CHAPTER IV: RESEARCH METHODOLOGY

The research method adopted in studying the chosen problem is discussed in this chapter. The critical importance of adopting an appropriate method of analysis for meaningful conclusions needs no special mention. An humble attempt is made in our study to capture the intricacies of and insights into the issues under study through the following approaches.

4.1 DESIGN OF THE STUDY

1) Research Issues/Objectives of the Study

The Anand Pattern dairy cooperatives are said to be very successful in Kaira District - the birthplace of Amul. Its success is evidenced by the fact that over 950 villages (almost all villages) in the district have been covered; almost all the milk animal keeping households have been enrolled in the milk cooperatives as its members; a very large proportion of saleable (surplus) milk is procured by the cooperatives; the procurement operations carried out by the middlemen are negligible; the sale of factory-mixed cattlefeed manufactured by Amul is enormous; the utilization of technical and input services is regarded very encouraging; the returns to the producers in terms of higher income from milk sales, return from the end-of-the-year price difference, bonus, dividends are said to be substantial and finally, the investments made by the cooperatives in developing the village infrastructure and development facilities are regarded noteworthy.
But in the district of Guntur, A.P. both as revealed by some documents and studies as also based on this author's observations, results as noted above in the case of Kaira have not been witnessed on the same scale. For example, (a) presence of a large number of non-members in the village cooperatives (b) substantial quantities of milk is still procured by the middlemen (c) low distribution and utilization of technical and input services (d) low or non-payment of bonus etc. (e) high discrimination in terms of enrollment of producers as members in the cooperatives which centres around caste hierarchies and factions. Reasons for this differential quality/rate of performance could be many. An humble attempt is made here to identify the reasons and analyse the same so as to understand the dynamics of dairy cooperation and rural development in Guntur, and more importantly, to understand what social and economic factors can be attributed to the relative successess and/or failures of cooperative dairying in Guntur in the context of rural development. With this broad objective in mind, we have examined the following research issues/objectives through a field study of village Tenepudi of district Guntur, A.P. District level data on the same have also been used extensively for comparisons at appropriate stages of analysis.

A. Does the Anand Pattern of Cooperative dairying envelope almost all the milk producers in the village Milk Producers Cooperative Society as its Members? If not, what social, economic and cultural factors explain the same?
B. What is the nature and magnitude of benefits (i.e. incomes, inputs for production enhancement and animal health and feeding, increased consumption, sense of participation in cooperative management) reaped by different sections of village producers? Do all classes of farmers get equal access to these benefits? If yes, what factors have facilitated this? If no, what are the inhibiting factors? What bearing does the social structure have on these?

C. How does a dairy cooperative society (a new institution in the village) work and position itself in the existing village social, economic and power structure?

D. What kind of impact the dairy cooperative has had on the role and status of women?

ii) Selection of District

Our objective was to select a district which was covered by the 'Operation Flood-I' programme, introduced in the 70s for our study to examine the above. This was to ensure that the above programme was implemented in a district for a sufficiently long time so as to assess whether the changes that it had sought to achieve had been achieved or not. As no elaborate study has yet been done in Andhra Pradesh in this regard, the choice of that state had naturally appeared appropriate to us. However, since only one district in Andhra Pradesh viz. Guntur was included in the above programme, district Guntur was chosen for our study. Moreover, this district is broadly comparable to district Kaira (where Amul Pattern originated and is said to be successful) in terms of
its (i) history of household dairying; (ii) animal feeding and breeding practices; (iii) agricultural practices and soil fertility; (iv) availability of water for irrigation; (v) and the enterprise with which the commercial activities in general are taken up. Thus the comparability of these two districts (Kaira, which is regarded as a highly successful one with its native origins and Guntur, a replicated Amul model in the recent past) on the above parameters, would help us in assessing the relative changes that might have taken place through cooperative dairying and the problems confronted. In appropriate sections, analysis of differential rates of performance between the village under study and Guntur district as also between Guntur and Kaira would be presented in broad terms and analysed with implications for policy.

(iii) Selection of Village and the Method of Study

In order to comprehend the working of any system or understand the behaviour patterns of people in their socio-economic setting, and to use the insights so gained for generalisation, it is said to be desirable to have a large data base across diverse regions, cultures and people. This is generally envisaged so as to accommodate as many varied issues and variables as possible. However, this approach may not at the same time lend itself fully to an accurate analysis and understanding of the macro-level scenario for policy planning purposes both at the macro and the micro levels.
It is argued that indepth micro-level studies may be more meaningful for micro planning in activities such as cooperative dairying. However, the efficacy of either approaches—one envisaging an extensive coverage across many villages/regions and the other emphasising an indepth micro-level village study—is debatable. Assessing the merits and the nature of our research inquiry, we believe that an indepth micro-level study would be more useful to identify the nature and magnitude of the impact of cooperative dairying on rural development.

In order for a suitable village to be selected for our study (given the limitations of selection on diverse criteria), the following method was adopted:

**Step I**

(a) Discussed with the Guntur District Cooperative Milk Producers' Union, and obtained a comprehensive list of the primary level village dairy cooperative societies under its jurisdiction.

(b) Classified the Village Dairy Cooperative Societies (DCS) according to their:

i) Length of existence. The groupings were made on the basis of dairy cooperatives with 3-5 years of existence; cooperatives with more than 5 years and less than 7 years' of existence.

ii) Village population and size of the cooperative society's membership, were divided into three groups viz., (a) dairy
cooperative villages with lowest population and lowest number of members in the dairy cooperative societies (amongst all the dairy cooperative villages in the district); (b) dairy cooperative villages with a population of 1000-2000 more and a membership of a 100 more than (a) above; and (c) dairy cooperative villages with a population of a 1000 and more and membership of a 100 and more than category (ii) above.

iii) Percentage composition of dominant and low caste populations in the total village population.

iv) Proportion of representativeness of villages of the region (in terms of agro-climatic conditions, irrigation, infrastructure etc.)

**Step II**

i) On the basis of step I, we found out as to which kinds of villages were predominant in terms of their length of existence, total population and membership strength in DCS, percentage mix of dominant and low castes and representation of regional features.

ii) Based on (i) above we selected 4 villages which most predominantly stood out in the list on each of the criteria.

iii) Of the villages in (ii) above we selected one village viz. Tenepudi, which had the most ideal combination of variables within the same criteria.
Hence, village Tenepudi of Tenali taluk was chosen for study. The selection of the village to be more specific, was broadly based on the following: (i) it represented several social and agro-economic features of the region; (ii) its dairy cooperative society represented the average number of years of existence from among the existing societies in the region (on this criterion, the Tenepudi Cooperative society did not exactly represent the average length of existence but however this was done purposively in view of its suitability otherwise); (iii) it broadly represented the composition of average number of members and non-members amongst the village cooperatives in the region.

iv) Collection of Primary Data

Village Tenepudi of Tenali taluk has been chosen for our indepth study. The village has 1011 households. Of these, 260 households keep milch animals like buffaloes and/or cows. Again, of the 260 households engaged in dairying, only 120 households are full Members of the Dairy Cooperative Society (Members are those who are enrolled in the cooperative society as full members by virtue of holding one or more share of the society. They enjoy the right to vote as also contest for office-bearership of the society) and the rest, 140 householders are what are called Non-members. (Non-members are those who supply milk to the cooperative society but are not shareholders - thus regarded non-members and hence, they neither have the right to vote or gain a place in the management committee of the society nor can have a share in the bonus, dividends etc. as and when declared by the
cooperative society. However, their names are recorded in the society registers for the purposes of payment, future enrollment etc. In principle, the Non-members are supposed to have equal access to the procurement price offered by the cooperative, technical, input and extension services offered by the district union/village cooperative society.

All the dairy cooperative Member and Non-member households (120 and 140, respectively) listed in the registers of the Tenepudi Village Primary Producers' Milk Cooperative Society Ltd., constituted the sample for indepth interviewing. Within the above, the data of the Member households as regards changes in milk production and consumption, feeding and breeding practices, incomes, input services, cooperation etc. vis-a-vis the 'past situation' (before the introduction of the Dairy Cooperative in the village) have been analysed and comparisons made with the situation 'now'.

A detailed interview schedule was prepared to collect both qualitative and quantitative information from the sample households (see Appendix II). This was supplemented by qualitative observations made through the participant observation method stretching over five months. Besides, some village informants, village functionaries, women, dairy union officials and govt. officers were also interviewed. The quantitative information included details of size of family; ownership of land; tenancy transactions; main and
subsidiary levels of income; and number of milch animals, milk production, milk consumption and sale figures, quantity of feeds and fodder etc. The data so gathered were carefully cross-checked with records available at the village panchayat and the dairy cooperative society. The qualitative items of information included aspects such as respondents' nature of occupation, changes in animal husbandry practices, relationship of dairying with agriculture, attitudes towards the dairy cooperative society, the role of women in dairying, receptivity of producers to innovations for modernising dairying, the functioning of the cooperative society and its leadership, aspects of social structure that have a bearing on dairying and vice-versa, and so on.

v) Collection of Secondary Data

The secondary data relating to the general agro-ecological features, demography, status of agriculture and animal husbandry and infrastructure facilities available in the village were collected from the village panchayat and taluka offices, various govt. agencies, census reports, action plans prepared by the DRDAs, NDDB, and State Dairy Federation documents and records of the Guntur Dairy Union.

vi) Understanding the Impact

Isolation and measurement of impact of an intervention such as cooperative dairying on a complex aspect like rural development poses many a conceptual and empirical problem - particularly in view of the inherent social, economic and
technical complexities in the society. In physical and natural sciences it is somehow possible to artificially simulate an environment in a laboratory where only those factors are allowed to change whose effects are sought to be observed; all other factors can be controlled at some pre-determined levels. Such an arrangement enables the researchers to isolate and measure accurately the effects of the factors under study. But in social sciences, control of all causal factors except those to be studied is not possible and hence what is observed is a combined effect of all causal variables. A rough method of isolating and measuring effects of selected causal factors under these circumstances is the use of the 'Then and Now' and the 'with and without' approaches together. The use of the former requires concrete data for at least two points in time and that of the latter availability of two comparable entities or units — one where the causal factors were present and the other where they were absent during the reference period. In the absence of ready-made base line information about the village selected for this study, it was not possible for us to use the 'Then and Now' approach completely. But however, in view of the inappropriateness of the 'with and without' approach in our opinion, we judiciously used the 'recall method of interviewing' while interviewing the respondents, informants, and government officials so as to reconstruct historically the 'past situations' and compare the same qualitatively with the 'present' data. The use of this approach also had some limitations in that the respondents were prone to make errors in recalling
the past events/information correctly. However, adequate care was taken to ensure that such errors were reduced significantly by way of cross checking the data with other respondents and officials. Since the kind of data that were sought from the respondents were not strictly quantitative in nature and indeed more qualitative, some reliability of data could be ensured without much difficulty. The nature of both qualitative and quantitative data sought through the 'recall method' particularly in the areas of breeds, production, feeding, consumption, sales, prices and incomes are discussed in detail in the introduction to chapter VIII which contains comparative analysis of the 'past and 'present' situations and its implications for rural (dairy) development.

vii) Plan of the Thesis

The thesis is divided into Ten chapters. Chapter I- introduces the nature and problem of our study. Chapter II- presents a brief and critical account of the nature and role of dairying in India and in AP vis-a-vis the planned interventions introduced so far. A brief survey of research literature on the theme of Cooperative Dairying and Rural Development is contained in Chapter-III. Chapter -IV is devoted to explaining the methodology adopted and the objectives of the study set-forth. 'The Guntur district and the Guntur District Cooperative Milk Producers' Union (Sangam Dairy)' is the theme presented in Chapter -V. 'Village Tenepudi and the village Dairy Cooperative Society'
is the focus of Chapter-VI. An analysis of the socio-economic characteristics of the sample member and non-member households is presented in Chapter-VII. The role and impact of cooperative dairying on (production, incomes, consumption and marketing of milk and utilization of input services) various categories of dairy farmers and its implications for development constitute the thrust of Chapter-VIII. Chapter-IX briefly discusses the role and status of women in dairying and the receptivity of farmers to innovations for modernising the dairy industry. And finally, Chapter-X presents inferences drawn and conclusions made from the study.