CHAPTER - VIII

CONCLUSIONS AND SUGGESTIONS

SUMMARY OF CONCLUSIONS

GENERAL PROFILES OF SAMPLE SOCIETIES

1. The sample dairy co-operatives were organised by either of the two monitoring agencies namely the National Dairy Development Board and the Tamil Nadu Dairy Development Corporation; and were spread-over in 5 taluks. All the sample societies were in their infancy and came into being only after 1974. The period of existence being too short, the societies could not acquire substantial physical assets and equipment. The deficiency was more marked in respect of building, telephone facility, first aid and AI Kit.

2. All the sample societies were democratically managed by the elected boards of directors. The educational level of the boards of directors was fairly good, however, an overwhelmingly large percentage of them were big farmers, and belonged to the dominant caste. It was deplorable that women members, who
constituted 11 per cent of the total membership did not have representation on the board of any society.

3. The overall progress of dairy co-operatives was very impressive and uniformly good. During the period under study the number of societies had doubled the working capital and the milk handled had increased by 17 times and 7 times respectively. Profit earned and bonus paid by the societies had also multiplied during the above period. Yet a sizeable percentage (31%) of the dairy co-operatives were placed under 'C' class by the audit department.

OPERATIONAL EFFICIENCY

4. Efficiency in Procurement of Milk:

The dairy co-operatives in the Erode Milkshed area were well organised in respect of milk procurement. The daily average milk procurement worked out to 189.6 litres which compared favourably with that of 153 litres for the whole of Tamil Nadu. Though the overall performance of dairy co-operatives was good
in respect of milk procurement, the societies organised by the TNDDC were less efficient than those organised by the NDDB. There is enough scope for a still better performance in the field.

5. **Factors Influencing Milk Procurement:**

5.1 The level of milk procurement was influenced by the coverage of bovine population, coverage of dairy households, in the area of operation and member-participation. Higher milk procurement by NDDB societies was due to larger coverage of bovine population and dairy households; and greater participation by members.

5.2 Large majority of the members were selling milk only through co-operatives; and the disloyalty of members was noticeably negligible.

5.3 As the distance of the location of the societies from towns was more, the average daily milk
procurement was also higher. This was because the societies situated nearer to towns were more likely to succumb to private competition.

5.4 The quantity of milk procured by co-operatives was directly and significantly influenced by three factors namely: (1) marketed surplus in the area of operation of co-operatives, (2) number of members of co-operatives and (3) number of active members. Of the three variables only two variables namely: (1) marketed surplus and (2) the number of active members had individually influenced the milk procurement to a significant extent. The combined influence of the above three variables on the level of milk procurement by co-operatives was highly significant.

5.5 Where there was larger marketed surplus there were more number of private creameries. There was no significant relationship between quantity of private sale of milk in the area of operation and the number of irregular/non-supplier members in
co-operatives which indicates that private trade was not patronised by the members of co-operatives.

5.6 Higher the percentage of coverage of dairy households by co-operatives, the private sale showed a tendency on the decline, which implies that the private trade thrived mainly due to non-coverage of dairy households by co-operatives rather than due to disloyalty of the members of co-operatives.

5.7 Earlier the scheduled time for truck arrival, lesser was the milk collection.

6. Sale of Milk:

6.1 There had been substantial rise in the average annual sale of milk per society. However, the local sale of milk as a percentage of the volume of total sale was very insignificant.

6.2 There had been steady increase in the sale of sample milk in proportion to the quantity of milk handled by the societies. The value of sample milk sale was proportionate to the number of
samples and there was no misuse of sample milk to any significant extent.

7. **Payment to Producers:**

There had been phenomenal rise in the payment made to producers which indicates that more and more producers had been brought under co-operative fold. Payments were made regularly every week to producers.

8. **Quality of Milk:**

8.1 All the societies fulfilled the minimum stipulated fat per cent; and as regards SNF, 20 per cent of the societies did not satisfy the minimum standard of 8.8 per cent. The incidence of SNF deficiency was much greater in NDCC societies; and the quality of milk supplied by the NDDB societies was appreciably high.

8.2 In 24 per cent of societies there was significant variation between the fat test at society and at
dairy. The societies which had larger variations were either newly started or had newly appointed testers.

8.3 As regards the quantity, the variation between society and the dairy was significant in 10 per cent of the societies; and they were all incremental.

9. Sourage of Milk:

The percentage of sour milk to total milk handled was very marginal. The frequency of sourage was likely to be more when the distance of the society was more.

10. Artificial Insemination and First Aid:

Only in 58.6 per cent of societies the AI facility had been extended. The efficiency in performing the AI programme was very low; and the utilisation of the semen issued to the societies was far below the insemination capacity. As a result of the low productivity in AI method, the preference for this method was found to be low. The preference was
still lower in the case of cows, as it was feared that the use of exotic semen will meddle with draught qualities of the male progeny.

The number of cases treated during weekly veterinary visits also remained low. The TNDDC societies had poor record in first aid and emergency treatment of cases.

11. **Supply of Cattle feed mix:**

Only 48 per cent of the societies undertook the supply of cattle feed mix to the members. The response of members in purchasing the cattle feed mix was very poor owing to the high cost. It was also observed that the secretaries of the dairy societies did not evince much interest in it, in the absence of any incentive for them.

12. **Cultivation of Forage seeds:**

The progress achieved in cultivation of forage crops was also quite insignificant; and the chief reasons were: (1) non-availability and basic factors such as water and land, (2) self-sufficiency in fodder and (3) non-availability of
quality seeds. The adoption of forage cultivation was greater in regions with partial irrigation than in other regions.

13. **Training:**

The training needs of the secretaries were not adequately met. Only in 24.2 per cent of the societies the secretaries had undergone a comprehensive training programme.

14. **Satisfaction of Members:**

14.1 An overwhelming majority of the members had acknowledged the advantages of dairy cooperatives.

14.2 The average price available to the producers per litre of milk worked out to Rs. 1.67 per litre. The price offered for cow milk was very low ranging between Rs. 1.28 to Rs. 1.47 per litre depending on the percentage of fat content. Majority of the members who were selling milk to the society were not satisfied about the price paid to them.
15. Economic Incentives:

The producers' interests had been safeguarded to a great extent by the dairy co-operatives. As much as 77 per cent of the members had received an average amount of Rs. 92/- each, by way of bonus during the previous year. The dairy co-operatives were efficient in passing on a sizeable pecuniary benefit to their members. Yet about 10 per cent of the societies which had earned profit, did not pay bonus to their members.

16. Viability in Procurement:

About one third (34%) of the dairy co-operatives did not achieve viable level of procurement. The overall trend in the procurement suggests a favourable growth potential. But in respect of TNDDC societies a negative growth trend was observed.

17. Viability in Membership:

The societies were, by and large, viable in respect of membership. There was an upward trend in the membership of dairy societies which indicate that
the dairy farmers were increasingly brought under co-operative fold.

18. Viability in working capital:

A sizeable percentage of societies (45%) were yet to achieve a viable level of working capital. There had been very substantial rise in the average working capital of dairy societies; which is an indication of their potentiality to achieve financial viability in the ensuing years.

Taking into account the overall viability it may be concluded that 34 per cent of the societies were non-viable; of which 24 per cent should be considered absolutely non-viable.

19. Financial Self-reliance:

The entire working capital of the societies was raised out of the internal resources of the dairy co-operatives.

20. Financial result:

There had been substantial rise in the margin earned
by the societies. The profitability was spectacular in NDDB societies due to high margin and low establishment cost. The profit earning capacity of the dairy co-operatives augurs well for attaining viability; achieving sound financial base and expansion of activities by them.

Ten per cent of societies were incurring loss. Low level of procurement and nearness to towns were the causes identified for the loss incurred by such societies.

21. **Reserve Position:**

Except in respect of statutory Reserve Fund the amounts to the credit of various reserves were meagre. The reserve position of the NDDB societies was far better than that of the TNDDC societies. Nevertheless, the reserves created had enhanced the financial viability of dairy co-operatives.

22. **Growth of Assets:**

The value of assets of the dairy co-operatives had shot up quite substantially and the growth was
still greater in NDDB societies. The significant progress made by the dairy co-operatives in building up assets goes to prove their growing viability.

**ECONOMIC IMPACT OF DAIRY CO-OPERATIVES**

23. **Impact on Herd Ownership:**

23.1 The members of dairy co-operatives tended to keep more number of dairy animals and animals in milk, than the non-members did; and the adoption of dairying was greater among members than among non-members.

23.2 Though the different categories of members were found to be owning larger number of dairy animals than the respective categories of non-members, the dairy co-operatives were yet to make any perceptible impact with regard to the ownership of dairy animals by the members.

23.3 Members of co-operatives kept greater number of buffaloes than those owned by non-members. So also the members possessed higher percentage (24.4%) of upgraded buffaloes than by the non-
members (12.9%). As regards the cows the cross-bred varieties were possessed only by the members and even among them the prevalence of such breeds was too sporadic to be of any great consequence.

24. **Impact of Milk Production:**

The average daily milk production as well as marketable surplus was higher among members than among non-members. But the average daily milk consumption was higher among non-members than among members.

The impact of dairy co-operatives on milk production was significant among big farmers and small farmers.

25. **Impact on Income and Employment:**

25.1 The dairy income as a percentage to gross income of the members of co-operatives was much higher (23%) than that of the non-members (15%). The percentage of dairy income to gross income progressively increased with decrease in size of holding. **This reveals the relevance of dairy**
farming as an income raising source to weaker sections like small farmers and landless persons.

25.2 The difference between the mean dairy income of various categories of members on the one hand and that of their non-member counterparts on the other, was not statistically significant except in the case of big farmers. The dairy co-operatives had thus made a significant impact in terms of income only among big farmers.

25.3 The employment generated by dairy co-operatives had been significantly higher among the members of co-operatives belonging to two categories namely big farmers and landless persons; and therefore, the impact on employment was felt by the households of big farmers and landless persons.

26. Impact on Dairy Husbandry:

26.1 The dairy co-operatives and the dairy organisations at higher level responsible for providing AI and veterinary services were yet to make their impact in improving the production traits of dairy animals.
26.2 The dairy co-operatives and the agencies implementing the AI programme had also failed to make any perceptible change in the method of breeding adopted by dairy farmers.

26.3 There had been considerable impact in the treatment of sick animals which had resulted in the reduction of mortality rate of dairy animals.

26.4 The coverage of calf-subsidy scheme was too inadequate to make any impact on the prospective beneficiaries. Furthermore, the scheme was confined only to zebu heifers; and buffalo heifers were left out of the purview of the scheme.

27. **Impact on Sale of Milk and Economic Incentives:**

27.1 A large percentage of members (72%) patronised their dairy co-operatives while the percentage of non-members who extended their patronage to the co-operatives was much less (43%).

27.2 The higher price offered by the creameries was the motivating factor for the patronage extended by a section of members and non-members to the private creameries. The premium price offered
by the creameries should be construed as an indirect impact of dairy co-operatives.

27.3 With regard to the sale proceeds through co-operatives, the impact was found more among big farmers than among other groups. The variance in the receipt of sale proceeds between different groups of members was significant.

27.4 The big farmers had consistently sold larger quantities of milk for more number of days and got largest amount of bonus than other categories. The variance between different categories of members in the amount of bonus received was not, however, statistically significant.

FUTURE OF DAIRY CO-OPERATIVES

28. Production Potentials:

Due to the impact of dairy co-operatives and the spread-effects of the 'Operation Flood' project the daily milk production is likely to go up to 19.47 lakh litres; and the marketable surplus of
milk would be at the order of 13.63 lakh litres by 1985 in the milkshed area. The production of milk within the co-operative ambit will move up to 3.04 lakh litres per day when compared to the current level of 1.27 lakh litres.

29. Market Potential:

The local milk sale in the Erode Milkshed will reach the level of at least one lakh litres; the sale of fluid milk at Madras will be to the extent of 1.12 lakh litres per day by 1985; and the remaining 92,000 litres would be rendered as daily fluid milk surpluses. Capacities for handling, three lakh litres and conversion capacity of about one lakh litres of milk per day have to be created by 1985 so as to ensure a reasonably steady market and remunerative price.

30. Infrastructural Needs:

The percentage of marketed surplus of milk procured and marketed through co-operative infrastructure is likely to go up from the present 12.2 per cent level to 22.3 per cent by 1985.
The market share of co-operative societies could be further raised to 40 per cent by organising another 1,100 dairy co-operatives in addition to the proposed 1,600 societies by 1985. The four district level milk producers' unions in the milk-shed area were in the formative stages and need to be activated.

31. **Seasonal Variation:**

There had been 30 per cent variation in milk production due to seasonal factor in the milkshed area. The cow milk as a percentage to total milk procurement by co-operatives was found to be very negligible i.e. 0.7 per cent, which contributed for wide seasonal fluctuation.

32. **Private Competition:**

32.1 The co-operatives had been facing stiff competition from private creameries. There were 43 private cremery units in the 113 hamlets which fell in the area of operation of the dairy co-operatives.
under study. In the area of operation of each society on an average about 150 litres of milk was under the command of private creameries. The continued existence of large number of creameries poses a big threat to the viability of dairy co-operatives and endangers the interests of members as a divisive influence.

32.2 Patronage extended to private creameries were both due to negative factors like dislike of collection system in societies (40%), non-soliciting of support by the office bearers (12%) and non-acceptance of cow milk by co-operatives (4%); and positive factors like close connection with creameries (6%) and higher price offered by them (4%).

32.3 Only 32 per cent of non-members were aware of the advantages of dairy co-operatives and 54 per cent were willing to become members. Therefore, much remains to be done in the extension activities in order to enlarge the base of dairy co-operatives, enlisting the patronage of non-members and to effectively meet the private competition.
SUGGESTIONS

1. The dairy co-operatives must, as a first step in their development, decide to construct office building as such a factor will greatly enhance their image and efficiency. The State Government should prepare a scheme for loan and subsidy for construction of building for dairy co-operatives. Substantial resources could be raised internally by the dairy co-operatives by transferring the surplus reserves of the Audit Fund; and by enabling the utilisation of Co-operative Development Fund in the respective societies for the building instead of transferring it to the Tamil Nadu Co-operative Union. Such change could be effected by suitable amendments to the Co-operative Societies Act and Rules. The State Revenue Department should provide immediate allotment of site required by dairy co-operatives from the Government waste lands.

2. The dairy organisations should supply the First Aid and AI Kits to each dairy co-operative society as and when its secretary completes the required training.
3. In order to give representation for women in the board of management, provision should be made in the bye-laws of dairy co-operatives either for the reservation of one constituency for representation by women or for the co-option of one woman member on the board.

4. The procurement efficiency of the TNDDC societies must improve substantially. Activising the existing members, admission of new members and larger coverage of dairy households in the area of operation are the necessary measures to enhance the level of procurement.

5. The truck time should be scheduled in such a way that it facilitates the producers to pour the milk without any hardship. In no circumstance it should be earlier than 6.30 A.M.

6. The local sale of milk should be encouraged at the village level so that the village population is not deprived of the benefit of enhanced milk production. The price charged for the milk sold locally should
be kept at a reasonable level; and should not exceed the price paid by the dairy to the society.

7. The quality of the milk procured by the TNDDC societies was deficient, particularly in SNF, which had adverse effect on their profitability. Such societies must educate their members as to the advantages of supplying unadulterated milk.

8. Wherever the societies are newly started or when the testers are newly appointed adequate training should be given to them before they are allowed to handle the testing of milk independently. Such a step will avoid wide variation in quality between the society and dairy.

9. The quality and the performance of the AI should be improved vastly so as to increase the rate of conception and to bring about desirable changes in the production traits of dairy animals. Introduction of frozen semen technology both for buffaloes and cows; and imparting adequate training to secretaries in AI method are the vital steps for achieving
greater efficiency in AI.

In order to improve the performance of veterinary service, the veterinarians should be made to strictly adhere to the time schedule. Extending telephone connections to those societies which can afford such facility will improve the efficiency in the treatment of emergency cases.

10. The sale of cattle feed mix should be improved in order to enhance the productivity of dairy animals. Steps should be taken to produce and supply balanced feed mix at economical price, as the prevailing price was found to be prohibitory. An element of incentive should be introduced in the sale of cattle feed, so that the secretaries take genuine interest in its sale. If need be, the co-operative cattle feed plants must be provided with concessions like tax exemption, supply of ingredients at subsidised price etc.

11. A comprehensive scheme should be prepared for popularising the forage cultivation in the milkshed area. To begin with the scheme should be imple-
mented in areas with partially assured irrigation as the response was greater in such areas. The scheme should ensure a package of services such as supply of quality seeds, subsidy for cultivation, guidance and advice by agricultural scientists etc.

12. Immediate steps must be taken to impart the co-ordinated training programme for the untrained secretaries of village dairy co-operatives. The district co-operative milk producers unions should organise such training programmes in co-ordination with TNDDC and the Tamil Nadu Co-operative Union.

In the long run it will be desirable to organise a training institute at Erode to cater to the personnel of dairy co-operatives in the milkshed area.

13. Societies which had withheld the payment of bonus to their members so far, should take steps for the distribution of bonus forthwith.

14. The prevailing rates at which milk was procured from the producers was uneconomical in general and unjust in the case of cow milk. The procurement
price should be modified in such a way that the producers' interests are sustained and the cow milk is not very much discriminated against. The producers should be assured of an average price of Rs. 2/- per litre for buffalo milk and Rs. 1.50 per litre for cow milk. The two-axis pricing system* which aims at rationally evaluating the fat and SNF contents in milk should be adopted in the milkshed area.

15. Steps must be taken to improve the viability of non-viable dairy co-operatives. The level of daily milk procurement being the sole determinant of viability, enhancing the level of procurement will automatically improve the viability.

16. The loss sustained by dairy co-operatives was mainly due to the low level of procurement and

* This system was suggested by the NDDB. According to this system the price of milk is calculated by fixing pre-determined rate for fat and SNF. This system discourages adulteration and also provides a common pricing approach to cow and buffalo milk. Such a price structure in effect pays for fat and SNF as if they are purchased separately. (Ref: Report of the National Commission on Agriculture 1976, Part VII, p.153.)
nearness to the towns. In future no dairy society should be organised within a distance of 15 kms. radius of the towns with a population of 50,000 and above; and within 10 kms. radius of other smaller towns.

17. A buffalo and a cattle farm and a demonstration dairy farm should be established in the milkshed area either by the State department of Animal Husbandry or by the TNDDC. The Bharatiya Agro Industries Foundation should be persuaded to establish a cattle breeding centre in the milkshed area. Such measures will bring about far reaching changes in the quality of the breeds; and accelerate the process of breed improvement in the area. As and when the milk producers' unions acquire competence such farms should be placed under their command. The Government of Tamil Nadu should formulate Intensive Cattle Development Projects for all the districts of the Erode Milkshed area in order to generate the bovine wealth of the area.

18. The economic impact of dairy co-operatives had so
far been realised largely by the big farmers. Conditions should be created to enable the other sections of the rural households for their increased adoption of dairying. The SFDA scheme already in operation in the milkshed area should be intensified further so as to benefit the weaker sections in increasing measure. The Tamil Nadu Co-operative State Land Development Bank and other commercial banks should prepare and implement schemes for financing dairy development in the region; and the Agricultural Refinance And Development Corporation should provide refinance facility for such schemes.

19. The calf subsidy scheme should be extended to all the regions of the milkshed area and to all the potential beneficiaries. The scheme should be so modified as to cover the buffalo heifers which are hitherto kept out of it.

20. In order to handle the local milk sale in the towns and cities of the Erode Milkshed area, efforts made to organise the consumers' societies in all the towns with a population of 50,000 and
above should be expedited. Such a step is necessary for sustaining the local market for fluid milk sale in the event of enhanced production.

21. In order to handle the enhanced milk production in the milkshed area about 2,700 primary dairy co-operatives have to be organised with a view to bringing about 40 per cent of the marketed surplus under co-operative fold.

22. Efforts must be made to strengthen the district co-operative milk producers' unions by placing the chilling centres and dairies with such unions. The implementation of input programme should also be transferred to such unions. At the pinnacle of the co-operative structure, a cluster federation of the district co-operative milk producers' unions should be organised. Such an organisation should serve as a marketing agency, a repository of technical know-how and an agency for training.

23. The production of cow milk needs to be encouraged
by suitable price incentives so as to maintain a balance between cow and buffalo: milk which will mitigate the dangers of extreme seasonal fluctuations.

24. The dairy co-operatives must embark on a massive membership campaign to bring the non-members into their fold and to reduce the hold of private creameries. Undertaking systematic extension activities; and educating members in co-operative organisation, democratic management, dairy husbandry practices etc. will be of immense value in enlisting the patronage of all sections and enlarging the base of dairy co-operatives.