

CHAPTER - IX

SUMMARY OF FINDINGS, CONCLUSION AND SUGGESTIONS

9.1 Summary of Findings

The first chapter of this study which was introductory in nature gave a statement of the problem, a review of literature, the objectives of the study, the hypothesis and the methodology. The main objective of the study was to assess the economic impacts of dairy co-operatives on the dairy farmers of Idukki district. The specific objectives were to examine the extent to which dairy co-operatives had succeeded in improving the lot of dairy farmers in the district by enhancing employment, milk production, income, consumption and general standard of living. The hypothesis tested was that by providing timely inputs and services and by creating a ready and year-round market for milk, the dairy co-operatives had succeeded in generating a powerful stimulus for dairy development in the district.

A brief review of development in the dairy sector of the state under the Five Year Plans, made in the second chapter, found that there had been substantial progress in the dairy sector of the state. Predominance of agriculture, the seasonal nature of agricultural operations, fluctuating and irregular nature of agricultural income and ready market offered through dairy co-operatives

were the important factors behind this remarkable progress in dairying.

There has been considerable increase in the number of bovines, quality and productivity of bovines, milk production, procurement, processing and marketing of milk and milk consumption, especially since the launching of Operation Flood in Kerala in 1981. It was found that while cattle population showed an increasing trend, buffalo population showed a decreasing trend. That is, while cattle population increased from 28.57 lakhs in 1966 to 34.24 lakhs in 1987, buffalo population decreased from 4.72 lakhs in 1966 to 3.29 lakhs in 1987.

About 50 percent of the cattle in the state were cross-breds in 1987. With the increase in the number of cross-breds, the productivity of milch animals increased from 2.64 kg. in 1980-81 to 3.78 kg. in 1992-93. Milk production in Kerala during this period had more than doubled, that is, it increased from 9.08 lakh tonnes in 1980-81 to 18.89 lakh tonnes in 1992-93. Per capita availability of milk also increased from 98 grams per day in 1980-81 to 175 grams in 1992-93 registering an increase of 78.57 percent.

Dairy development in Idukki district described in chapter three, found that dairy farming is of crucial importance to the district. The agricultural background of the district, abundant availability of green fodder, vast areas of grazing land, invigorating climate

throughout the year, active working of dairy co-operatives offering steady market and regular payment, etc., were the important factors behind the rapid growth of dairying in the district. Widespread quick-wilt disease of pepper together with its extremely low and fluctuating price was, however, the immediate reason behind the spread of dairying in the district.

There has been considerable increase in the number of bovine population, quality of bovines, milk production, milk procurement through dairy co-operatives and in the per capita availability of milk in the district. Bovine population in the district increased by 15.68 percent from 1977 to 1987, that is, from 1,84,275 in 1977 to 2,13,174 in 1987. Next to Wayanad, Idukki district has the highest number of bovines per thousand persons, showing a wide adoption of dairying in the district. Similarly, the percentage of cross-breds is also higher in the district by about 13.89 than the Kerala average.

Milk production in the district was increasing at an increasing rate. While the growth rate was only 3.4 percent in 1988-89, it reached 8.0 percent in 1993-94, and is expected to reach 15 percent in 1995-96. Milk production in the district increased from 0.88 lakh metric tonnes in 1987-88 to 1.21 lakh metric tonnes in 1993-94.

Dairy co-operatives are the main thrust behind the growth of dairying in the district. Because of limited industrial, commercial and business expansions in the district, market for milk within the district was found to be extremely limited. Local tea-shops and hotels could purchase only a limited quantity of milk produced in the district. Dairy co-operatives in the district procured the surplus milk from the farmers and sold it in the neighbouring industrialised districts like Ernakulam. In fact, they acted as intermediaries between rural milk producers and urban consumers benefiting both. It was noted that, though Idukki district produced only six percent of the total milk production of the state, it contributed nearly nine percent of the milk procured by the organised sector in the state.

There were 134 primary dairy co-operatives in the district in 1988. It was found that though Idukki district had the lowest number of dairy co-operatives under Ernakulam Region, it contributed the largest quantity of milk to the Region. While the average quantity of milk procured by dairy co-operatives in Kerala as a whole was about 275 litres per day during 1994, it was nearly 400 litres in Idukki district. Similarly, while the percentage of milk procured by dairy co-operatives of Kerala as a whole was only 11.6, it was about 17 in Idukki district.

An important feature of the location of dairy co-operatives in Idukki district was that about 85 percent of dairy co-operatives were concentrated in Udumbanchola and Thodupuzha taluks. While Devicolam and Peerumede taluks together constituted 61 percent of the geographical area of the district, there were only 15 percent of dairy co-operatives in these taluks. It was also found that only 25 percent of the members were supplying milk to the societies indicating that the majority were passive members.

Idukki district was found to have the highest per capita availability of milk in Kerala. It was 283 grams per day in the district whereas it was only 176 grams for the state as a whole. However, because of the general economic backwardness of dairy farmers and the growing commercialisation of dairy farming, per capita real consumption of milk among the poor dairy farmers is far less than the per capita availability of milk.

The socio-economic profile of dairy farmers belonging to both the society and non-society areas presented in chapter four, showed that farmers belonging to the non-society area were far behind in all respects, such as, literacy, housing facilities, income and consumption levels. They were far behind in the field of dairying too- in productivity of milch animals, milk production, value of bovine holdings, realisation of gross milk income and in milk consumption.

uts and services by the societies appeared to be a contributing factor to this superior performance.

This chapter also found a positive correlation between land holding and bovine holding, that is, the size of bovine holding increasing with the increase in the size of land holding. Nevertheless, it was observed that bovine holdings was not as concentrated as land holdings. For example, while 30 percent of farmers belonging to the lowest stratum held only 6.7 percent of land, they held 26.5 percent of bovine.

Though the number of milch animals increased with the increase in the size of land holding, the percentage of milch animals in the total bovine holding was found to decrease with the increase in the size of land holding. Majority of the dairy farmers in the district held only one milch animal mainly because of the subsidiary nature of dairying and the paucity of funds. It was also found in this chapter that about 85 percent of milch animals were cross-breds and 'Sunandhini' was the most popular variety of milch animal held by the farmers.

Production, marketing and animal health care facilities discussed in chapter five revealed that the average yield per day during lactation period was 6.24 litres for cross-breds, 3.87 litres for local cows and 4.97 litres for buffaloes in the society area and only 4.53 litres, 2.56 litres and 3.83 litres respectively for these varieties in the non-society area. The timely supply of essential inputs and services by the societies appeared to be a contributing factor to this superior performance.

As far as marketing of milk was concerned, while farmers in the society area sold 78.2 percent of the marketable surplus to societies, farmers in the non-society area sold about 57 percent of milk to tea-shops and hotels. It was also noted that while local vendors handled about 33.8 percent of milk in the non-society area, they handled only 1.8 percent in the society area.

There existed considerable variations in the price received by the farmers in the society and non-society areas and the price paid by different marketing channels. While the average price received by members in the society area was Rs.6.80 per litre, it was only Rs.4.39 per litre in the non-society area. Dairy co-operatives gave an average price of Rs.6.72 per litre and though this was a little lower than the price given by neighbouring consumers, tea-shops and hotels, the difference was negligible when the realised benefits of the supply of inputs by dairy co-operatives at subsidised rates were taken into account.

Dairy co-operatives were proved to be the most efficient agency in disbursing regular weekly payment to the farmers. They distributed about 84 percent of payment regularly on weekly basis and only 5.1 percent was irregular. On the other hand, tea-shops and hotels, the agency which purchased the major part of milk in the non-society area made only 17 percent of payments regularly on weekly basis and 48.1 percent of payments were highly irregular.

It was found that the local vendors made nearly 60 percent of payments regularly, either daily or weekly, in the non-society area. Though the percentage of irregular payment was comparatively lower in the case of local vendors, they gave the lowest price to the farmers. The price given by dairy co-operatives was about 75 percent higher than the price given by local vendors in the non-society area.

This chapter also found that animal health care facilities provided by the societies were quite beneficial to the farmers. It was found that the Union veterinary doctors treated about 60 percent of emergency cases of bovines belonging to members of dairy co-operatives, for which they had to spend only Rs.35. On the other hand, emergency treatment by government veterinary doctors cost about Rs.193 in the society area and Rs.287 in the non-society area. Animal health care facilities were extremely inadequate in the non-society area. For example, farmers of Keezhanthoor and Kanthalloor villages had to travel about 20 kms. for getting the services of veterinary doctors. The cancellation of the regular veterinary route of ERCMPU, which was of great help to the dairy farmers, was considered a great blow to the farmers. The emergency veterinary treatment offered by the Union was also found to be inefficient, especially since the second half of 1993.

Of the total 283 milch animals in the society area 83.4 percent were artificially inseminated. On the other hand, of the total 116 milch animals in the non-society area, only 60.3 percent were artificially inseminated. While artificial insemination facilities were available within four kms in the society area, farmers in the non-society area had to travel about 15 to 20 kms for it. It was also noted that farmers had to incur an extra expense varying from Rs.10 to Rs.25 for inseminating their bovines in dairy co-operative societies and government veterinary hospitals. The total expense per conception varied from Rs.43 to Rs.50 in the society area, while it ranged from Rs.83 to Rs.122 in the non-society area.

The economic analysis of dairy farming made in the sixth chapter showed that the total cost of milk production during lactation period was Rs.9170 for cross-breds, Rs.5208 for local cows and Rs.11,057 for buffaloes with a per litre average cost of Rs.4.39, Rs.4.33 and Rs.5.97 respectively for the three groups. The net income from dairying (excluding labour cost) was calculated to be Rs.6494.92 for cross-breds, Rs.4264.38 for local cows and Rs.5613.79 for buffaloes.

When labour cost was included, the total cost of production increased to Rs.14,309 for cross-breds, to Rs.9979 for local cows and to Rs.16,777 for buffaloes leading to an average cost of Rs.6.85, that is, feeding cost, alone. When feeding cost alone

Rs.8.30 and Rs.9.06 per litre, respectively. With this the net income from dairying decreased to Rs.1356 for cross-breds, to Rs.-506 for local cows and Rs.-106 for buffaloes.

When all costs, including labour costs during lactation period and dry period were taken into account, the total cost became Rs.17,140 for cross-breds, Rs.13,254 for local cows and Rs.20,839 for buffaloes. When the total income from dung and calves were deducted from the total cost, the net cost became Rs.14,788 for cross-breds, Rs.11,010 for local cows and Rs.18,108 for buffaloes, leading to a per litre average cost of Rs.7.08, Rs.9.15 and Rs.9.78, respectively.

The analysis of the cost of production of milk made in chapter six revealed that farmers should be paid at least Rs.7.08 per litre of milk. The average price of Rs.6.66 per litre of cow's milk given by dairy co-operatives was found to be insufficient to meet all expenses in dairying. Among various breeds, only cross-breds covered the full costs of production and contributed something to profit.

Though a pure economic analysis based on all costs including labour costs shows that dairying is not profitable in the district, more and more farmers are attracted to dairying because a good number of farmers are mainly concerned with the recovery of direct money cost, that is, feeding cost, alone. When feeding cost alone

is considered, farmers get an average net income of Rs.7131 for cross-breds, Rs.4191 for local cows and Rs.5891 for buffaloes.

The study of the economic impact of dairy co-operatives made in chapter seven found that the societies played a very important role in the supply of dairy inputs, in increasing milk production by ensuring stable market and regular payment, in the creation of interest in commercial dairying, in employment generation, in the creation of self-confidence, in promoting hardworking habits, in increasing milk consumption, in improving the standard of living and in promoting co-operative and democratic way of life.

Dairy co-operatives have succeeded in providing various dairy inputs such as cattle feed, green fodder, fodder seeds, veterinary facilities, artificial insemination facilities, etc., at reasonable rates. Members purchased about 60 percent of compounded cattle feed from dairy co-operatives. Similarly, about 60 percent of emergency treatment and about 30 percent of artificial inseminations were done by co-operatives.

Because of the stable market for milk and regular payment offered by societies, milk production among members increased by 41.4 percent during the span of five years, that is, from 1988 to 1993, while it increased only by 17 percent among farmers in the non-society area. It was also found that the gross dairy income

in the society area was about 145 percent higher than that in the non-society area and the regularly received income was higher by about 247 percent in the same order.

Dairy co-operatives, by creating new interest in commercial dairying, have generated substantial employment opportunities for the rural farmers. It was calculated that co-operatives had generated about 46,000 mandays of employment for the sample households per year.

Co-operatives have also succeeded in increasing the per capita consumption of milk by the members. It has been found that while the per capita consumption of milk in the non-society area was 118 grams per day, it was 197 grams in the society area. Moreover, while the per capita consumption of milk in the society area increased by about 16 percent during the period 1988-1993, it decreased by 8.5 percent during the same period in the non-society area.

Members of dairy co-operatives who sell milk to the societies were found to have a feeling of unity and oneness among them. They have engendered higher values of co-operation, equality, fraternity, sharing, honesty, tolerance and civic sense.

A discriminant analysis made in this chapter revealed that members of dairy co-operatives were far better in all the variables considered, especially in milk production, milk price, milk consumption and in literacy level.

A three-point scale analysis of perceived benefits showed that the availability of stable income was the most important benefit perceived by members. Regular payment and employment generation were the second and third important benefits perceived by members.

The major problems of dairy farmers identified in chapter eight included inadequate availability of quality inputs such as improved stock, green and dry fodder, concentrates and compounded cattle feed and insufficient veterinary facilities. The disproportionate increase in the price of inputs was another severe problem facing the farmers. This chapter found that while milk procurement price index increased from 100 to 390 between 1976-77 and 1992-93, cattle feed price index rose from 100 to 404 during the same period.

Insufficient price of milk was found to be the most severe problem facing the farmers. The problem was still more severe in the non-society area compared to the society area. The price margin taken by KCMMF was considerable. It has been found that KCMMF took a total price margin of Rs.3.48 per litre, including the value of extracted fat and this approximated to 53.37 percent of the procurement price. It was also found in the study that 97.2 percent of the farmers belonging to dairy co-operatives were not satisfied with the price given by societies. They expected a minimum price of Rs.7.60 per litre for cow's milk, whereas they got only an average price of Rs.6.66 per litre.

Conclusion
Paucity of funds was another major problem confronting dairy farmers. It was found to constrain the purchase of more milch animals.

Declaration of 'off' days and compulsory price reduction by KCMMF during flush season was another problem confronting the

farmers, especially members of dairy co-operatives. Compulsory price reduction during flush season when fat and SNF are already low, is a severe blow to the farmers.

Irregular payment of price was found to be another problem faced by the farmers. Infact, this problem was more severe in the non-society area than in the society area. It was noted that while members of dairy co-operatives got 83.90 percent of milk-price regularly in the week, the corresponding percentage was only Rs.23.13 in the non-society area.

It was also found in this chapter that members of dairy co-operatives faced certain institutional problems, too. Employees of certain societies were reported to have behaved in an impolite manner especially when farmers complained of faulty measurement and quality testing. Excess quantities were reported to have been extracted in certain societies. Quality testing was also not found satisfactory to members of many of the societies. Testing was found to be satisfactory in only one society, where it was done in the presence of farmers.

9.2 Conclusion

The major conclusion arrived at in this study is that the contribution of dairy co-operatives to the development of dairy farming in the district is significant. This has reflected in the superior economic position and performance of dairy farmers

in the society area more than that of the farmers in the non-society area. This study also observes that the working of dairy co-operatives, however, needs some revitalisation for realising the full potential and benefits of the co-operatives for the further development of dairying in the district.

9.3 Suggestions

Based on the above findings, the following suggestions could be made.

1. Dairy co-operatives are to be formed immediately in the non-society areas of the district.
2. Working of existing societies is to be made more efficient and all the dairy farmers are to be persuaded to come under the co-operative umbrella.
3. Pricing of milk should be based on the cost of production and the cost should be studied every year in a scientific manner.
4. Co-operatives should raise the procurement price of milk to Rs.7.10 per litre to cover the entire costs.
5. Regular, weekly payment should be made to farmers.
6. Employees of co-operatives are to be encouraged to be fair considerate and honest in their dealings with farmers.
7. The weighing system should be introduced instread of measurement in litres.
8. Quality testing is to be made in the presence of farmers.

9. Quality cattle feeds are to be supplied to dairy farmers at reasonable prices. Cattle feed in 10 kg.bags is to be supplied to farmers.
10. Co-operatives should undertake green fodder cultivation and it should be made available to farmers at reasonable price.
11. Veterinary and artificial insemination facilities are to be made available within the easy reach of the farmers especially in the non-society area.
12. The regular veterinary route and emergency services given by co-operatives are to be made more efficient. As far as possible vernacular speaking veterinary doctors are to be appointed for this purpose.
13. Loan facilities are to be made available to farmers by co-operatives for their dairy operations.
14. Declaration of 'off' days and compulsory price reduction during flush season are to be avoided.
15. Steps should be taken to supply improved stock of bovines at reasonable price. For ensuring sufficient distribution of new breeds of bovines, livestock farms are to be established in all the districts.
16. Farmers should be made aware of the need of consuming sufficient quantity of milk for ensuring balanced diet.
17. The capacity of existing chilling plants is to be increased and a powder plant is to be established in the district.

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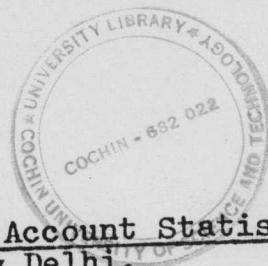
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