

AN ECONOMIC ANALYSIS OF DAIRY SECTOR IN THANJAVUR DISTRICT, TAMILNADU, INDIA.

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Abstract

The present study the characteristics of the milk producers in the study area. To examine the various channels of marketing adopted by the milk Producers and to examine constraints experienced by the milk producers in production and marketing. The study was conducted in Thanjavur District of Budalur Block. The data relating to age, sex, community, occupation, family size, education and source wise income of the respondents have been obtained. From each category of villages 100 respondents have been chosen using simple random method with total of 300 respondents (milk producer) have been chosen by using stratified simple random sampling technique.

In the study found that the majority of the respondents 67.3 per cent belong to the Hindu religion. The major portion of milk production is undertaken by the backward community milk producers and they are in large number with 67.7 per cent. It is found that the male milk producers with 91.7 per cent are more than the female milk producers. Education of the milk producers depend upon the income they receive from milk production. Milk producers have majority of high school level of education. There is difference in the milk price of different channels of marketing. A tremendous increase in adoption of crossbreed cows yielded an increase in milk output.

Keywords: Dairy Sector, Economic analysis, Employment and Thanjavur.

INTRODUCTION

Dairying provides livelihood to millions of Indian farmers and generates additional income and employment for a large number of families in the countryside. Dairy industry is the single largest contributor to India's GDP and with its profound social impact, involves over 80 million small farming households. However, India with about 18.36 per cent of the world's total cattle and buffalo population accounts for only about 14.5 per cent of the world's total milk production. Our livestock are roughly half as efficient as the average milk animals in the world and probably only one-fifth as efficient as those in the advanced countries. India has acquired the position of the largest producer of milk in the world despite constraints like rearing of livestock under sub optimal conditions due to low economic status of dairy owners. The development of Indian dairy sector is an unprecedented success story as it is based on millions of small producers. India has attained the first rank in milk production in the world. The first five countries in the world producing maximum milk are India, USA, Russia, Germany and France. India has produced 13.1 per cent of the total milk produced in the world. To maintain our first position in milk production, India will have to face healthy competition from other countries. For this, only producing largest quantity is not sufficient, but the quality of milk and other factors also need to be borne in mind, the "operation flood" programme will have to be supported by quality improvement and quality maintenance.

Dairying has brought about socio-economic transformation in Tamil Nadu and is playing a significant role in strengthening rural economy. Majority of milk producers are small farmers, marginal farmers and downtrodden. Dairying provides definite and regular income and employment to millions of rural families throughout the year, improving the quality of their life. The milk producers in the Co-operative sector collectively on an average get daily income of Rs.262 lakh (Rs.95, 630 lakh annually) for the milk they supply to

the dairy societies which show the importance of this sector in the rural economy. Tamil Nadu is one of the front line states in milk production and stands at number one position in the coverage of more than 50 per cent of revenue villages under Co-operative ambit. There are 7833 functional primary milk societies with 22.10 lakh members. During 2007-08 average milk procurement by Dairy Co-operative was 26.27 lakh liters per day (LLPD).

Dairying and agriculture are bound together by a set of mutual input-output relationships. Dairying is not an adjunct to the crop-mix of Indian farms, but an integral part of the total farming system. Hence, treating dairy cattle as the backbone of the livestock wealth of our country would not be an exaggeration. Though the dairy industry in India has undergone considerable transformation over the years and is considered the secondary source of income for millions of rural households, in terms of per capita consumption of milk, India still compares poorly among the nations of the world. Therefore in view of ensuring food security, livelihood security and rural development, the Indian dairy sector is a strategic one.

Need for the study

The need for promotion of dairying in India arises due to several considerations such as low per capital availability of milk prevalence of large scale unemployment and under employment discouraging mixed farming for further utilization of farm products and wastages and increasing the living condition of rural poor, achieving self-sufficiency in the production of milk, milk products and save valuable foreign exchange. The need for dairy development in India arises due to various main reasons which stand out prominently as supply of adequate quantity of milk at reasonable price to urban consumers, lack of marketing facilities and extension services. There is poor perception of the farmers towards commercial dairy enterprise as an alternative to other occupations. Owing to lack of proper veterinary extension system there is poor perception to the farmers towards

dairy enterprise as a viable alternative to crop husbandry. An equally important sector is dairy, which needs some support. A majority of the small farmers in India, who do not have good land for agriculture, depend on dairy for supplementary income. Therefore, promotion of dairy sector with cattle and buffalo can generate employment for small farmers throughout the year. Fortunately, India has the largest population of livestock in the world and with the increasing demand for livestock produce, while in 2008-09 the milk production was 108.5 million tons, the demand in the year 2022 is likely to rise to 180 million tons. This will provide greater opportunity to small farmers to expand their dairy sector. The dairy sector in its potential, is making impact on the dairy economy, and recommends areas to be encouraged more for research work where it is highly needed. Changes in animal management and animal feeding practices, especially by small dairy farmers, can be instrumental in raising milk yields in the short run. The attempts to enhance production of smallholder dairying are not only important for raising milk yield in the country; they could also become an effective tool of raising incomes of impoverished rural households. Dairy sector is giving self-employment and generating income and livelihood of the rural people therefore, there is a need to improve the production and marketing structure in dairy sector.

Statement of the problem

India is the largest milk producer in the world. The milk production of this country has increased from 17 million tons in 1950-51 to 108.5 million tons in 2008-09 and the per capita availability of milk has also increased from 112 grams / day in 1968-69 to 258 grams / day during 2008-2009. But still it is low compared to the world average of 265 grams/day. About 80 per cent of the milk produced in the country is handled in the unorganized sector and the remaining 20 per cent is shared equally by cooperative and private dairies. The productivity of the animal is also low when compared to the world countries. This deficit which is of a very serious nature may affect the health and vitality of the nation, as milk is the only source of animal protein for a large number of people in this country. To meet the nutritional requirements of the people, there is an urgent need to boost milk production. Low productivity has been a major problem of Indian dairying for a long time. It is important to know what policies, and what steps need to be taken for productivity enhancement before investing scarce capital in certain factors which affect productivity.

In Tamil Nadu, the production of milk is low compared to the other states. The milk production has increased from 4752 thousand tons in 2003-04 to 5586 thousand tons in 2007-08. The per capita availability of milk has also increased from 209 grams/day in 2003-04 to 233 grams/day in 2007-08. In Thanjavur district the milk production was low and not impressive (196.748 thousand tones) in 2007-08 compared to Salem (450.613), Villupuram (334.215) and Coimbatore (333.225) districts. This deficit is due to the cross-breeds is cow in this district and buffalo milk production was also low. The disparity in dairy sector persists with respect to other indicators of dairy development, such as, proportion of crossbreed population, breeding, feeding and marketing facilities for dairy as well. The growth of milk production is important not merely to improve milk availability, but for improving the livelihood status for the bulk of rural poor in this state. The balanced growth in dairy sector apart from the other factors is also influenced by the Government expenditures and regulations in the sector. The main objective of dairy development is to improve the milch cattle, to provide

remunerative price to milk, improvement of the socio-economic conditions of the milk producers, to maintain an effective supply system of the milk and milk products at reasonable price for the consumers. In this context this investigation aims to study the production and marketing of milk in Budalur Block of Thanjavur district and know the problems encountered in the dairy sector on productivity, finance, marketing, feeding, infrastructure, and other problems.

Objectives of the study

1. To study the characteristics of the milk producers in the study area.
2. To examine the various channels of marketing adopted by the milk Producers
3. To examine constraints experienced by the milk producers in production and marketing.

REVIEW OF LITERATURE

The research studies conducted previously on the dairy sector in various parts of India and other countries.

Dhanabalan. M. (2009) opined that dairy has an important role in improving the overall economic conditions of rural India. To maintain the ecological balance, there is need for sustainable and balanced development of agriculture and allied sectors. From our first plan onwards, planners have given priority to allied sector for the economic development of the rural sector. Dairy farming is described as a small industry which provides gainful

employment opportunities. It comprises of about six per cent of the national income.

Mandeep Singh and Joshi.A.S. (2008) reported the economic analysis of dairy farming has been reported for marginal and small farmers in Punjab for the year 2003-04. It has been found that a majority of the farm households are not able to meet their requirements from their income from crops. Further dairy farming has emerged as a major allied enterprise for supplementing the income of marginal and small farmers in Punjab. Income from off-farm sources has been identified another important factor contributing significantly to the disposable income of these farm households.

Islam. S., Goswami. A. and Mazumdar. D. (2008) have analysed Tehatta-II block of Nadia district in West Bengal. The study area was more or less homogenous with respect to animal husbandry practices, socio-cultural conditions, facilities for service and critical inputs. Most of the dairy farmers in study areas were unorganized in milk production. The study revealed that crossbred cows were more economical and gave higher yield than the indigenous cows and inclusion of a few crossbred cows can increase the income of a dairy entrepreneur and provide gainful and round the year employment. Family labour work was carried out in the mill pocket areas of eight districts of Marathwada region. About 59 percent of the dairy farmers belong to general (unreserved) category, 25 percent were backward class and only 8 percent each of SC and ST. The landless dairymen equally contributed with dairymen having (large) land; 13 landless dairymen reported comparable lactation yield as the number of milch animals increased, the herd lactation performance decreased. The animals maintained by joint family were not properly cared for while they were cared for properly by singly family.

Radha Krishnan, Nigam.S, and Shantanu Kumar (2008) in their opinion growing human population, rising per capita income and increasing urbanization are fuelling rapid growth in the demand for food and animal origin in developing countries. India possesses the largest livestock population in the world. Contrary

to the large population of livestock in India productivity of Indian livestock is low compared to many developing countries.

RESEARCH DESIGN

The study was conducted in Thanjavur District of Budalur Block. The study area was purposefully selected due to the following reasons: Agricultural based area, Animal Intensity Rearing habit and livelihood pattern and Employment opportunity. The above facts are presented based on the pilot survey conducted by the researcher. The researcher felt that Budalur Block is viable and potential one to conduct so meaningful and systematic study for dairy Industry. There are three veterinary dispensaries of which three zones have been identified viz., Thirukkattupalli, Budalur and Sengipatti. In Thirukkattupalli dispensary controlled villages are 33, in Budalur dispensary controlled villages are 11 and in Sengipatti dispensary controlled villages are nine. The classification has been done on the basis of the bovine population at these villages five villages from each group have been selected using random sampling method. The data relating to age, sex, community, occupation, family size, education and source wise income of the respondents have been obtained. Details on borrowings of the sample household for bovine rearing, bovine wise milk production and marketing, bovine wise milk production, net income of the respondent, Cost for bovine milk production, productivity for bovine milk production and problems faced by respondent, bovine population, and so on were collected for the present study. From each category of villages 100 respondents have been chosen using simple random method. In this way, a total of 300 respondents (milk producer) have been chosen by using stratified simple random sampling technique.

ANALYSIS

The analysis of characteristics of the respondents in Budalur Block can be understood with the help of the following eleven tables. Table.1 brings out the religion wise distribution of the respondents. Table.2 deals with the community wise distribution of the respondents. Table.3 deals with the sex wise distribution of the respondents. Table 4 deals with the education wise distribution of the respondents.

Table(1) Religion wise distribution of the respondents

Religion	No. of Respondents	Percentage
Christian	98	32.7
Hindu	202	67.3
Total	300	100.0

Source: Primary data.

The table(1) reveals that the religion wise distribution of the respondents. The respondents belong to the following religions namely Hindus and Christians. Majority of 67.3 per cent of the respondents are Hindu and 32.7 per cent of the respondents are Christians. The table clearly indicates that the majority of the milk producers belong to Hindu religion.

Table (2)Community wise distribution of the respondents.

Community	No. of Respondents	Percentage
S.C	75	25.0
B.C	203	67.7
M.B.C	22	7.3
Total	300	100.0

Source: Primary data.

Table(2)reveals the community wise distribution of the respondents. The respondents are belonging to the following communities namely Scheduled Caste, Backward Community and Most Backward Community. 67.7 per cent of the milk producers are Backward Community, 25.0 per cent of the respondents are Scheduled Caste, and 7.3 per cent of the respondents are Most Backward Caste.

Table (3)Sex wise distribution of the respondents

Sex	No. of Respondents	Percentage
Male	275	91.7
Female	25	8.3
Total	300	100.0

Source: Primary data.

Sex ratio is one of the power full indicators of the social health conditions of the any society. It conveys a great deal about the state of gender relations. It gives the ratio of women and men in the population and reflects the relative chances of survival of women in relation to men.

The table(3) gives the sex wise distribution of the respondents. Among the total number of the respondents, 91.7 per cent of the milk producers are male while, 8.3 per cent are female. As for sex wise distribution of the respondents, male respondents dominate the female respondents and the females are less in number.

Table (4)education wise distribution of the respondents.

Education	No. of Respondents	Percentage
Illiterate	26	8.7
Primary School	59	19.7
Middle School	38	12.7
High School	127	42.3
Higher Secondary	37	12.3
Diploma	9	3.0
Graduate	4	1.3
Total	300	100.0

Source: Primary data.

Human development basically comprises of income, health and education apart from various other factors like gender equality and political freedom. Among the various factors, the principal, institutional mechanism for human development is the development of educational systems. According to the census definition, a person is confirmed as literate if he or she can read and write with understanding in any language. A person who can merely read but cannot write is not literate. Any person, who is not literate according to the above definition of literacy, is an illiterate person. The level of literacy is an important part of the study of the socio-economic structure of households. It has great significance on the occupational structure and animal husbandry as one is no exception to this.

The table (4) reveals the education wise distribution of the respondents. 8.7 per cent of the milk producers are illiterate and they are unable to read and write any language. 19.7 per cent of the respondents have completed the primary education that is upto-5th standard. 12.7 per cent of the milk producers have finished the middle school education that is 6-8 standard. 42.3 per cent of the milk producers have completed the High School education that is 9-10 standard. 12.3 per cent of the respondents have completed the higher secondary school education that is 11-12 standard. 3.0 per cent up the respondents have completed diploma education and only 1.3 per cent of the respondents have completed the under graduate

level of education. The table reveals that majority of the respondents have not crossed high school education

Table (5)Marketing channels.

Marketing Channels	Number (Cow)	Percentage	Number (Buffalo)	Percentage
Tea stall	61	24.90	29	52.73
Household	99	40.40	11	20.00
Milk Vendor	85	34.70	15	27.27
Total	245	100.00	55	100.00

Source: Primary data

The table (5) explains the marketing of the milk in different channels in the study area. The Bovine milk is distributed to Tea stall, Household and Milk vendor. 40.40 per cent of the cow milk rearers sold their milk to Household which is higher because the price of milk is higher and 24.90 per cent of the milk rearers sold their milk to Tea stall. The table indicates the 52.73 per cent of the buffalo milk rearers sold their milk to Tea stall because the fat content is higher in buffalo milk therefore, the price of milk is higher in tea stall and 20.00 per cent of the milk rearers sold their milk to household which is lower because most of the people do not purchase buffalo milk. From this explanation we observed that the Cow rearers sold their milk to Household in higher level and Buffalo rearers sold their milk to tea stall. And there is no Milk co-operative society (AAVIN) in the study area.

MAJOR FINDINGS AND CONCLUSION.

The study on the milk production at Budalur block, Thanjavur district has led to the following findings.

- 1)The study found out that in study area of Budalur block, there is an identical structure and systematic pattern of religion and caste system. In the study we found that the majority of the respondents 67.3 per cent belong to the Hindu religion.
- 2)This study refers to the caste systems in the study area. The major portion of milk production is undertaken by the backward community milk producers and they are in large number with 67.7 per cent.
- 3)The present study shows the male and female milk producers in the study area. It is found that the male milk producers with 91.7 per cent are more than the female milk producers.
- 4)Majority of the respondents, (72.0 per cent) belong to the age group of 31-50.
- 5)Education of the milk producers depend upon the income they receive from milk production. This study reveals that the literacy rate in the study areas. Milk producers have majority of high school level of education.
- 6)There is difference in the milk price of different channels of marketing.
- 7)The number of milch animals per households got reduced, especially buffaloes and local cows. A tremendous increase in adoption of crossbreed cows yielded an increase in milk output.

Suggestions

The following suggestions are to be provided for the development of the Dairy Sector in the study area:

1)Adequate Veterinary Services: The veterinary facilities available in the study area are not adequate and sufficient. Steps should be taken to provide adequate and proper veterinary facilities in the study area.

2)Proper Training Facilities: There is good potentials for developing small scale industries for manufacturing indigenous milk products in the study area. There is need to educate and assist the dairy farmers in respect of breeding, feeding, animal management technique and marketing of milk and milk products.

3)Infrastructure Development: Some infrastructural development like road communication is needed for transportation of fodder, feed concentrates, veterinary services and medicines and transportation of milk to the consuming centres.

4)Credit Facilities: The financial institutions can also play a significant role in improving the processing infrastructure by extending credit to good working SHGs and milk producing units.

5)Marketing Infrastructure: Establishment of organized marketing networks of market is necessary so that the dairy farmers get the remunerative return for their produce.

6)Artificial Insemination: The State Veterinary Department should create facility for Artificial Insemination and pregnancy test at the door step of the dairy farmers.

Conclusion

In conclusion, the findings of the study revealed that the composition of milch animals with adequate number of cross breed animals could boost milk production significantly. The potential of indigenous livestock needs to be tapped by improving nutrient availability from locally available feed and fodder resources. The comparative performance of cross-breed cows and indigenous cows revealed that the income from cross breed cows is higher than from the indigenous cows. This has sufficiently established that the cross breeding programme through Artificial Insemination may make a real break - through in genetic improvement of breedable milch animals for improvement of milk production and productivity. The dairy enterprise in the study area has been able to improve the economic conditions and standard of living of the dairy farmers. This has created a positive impact in creating of gainful employment opportunity and income to the people living in the rural areas of Tamil Nadu.

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