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AV Agarkar

P.G. Students, Section of Animal Husbandry & Dairy Science, College of Agriculture, Nagpur, Maharashtra, India

DT Undratwad

Assistant Professor, Section of Animal Husbandry & Dairy Science, College of Agriculture, Gadchiroli, Maharashtra, India

VG Atkare

Professor, Section of Animal Husbandry & Dairy Science, College of Agriculture, Nagpur, Maharashtra, India

Bhavana R Wankhade

Assistant Professor, Section of Animal Husbandry & Dairy Science, College of agriculture, Nagpur, Maharashtra, India

Corresponding Author:

AV Agarkar

P.G. Students, Section of Animal Husbandry & Dairy Science, College of Agriculture, Nagpur, Maharashtra, India

Constraints faced by rural dairy farmers in milk processing and milk products manufacturing

AV Agarkar, DT Undratwad, VG Atkare and Bhavana R Wankhade

Abstract

The present study entitled “Challenges faced by rural dairy farmers in milk processing and milk products manufacturing” was carried in Shirur tahsil of Pune district of Maharashtra state. Total 200 dairy farmers were selected from 25 villages of Shirur Tahsil by using random sampling method. Data were collected by personally interviewing the dairy farmers with the help of well-structured pretested interview schedule. Primary data collected by interview of rural dairy farmers and questionnaire, secondary data collected from books, internet, research papers etc. and data were subjected to appropriate statistical analysis. The results of the study revealed that major economical constraints 100% farmers faced the constraint low price for milk offered, while 91% farmers faced constraint high cost of modern machines and equipment, regarding marketing constraints, 100% dairy farmers faced constraint advertisement of owned milk products as major constraints and 91% dairy farmers faced constraint irregular advanced payment followed by 89% dairy farmers expressed constraint inadequate marketing intelligence. In technical constraints 73% of the dairy farmers had encountered constraint lack of scientific knowledge about milk processing and milk products manufacturing and 61% of the dairy farmers expressed constraints about lack of technical guidance. In socio-psychological constraints lack of co-operation and co-ordination 89% major socio-psychological constraints mentioned by the farmers, followed by 76% dairy farmers encountered constraint lack of training and information source. In communicational constraints majority i.e. 85% dairy farmers faced the constraint regarding inadequate access to training programme followed by 79% of the dairy farmers encountered constraint low social mobility of dairy farmers. In infrastructural constraints lack of quality testing facilities 92% major infrastructural constraints mentioned by the farmers, followed by 86% of dairy farmers encountered constraints lack of training facilities and 83% of dairy farmers mentioned the constraints lack of skill labour availability, while 68% of dairy farmers mentioned the constraints lack of chilling facilities while, 93% of dairy farmers encountered the constraints weak supply of milk chain. Hence, for overall development of milk processing in this area it is inferred that there is need to provide training, guidance, knowledge and loan facility to rural dairy farmers, so as to increase the rural dairy farmers count in milk processing and milk products manufacturing in study area.

Keywords: Constraints, milk processing, rural dairy farmers

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 the most important economic activities in the rural areas and are regular source of cash income for rural households. It provides supplementary income to the family as well as employment (Dropati *et al.* (2020) ^[3]. Milk handling from household sector 45% uses for drinking, for conversion into milk products such as curd, ghee, makhan/butter. An estimated, 54% milk produced in India is converted into products (traditional & western) and rest of milk is utilized as a market milk i.e. for liquid consumption, about 46% of milk uses as a liquid milk, 33% milk uses for Ghee/Butter, 07% milk uses for curd/dahi (Shrikhand, Lassi etc.), 07% milk uses for khoa (peda, burfi, gulabjamun etc.), 03% milk uses for Channa/Paneer (rasogolla, rasmalai etc. and 04% milk uses for western products (powder, cheese etc (Aneja *et al.* 2002) ^[2].

Despite impressive growth in milk production during the past three decades, productivity of dairy animals continues to remain very low and milk marketing system is primitive. Currently, more than 80 percent of the milk produced in the country is marketed by the unorganized sector (private organization) and less than 20 percent is marketed by organized sector (government or cooperatives societies). But, both organized and unorganized sectors in the dairy industry of the country face a lot of constraints- infrastructural, technical, socio-psychological, economic and marketing- with high or low severity to expansion of milk

production in the country (Sarker and Ghosh., 2010)^[8]. Now a day's milk is emerged as the second largest agricultural commodity and it provides job opportunity to the farmers and also to the educated unemployed people. The nation's milk supply comes from billions of small producers dispersed throughout rural areas. But the economic condition of rural dairy farmers is not good because they afraid to jump in milk processing due to various reasons.

Milk processing and marketing is very less at village level in rural area. Inadequate knowledge, lack of modern machinery, lack of market knowledge are the reasons for low milk processing and ultimately poor economic condition of rural dairy farmers. Therefore, the present study was undertaken with the objective to study various constraints encountered by rural dairy farmers in milk processing and milk products manufacturing.

Materials and Methods

The present study was carried out during the year 2021-22 in Shirur tehsil of Pune district in western region of Maharashtra State. Twenty-five villages were selected for the study purpose. From each village 8 dairy farmers follows milk products manufacturing were selected. Total 200 dairy farmers were personally interviewed with help of well-designed questionnaire. Data were collected by personal interview with the help of structured pretested schedule especially designed for the purpose of present study. Tabulation was done after completion of the interview work with the dairy farmers and editing the schedule. The raw data from edited schedule were first recorded in suitable primary table serially and incorporated in secondary table according to the classification. The entire schedule was numbered serially to facilitate the work of tabulation and analysis. All schedules were tabulated in different tables and the categorized and tabulated. The frequencies were converted into percentage for giving better and clear expression to the data. The analysis was done, keeping in view the objectives of the study.

Results and Discussion

Constraints faced by rural dairy farmers

Dairy farming is one of the important enterprises which dominates the economic activities of the people in rural areas of Maharashtra. This sector also offers an efficient means of cash savings and economic security to the rural dairy farmers. Constraints refer to the situation or circumstances which is responsible to restrict or limit the activity or performance of an individual. In this study, it is operationalized as the items of difficulties experienced by the dairy farmers in milk processing and milk products manufacturing. Constraints play a vital role in adoption as well as transfer of technology. To obtain better result of any type of extension services, it is very essential to minimize the constraints. For which, constraints in flow of services should be made for rapid action. The information regarding constraints experienced by the dairy farmers were collected by using open ended questions. Agreements of each dairy farmer against enumerated constraints were sum up separately and converted into percentage.

Economic constraints faced by rural dairy farmers

The data on distribution of rural dairy farmers according to economic constraints faced are presented in Table 1. In case of economic constraints 100% farmers faced the

constraints low price for milk offered, 95% dairy farmers encountered constraint high charges for insurance as well as 91% farmers faced constraint high cost of modern machines and equipment, 89% dairy farmers expressed low provision of loan for purchase modern machinery, while 80% dairy farmers expressed non availability of credit at proper time. About 74% dairy farmers faced the constraints high interest on loan, while only 56% dairy farmers encountered the constraints delay payment for milk and milk products.

Sankhala *et al.* (2006)^[12] and Dropati *et al.* (2020)^[3] observed that farmers faced constraints were low price for milk, non-availability of subsidy and high charges for insurance, inadequate money, lack of loan facility, low provision of loan in society or government and delay in payment of milk. Likewise, Sarker (2010)^[8] also observed that major constraints faced by farmers were, low price for milk offered, low provision of loan in society or gov, delay payment for milk and milk products and high charges for insurance.

Marketing constraints faced by rural dairy farmers

The data on distribution of rural dairy farmers according to marketing constraints faced are presented in Table 2.

As regards to marketing constraints 100% dairy farmers faced constraints advertisement of owned milk products and 91% dairy farmers expressed constraints irregular payment followed by 89% dairy farmers expressed constraints inadequate marketing intelligence, while 83% dairy farmers faced constraints irregular sale of milk products. Nearly more than half of total dairy farmers i.e. 59% of dairy farmers expressed constraints less knowledge about marketing strategy and 69% of dairy farmers faced constraints lack of time for marketing, while 78% dairy farmers encountered constraints transportation problem in rural area.

Dropati *et al.* (2020)^[3] and Sarker (2010)^[8] noticed that major constraints encountered by farmers were inability to sell value added products, problems of transportation, irregular payment for milk by co-operatives society, lack of awareness in marketing strategy, distance to the milk societies and irregular sale of milk and lack of time for marketing.

Singh *et al.* (2004)^[10] also reported that major constraints faced by rural dairy farmers were marketing facilities and poor credit, while Patil (2009)^[6] noticed that 78.22% dairy farmers encountered important constraints delay in milk payment. Likewise, Darling (2017)^[9] observed that major constraints faced by rural dairy farmers in distribution and marketing of milk and milk products were transport cost, delivery cost, price constraints and poor road system.

Technical constraints faced by rural dairy farmers

The data on distribution of rural dairy farmers according to technical constraints faced are presented in Table 3.

In technical constraints majority i.e. 100% dairy farmers faced the constraints regarding high cost of modern technologies followed by 73% of the dairy farmers encountered constraints like lack of scientific knowledge about milk processing and milk products manufacturing and 61% of the dairy farmers expressed constraints lack of technical guidance, while only 47% of the dairy farmers encountered constraints like lack of knowledge of modern machinery.

Gour (2002)^[4] and Shrivstava (2003)^[11] noticed that major problem faced by dairy farmers were lack of knowledge like farmers had difficulty store milk in summer season, lack of

technical support system and lack knowledge of modern machineries like packaging machines. Likewise, Sarker (2010) [8] also noticed that major constraints faced by dairy farmers were lack of technical guidance.

Socio-psychological constraints faced by rural dairy farmers

The data on distribution of rural dairy farmers according to socio-psychological constraints faced are presented in Table 4.

In socio-psychological constraints lack of co-operation and co-ordination 89% major socio-psychological constraints mentioned by the farmers, followed by lack of training and information source 76% encountered by the farmers, and 71% of dairy farmers mentioned the constraints less risk bearing capacity of the farmers, while 64% of dairy farmers faced the constraints lack of purchasing power. While only 28% dairy farmers encountered the constraints lack of time due to busy in agricultural work.

Sarker (2010) [8] noticed that major constraints encountered by farmers were lack of time due to busy in domestic/agricultural work and lack of cooperation and coordination among members, low socio-economic condition. Likewise, Shrivastava (2003) [11] also noticed that major constraints faced by dairy farmers was lack of training.

Communicational constraints faced by rural dairy farmers

The data on distribution of rural dairy farmers according to communicational constraints faced are presented in Table 5.

In communicational constraints majority i.e. 85% dairy farmers faced the constraints regarding inadequate access to training programme followed by 79% of the dairy farmers encountered constraints low social mobility of dairy farmers and 56% of the dairy farmers expressed constraints poor

communicational facilities, while 43% of the dairy farmers encountered constraints like poor rapport with extension agencies and only 39% dairy farmers expressed constraints inadequate information about government scheme pertaining dairy enterprises about milk processing and milk products manufacturing.

Sankhala *et al.* (2006) [12] also noticed that major constraints faced by dairy farmers was inadequate information about government scheme pertaining dairy enterprises like non availability of subsidy and credit facility.

Infrastructural constraints faced by rural dairy farmers

The data on distribution of rural dairy farmers according to infrastructural constraints faced are presented in Table 6.

The data with regards to infrastructural constraints lack of quality testing facilities 92% major infrastructural constraints mentioned by the dairy farmers, followed by 86% of dairy farmers encountered constraints lack of training facilities and 83% of dairy farmers mentioned the constraints lack of skill labour availability, while 68% of dairy farmers encountered the constraints lack of chilling facilities while, 93% of dairy farmers faced the constraints weak supply of milk chain and only 49% dairy farmers encountered the constraints lack of improved equipment.

Gour (2002) [4] and Lokhande *et al.* (2009) [5] observed that major constraints faced by dairy farmers were lack of improved equipment's, lack of chilling facilities and shortage of skill labours and lack of cold storage facility. Likewise, Sarker (2010) [8] noticed that major constraints faced by dairy farmers were lack of improved equipment's and lack of training facilities.

Rangasamy and Dhaka (2007) [7] also reported that common constraints encountered by dairy farmers were lack underutilization of chilling centres with higher sales commission to the agents, wholesalers and retailers.

Table 1: Distribution of the rural dairy farmers according to economic constraints faced by rural dairy farmers

Sr. No	Constraints	(n = 200)	
		Frequency	Percentage
1	Low price for milk offered	200	100.00
2	Low provision of loan for purchase modern machinery	178	89.00
3	Delay payment for milk and milk products	112	56.00
4	High interest on loan	148	74.00
5	Non availability of credit at proper time	160	80.00
6	High cost of modern machines and equipment	182	91.00
7	High charges for insurance	190	95.00

Table 2: Distribution of the rural dairy farmers according to marketing constraints faced by rural dairy farmers

Sr. No.	Constraints	(n = 200)	
		Frequency	Percentage
1	Irregular sale of milk products	166	83.00
2	Advertisement of own product	200	100.00
3	Less knowledge about marketing strategy	118	59.00
4	Transportation problem	156	78.00
5	Inadequate marketing intelligence	178	89.00
6	Irregular payment/advanced payment	182	91.00
7	Lack of time for marketing	138	69.00

Table 3: Distribution of rural dairy farmers according to technical constraints faced by rural farmers

Sr. No.	Constraints	(n = 200)	
		Frequency	Percentage
1	Lack of scientific knowledge about milk processing and products manufacturing	146	73.00
2	Lack of technical guidance	122	61.00
3	Lack of knowledge of modern machinery	94	47.00
4	High cost of modern technologies	200	100.00

Table 4: Distribution of rural dairy farmers according to socio-psychological constraints faced by rural dairy farmers

Sr. No.	Constraints	(n = 200)	
		Frequency	Percentage
1	Lack of purchasing power	128	64.00
2	Lack of time due to busy in agricultural Work	56	28.00
3	Less risk bearing capacity of the farmers	142	71.00
4	Lack of training and information source	152	76.00
5	Lack of co-operation and co-ordination	178	89.00

Table 5: Distribution of the rural dairy farmers according to communicational constraints faced by rural dairy farmers

Sr. No.	Constraints	(n = 200)	
		Frequency	Percentage
1	Inadequate access to training programme	170	85.00
2	Inadequate information about government scheme pertaining dairy enterprises	78	39.00
3	Poor rapport with extension agencies	86	43.00
4	Poor communicational facilities	112	56.00
5	Low social mobility of dairy farmers	158	79.00

Table 6: Distribution of the rural dairy farmers according to infrastructural constraints faced by rural dairy farmers

Sr. No.	Constraints	(n = 200)	
		Frequency	Percentage
1	Lack of availability of skilled labour	166	83.00
2	Lack of improved equipment	98	49.00
3	Lack of training facilities	172	86.00
4	Lack of chilling facilities	136	68.00
5	Lack of quality testing facilities	184	92.00
6	Weak supply of milk chain	186	93.00

Conclusion

From the above results it is inferred that major constraints faced by dairy farmers in milk processing and milk products manufacturing the economic constraints were low price for milk offered, non-availability of credit and high charges for insurance. In marketing major constraints were advertisement of own milk products, irregular payment/advanced payment and inadequate marketing intelligence. In technical constraints major challenged faced by dairy farmers were lack of scientific knowledge of milk processing, lack of technical guidance and high cost of modern technologies. In communicational constraints major problem faced by dairy farmers were inadequate access to training programme, low social mobility of dairy farmers and poor communicational facilities. In case of infrastructural constraints, the major constraints faced by dairy farmers were lack of quality testing facilities, weak supply of milk chain and lack of availability of skilled labour. So, as to increase the milk processing and milk products manufacturing in study area and to minimize constraints and improvement in development of milk processing and milk products manufacturing in study area the special attention towards this sector is needed as well as awareness among dairy farmers, provision of training, guidance, loan and credit facilities to rural dairy farmers is needed.

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