportunity for the Gujarat dairy sector to manufacture quality products at lower costs?	80
5	Do you think the increase in the range of products manufactured by Gujarat's dairy plants (including Western and traditional Indian dairy products) is a good opportunity for dairy plants for further growth?	80
8	In your opinion, will the use of SAP system provide a good opportunity for the dairy plants in properly maintaining the MIS data and streamlining the administrative/technical/ decision making processes in Production departments?	80
2	Do you think the higher capacity utilization in dairy plants will be a good opportunity to increase the production efficiency?	60
4	Do you think the development in the field of innovative packaging materials is a good opportunity for dairy plants?	60
7	In your opinion does the use of Anaerobic ETP provides a good opportunity for dairy plants to handle their effluents?	60
6	In your opinion, will the Opening up of new dairy science colleges in Gujarat throw a good opportunity for recruiting qualified & skilled dairy technologists?	20

The main opportunities in the Production area were

- Growth in milk production in the state & the country a good opportunity for Gujarat dairy plants increase the share of organized sector
- Development in new technology is a good opportunity for the Gujarat dairy sector to manufacture quality products at lower costs
- The increase in the range of products manufactured by Gujarat's dairy plants (including western and traditional Indian dairy products) is a good opportunity for dairy plants for further growth

Expectations Suggested by Dairy Managers

The list of expectations as suggested by various dairy managers are presented below

Table 3: Expectations to Overcome Challenges in Production Related Matters

Sr. No.	Main Challenges Identified	Expectation To Overcome Challenges
1	Worker attitude a problem in production in dairy plants of Gujarat	<ul style="list-style-type: none"> Quality selection of employee
2	Worker efficiency a problem in production in dairy plants of Gujarat	<ul style="list-style-type: none"> Provide monthly training by the organization. Follow yearly training program strictly
3	Equipment related safety a problem in Today's dairy plant	<ul style="list-style-type: none"> Provide automated machinery.
4	Production planning (in cooperative dairies) is a problem (because of the uncertainty in the quantity demanded by the federation)?	<ul style="list-style-type: none"> Regularly change planning according to demands.
5	Handling of dairy byproduct- why is a problem for dairy plants in Gujarat	<ul style="list-style-type: none"> Installation of more whey powder plant. A new product developed which consumes whey.

Table 4: Expectations to Utilize the Opportunities in Production Related Matters Were

Sr. No.	Opportunities	Suggestions To Utilize Opportunities
1	Is the growth in milk production in the state & the country a good opportunity for Gujarat dairy plants increase the share of organized sector?	<ul style="list-style-type: none"> The more number of milk producers getting income. Installation of new manufacturing unit for milk and milk products.
2	Do you think the higher capacity utilization in dairy plants will be a good opportunity to increase the production efficiency?	<ul style="list-style-type: none"> Maximum capacity utilization
3	Do you think the development in new technology is a good opportunity for the Gujarat dairy sector to manufacture quality products at lower costs?	<ul style="list-style-type: none"> Automated plant reduces the losses. Adoption of new technology
4	Do you think the development in the field of innovative packaging materials is a good opportunity for dairy plants?	<ul style="list-style-type: none"> Taking the suggestion of the packing member.
5	Do you think the increase in the range of products manufactured by Gujarat's dairy plants (including western and traditional Indian dairy products) is a good opportunity for dairy plants for further growth?	<ul style="list-style-type: none"> Taking suggestion of the consumer monthly. Increase the product range
6	In your opinion, will the use of SAP system provide a good opportunity for the dairy plants in properly maintaining the MIS data and streamlining the administrative/technical/ decision making processes in Production departments?	<ul style="list-style-type: none"> SAP implementation is beneficial for the dairy industry for maintaining database and analysis.

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CONCLUSIONS

After analyzing the collected data it could be, it can be concluded that the main challenges in the Production area here - Worker attitude a problem in production in dairy plants of Gujarat, lack of Worker Trainings, Worker hygiene a problem in maintaining the standards of final product in dairy plants of Gujarat. The main opportunities in the Production

area where - Growth in milk production in the state & the country a good opportunity for Gujarat dairy plants increase the share of organized sector, Development in new technology is a good opportunity for the Gujarat dairy sector to manufacture quality products at lower costs and The increase in the range of products manufactured by Gujarat's dairy plants (including western and traditional Indian dairy products) is a good opportunity for dairy plants for further growth

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