Chapter XI

CONCLUSIONS AND SUGGESTIONS

The major objectives of this final chapter are to summarize the findings of the study and make appropriate conclusions. Further, it concentrates on various suggestions given to Sangam Dairy in particular and Dairy Industry in general for further improvement.

Indian Dairy Industry:

Today, India is 'The Oyster' of the global dairy industry. It offers opportunities galore to entrepreneurs worldwide, which wish to capitalize on one of the world's largest and fastest growing markets for milk and milk products. A bagful of 'pearls' awaits the international dairy processor in India. The Indian dairy industry is rapidly growing, trying to keep pace with the galloping progress around the world. As it expands its overseas operations and many profitable options are awaiting.

Indian dairy sector contributes the large share in agricultural gross domestic products. Presently there are around 70,000 village dairy cooperatives across the country. The co-operative societies are federated into 170 district milk producers unions, which is turn has 22-state cooperative dairy federation. Milk production gives employment to more than 72mn dairy farmers. In terms of total production, India is the leading producer of milk in the world followed by USA.
Although milk production has grown at a fast pace during the last three decades, milk yield per animal is very low. The main reasons for the low yield are

- Lack of use of scientific practices in milching.
- Inadequate availability of fodder in all seasons.
- Unavailability of veterinary health services.

The following table shows the milk yield comparison of India to other leading countries in milk production.

**Table 11.1: Milk Yield comparison**

<table>
<thead>
<tr>
<th>Country</th>
<th>Milk Yield (Kgs per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>7002</td>
</tr>
<tr>
<td>UK</td>
<td>5417</td>
</tr>
<tr>
<td>Canada</td>
<td>5348</td>
</tr>
<tr>
<td>New Zealand</td>
<td>2976</td>
</tr>
<tr>
<td>Pakistan</td>
<td>1052</td>
</tr>
<tr>
<td>India</td>
<td>795</td>
</tr>
<tr>
<td>World (Average)</td>
<td>2021</td>
</tr>
</tbody>
</table>

Source: Export prospects for agro-based industries, World Trade Centre, Mumbai.

The following table shows the production of milk in India from 1988-89 to 1999-2000 as per DEPI report.
Table 11.2: Production of milk in India from 1988-89 to 1999-2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Production in million MT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988-89</td>
<td>48.4</td>
</tr>
<tr>
<td>1989-90</td>
<td>51.4</td>
</tr>
<tr>
<td>1990-91</td>
<td>53.7</td>
</tr>
<tr>
<td>1991-92</td>
<td>56.3</td>
</tr>
<tr>
<td>1992-93</td>
<td>58.6</td>
</tr>
<tr>
<td>1993-94</td>
<td>61.2</td>
</tr>
<tr>
<td>1994-95</td>
<td>63.5</td>
</tr>
<tr>
<td>1995-96</td>
<td>65</td>
</tr>
<tr>
<td>1996-97</td>
<td>68.5</td>
</tr>
<tr>
<td>1997-98</td>
<td>70.8</td>
</tr>
<tr>
<td>1998-99</td>
<td>74.7</td>
</tr>
<tr>
<td>1999-00(E)</td>
<td>78.1</td>
</tr>
<tr>
<td>2000-01(T)</td>
<td>81.0</td>
</tr>
</tbody>
</table>

E=estimated, T=target/expected


The transition of the Indian milk industry from a situation of net import to that of surplus has been led by the efforts of National Dairy Development Board's Operation Flood. Programme under the aegis of the former Chairman of the board Dr. Kurien.

Launched in 1970, Operation Flood has led to the modernization of India's dairy sector and created a strong network for procurement processing and distribution.
of milk by the co-operative sector. Per capita availability of milk has increased from 132 gm per day in 1950 to over 220 gm per day in 1998. The main thrust of Operation Flood was to organize dairy cooperatives in the milk-shed areas of the village, and to link them to the four Metro cities, which are the main markets for milk. The efforts undertaken by NDDB have not only led to enhanced production, improvement in methods of processing and development of a strong marketing network, but have also led to the emergence of dairying as an important source of employment and income generation in the rural areas. It has also led to an improvement in yields, longer lactation periods, shorter calving intervals, etc through the use of modern breeding techniques. Establishment of milk collection centers, and chilling centers has enhanced life of raw milk and enabled minimization of wastage due to spoilage of milk. Operation Flood has been one of the world's largest dairy development programme and looking at the success achieved in India by adopting the co-operative route, a few other countries have also replicated the model of India's White Revolution.

The preferred dairy animal in India is buffalo unlike the majority of the world market, which is dominated by cow milk. As high as 98% of milk is produced in rural India, which caters to 72% of the total population, whereas the urban sector with 28% population consumes 56% of total milk produced. Even in urban India, as high as 83% of the consumed milk comes from the unorganized traditional sector.

Andhra Pradesh Dairy Industry:

Initially the state government entered the dairy industry in 1960 by establishing a directorate in the government. Before that, milk processing and marketing were in the hands of private individuals. In 1960 and in 1964 two dairies,
the government started one at Hyderabad as central dairy and the other at Vijayawada. From 1967 on words chilling centers at various places in the state were started on cooperative basis. In 1971, the state government established a separate Dairy Development department as a part of the State Ministry of food and agriculture, as the need for milk and supply of milk was growing largely.

The Andhra Pradesh Dairy Development Cooperative Federation (APDDCF), which came into existence in April 1974, is the pioneer in the state milk cooperatives. At present there are 7000 milk cooperatives and 9 dairy development cooperatives federations in the state.

**Sangam Dairy:**

**The Guntur District Milk Producers’ Cooperative Union Limited,** popularly known as Sangam Dairy was established in 1977 on cooperative basis. It is the third biggest milk cooperative dairy in the country. This dairy is the largest milk and milk product supplier in the district having a market share of 90.4 per cent.

The Sangam Dairy has the milk handling capacity of 2.5 lakh litres per day. Besides milk, it supplies various milk products to the consumers of the district like ghee, white butter, table butter, doodh peda, flavoured milk, butter milk, curd etc. It not only supplies milk and milk products within the district, but also send to other places like Kolkata, chennai etc. The dairy is using modern technology in milk processing and packaging. For example, a unit called aseptic milk packaging station is established at the dairy premises for aseptic packaging.
Nearly 700 employees are working in the dairy on permanent basis. The dairy has been providing many facilities to its employees at par with any standard organized unit in the state or in the country.

The dairy has a systematic organization structure to run the organization without any ambiguity. The authority and responsibilities of various levels are clearly defined. The dairy recruits employees using systematic procedure. It is not exorbitant to say that the dairy has not witnessed any disorder like strikes or lockouts since its inception, which shows the congenial atmosphere prevailing in the organization.

Sangam Dairy practices its own methods of marketing of its products and distributes them through its wide spread retail outlets and through large network of channels of distribution.

The dairy has been earning reasonable gross profits and the same has been utilized for useful purposes.

CONCLUSIONS:

From the foregoing discussion and analysis in the previous chapters, the following conclusions can be made:

1. With the objective of avoiding import of milk products and make self sufficiency in the supply of milk and milk products through out the country, National Dairy Development Board launched Operation Flood in three phases and introduced Anand pattern (cooperative based) in all states of the country which yielded good results in promoting dairy industry in India.
2. After the introduction of **Amul pattern**, 15 dairy milk cooperative federations were started in India, and thus dairy industry put a strong foot in the country under cooperative form.

3. **The Andhra Pradesh Dairy Development Cooperative Federation (APDDCF)** led the role in the state for promoting dairy industry. Primary cooperatives at the village level and district dairy development cooperative federations at the district level are functioning in the state in promoting the dairy industry in the state.

4. **The Guntur District Milk Producers’ Cooperative Union**, popularly known as **Sangam Dairy** was established at Vadlamudi in Guntur district with the main objective of supplying milk and milk products to the people of Guntur district and promote rural development through creating additional income to the rural masses.

5. **Guntur district** is famous for commercial crops viz., tobacco, cotton, and chillies. It is one of the developed districts in the states with good potential for milk and products.

6. **Sangam Dairy has a noble vision** of supplying milk throughout Guntur district and it is moving in right direction and with proper planning at all levels. The policy makers of the dairy are sincere in their attempt to continue the dairy as the leading one with plans that change according to the changed circumstances.

7. **The policy decisions** of the dairy are generally taken in the meeting of board of directors headed by the chairman. All these policy decisions are adopted and implemented throughout the line in letter and spirit.
8. Sangam Dairy has an effective organization structure. The authority in the dairy flows from board of directors through first line managers.

9. Though the organization structure of the Sangam Dairy is well planned and effective, as most of the employees are local and belong to the same culture, the informal relations in the dairy are prevalent.

10. Sangam Dairy has a practice of appointing committees to look into its various activities. There are five committees working in the dairy and each committee consists of two board of directors and heads of concerned departments. These committees discuss the problems and suggest the possible solutions.

11. Sangam Dairy started in 1977 on a cooperative basis as a small unit and reached to this present developed stage adopting the development strategy. It acquired modern machinery, adopted latest technology and expanded its network throughout the district.

12. Sangam Dairy has nine functional departments and all the heads of these departments receive directions from the managing director through the general manager. The departmental heads direct the departments through the formal line authority. The responsibilities in the dairy from all levels move from bottom to top.

13. The Sangam Dairy has an effective communication system. Most of the communication systems are in written form. Phone and oral communications are also frequently used in the communication process.

14. The management of the Sangam Dairy has taken all safety and welfare measures and created conducive environment to motivate the employees for better performance.
15. In the history of Sangam Dairy there were no strikes or lockouts. It is believed that **good leadership qualities** of managers make the dairy run on smooth lines. The researcher also observed that the managers forgetting their status and authority, in most cases, mingle with employees, while they are at work and advice them friendly if required.

16. There is a **good coordination** among the employees and managers in Sangam Dairy irrespective of their line of functioning. Coordination can also be observed among all the departments.

17. The management in Sangam Dairy takes **corrective measures** as and when the planned activities go wrong. However, they do not have the practice of punishing fraudulent employee, if such person unwillingly commits mistake.

18. Sangam Dairy is in the **era of competition**. Once it holds monopoly and the whole milk market of Guntur district was in its hand. But from the year 2000 the situation started changing with the entry of private diaries. However, the diary still holds the market leadership and shares the market with 90.4 per cent. It may not be a threat as on today but in the coming years with the entry some more private dairies the external environment may change.

19. Guntur District Milk producers’ Cooperative Union Limited – the Sangam Dairy, a pioneer in cooperative sector started its operations in the year 1977 to **cater the milk needs** of the people of Guntur district. As on 31st March 2003 there were 1,33,913 members in different primary cooperative societies affiliated to Sangam Dairy. At present it has milk-handling capacity of 2.5 lakh litres of milk per day. Besides the main dairy, there are four milk-chilling plants at Gurazala, Narasaraopet, Vinukonda and Bhattiprolu.
20. Sangam Dairy has a **product line** consisting of various milk products manufactured while milk processing is on. The dairy procures milk and manufactures two types of milk viz., skimmed milk, and whole milk. In this process various by products like table butter, white butter, ghee, doodh peda, sterilized flavoured milk etc., are also produced.

21. The period of the study of Sangam Dairy consists of ten years from 1993-94 to 2002-03. **Milk procurement** of Sangam Dairy faced troubles in the year 1994-95 and 1995-96. However, it recovered and increased procurement continuously with an exception of 2002-03. The reduction in procurement of milk to the extent of 666 lakh litres in 2002-03 is attributed to the **competition from private dairies**.

22. Similar to that of milk procurement, the **production of milk powder** is less in 2002-03 than 2001-02 by 75 tons.

23. Various **by products** of Sangam Dairy such as table butter, white butter, ghee, doodh peda, sterilized flavoured milk, buttermilk, curd etc. also reasonably contributing to the revenue of the dairy.

24. Sangam Dairy is carrying a good **brand image** for milk products in the district named as **Vijaya Sangam**. The people of Guntur district are very much familiar with this brand name for the last 30 years.

25. Sangam Dairy has a **modern packaging** system called as tetra packing. This packing protects the milk from damage for 15 days without refrigeration. For this purpose, the dairy started aseptic packaging station in 1986.

26. The **pricing method** of milk procurement and sales is mainly influenced by the decision of the state government. All the cooperative milk societies in the
state have to follow the state directive. The prices of the by products, however, are normally fixed by the dairy based on the market conditions.

27. Sangam Dairy spends **nominal amount for advertising** its products in print and electronic media.

28. Sangam Dairy sells its products through its **sales outlets** at different towns and cities. It also allows private agents to sell the products on commission basis.

29. Sangam Dairy **procures and distributes** its products using its leased vehicles without appointing any middlemen.

30. The **recruitment and selection** at Sangam Dairy is through direct notification and with prior permission from the state government.

31. The **transfers and promotions** in the dairy are strictly according to the framed guidelines.

32. The **training of employees** at the dairy is of two types. The first one is the training to employees in the areas of operations, technical and allied areas. The second one is the development of employees in the areas of principles, techniques of management, administration, organization and allied areas.

33. Most of the employees of Sangam Dairy are hailed from nearby villages and towns. They are paid and treated well. Because of these, the **labour turnover** in the dairy is almost zero.

34. Except security staff, all the employees in the dairy are working under permanent basis. The **absenteeism** in the dairy is also negligible.

35. Sangam Dairy has been providing various **security and welfare facilities** to its employees such as, bonus, EPF, housing, LTC, support to education, loans, festival advances, hospital, canteen, family incentives, cooperative society etc.
36. The current ratio of Sangam Dairy is above 2 times throughout the study period i.e. 1993-94 to 2002-03 ranging from 2.12 to 4.12. However, the ratio is not steady or in increased direction and faced marginal ups and downs.

37. The current assets of the dairy during 1993-94 are Rs.24.29 lakhs and reached to a maximum of Rs.34.18 lakhs by the year 2002-03. It denotes that the dairy has been investing big amounts in the form of current assets during the study period.

38. Except in the year 1993-94 and 1998-99 the current liabilities of the dairy are not much. They are at their minimal during 1994-95 with Rs.7.67 lakhs only.

39. The quick ratio of the dairy for the study period can be said as satisfactory as it crossed 1 in seven out of ten years. The ratio ranges from 0.53 to 1.59 times during the period.

40. The quick or liquid assets of the dairy from 1993-94 to 2002-03 range from Rs.5.8 lakhs to Rs.12.99 lakhs except during 2001-02 where liquid assets are Rs.8.12 lakhs, they crossed Rs.10 lakhs mark.

41. The debt burden of Sangam Dairy has been huge throughout the study period when compared to its equity. The cooperative societies have naturally low equity as it comes from the shareholders of weak financial background. The equity of the dairy is only Rs.109.65 lakhs during 1993-94. However, it recovered from 1996-97 with Rs.300.24 lakhs to Rs.682.66 lakhs by 2002-03.

42. Because of low equity, the debt equity ratio has been in big figures during the study period. The ratio ranges from 3.8 times to as big as 24.17 times.

43. The turnover of the dairy consisting of sales and transfers are Rs.5, 354.47 lakhs in 1993-94 and reached to Rs.11, 716.4 lakhs by 2002-03.
44. The **inventory** of the dairy ranges from Rs.903.45 lakhs to Rs.2,336.92 lakhs during the study period.

45. The **inventory ratio** of the dairy during 1993-94 is 2.9 times. It oscillated between 4.9 and 7.4 times in the remaining 9 years period. In the five out of 10 years the ratio is around 5 times.

46. The Sangam Dairy has earned a **gross profit** of Rs.672.23 lakhs during 1993-94. Except during 1995-96, the gross profit of the dairy has been increased continuously up to 2001-02 and reached to Rs.1,875.50 lakhs. In 2002-03 there is a reduction in the gross profit by about Rs.250 lakhs because of the entry of private dairies.

47. **Gross profit ratio** for all the ten years is between 12.5 per cent and 15.7 per cent.

48. The **net profits** of the dairy during the ten years period are not encouraging. The dairy even incurred a net loss of Rs.64.36 lakhs during 1993-94. Only during the year 1998-99 the dairy managed to a net profit of Rs.92.06 lakhs in 1998-99. In all the remaining eight years period there are meagre net profits.

49. As the dairy is running on cooperative basis, its main objective is not profiteering and much of the gross profits are transferred to staff welfare and other relevant reserves, the **net profit looks very low**.

50. During 1993-94 the **net profit ratio** is negative with 1.2 per cent. From 1994-95 to 2002-03 the ratios are less than 1 per cent with an exception of 1998-99 where the net profit is 1.08 per cent.
Sangam Dairy in the next 10 years:

“Sangam dairy has plans of tapping the international market with its products and as a prelude the dairy is streamlining its quality control system and getting the required certification”

K.Rajan Babu
Chairman, Sangam Dairy

The vision of the dairy can be seen in the words of the chairman Shri K.Rajan Babu given above. The dairy also acquired quality certification of 9001:2000 for its quality products. It wants to hold the monopoly of milk market in the district in the coming 10 years wiping off the private dairies along with tapping international market.

In the view of the management, the Sangam Dairy with the cooperation of its 1.4 lakh dairy farmers wants to achieve the dream target successfully. As one of its measures the dairy plans to supply milk to distant places like Nagpur, Kolhapur, and poone in the coming years. Similarly it plans to increase the turnover by four times in the coming ten years. The dairy also planning to diversify its product line, adding new products like mineral water, kalakand, mango drink, basundi, curd etc. The dairy has also been preparing action plans and taking all-necessary steps in this regard. In addition, Sangam Dairy reaffirms for the following:

- To enhance the present procurement to 5.0 lakh litres per day.
- To enhance the business turnover to Rs.500 crores by 2015.
- To make pucca buildings for all the Milk Societies in villages.
- To bring all the societies in the district to Electronic Milk testing.
➢ To achieve total computerization with LAN/WAN network.

SUGGESTIONS:

Based on the above conclusions and the observations of the researcher, the following suggestions are made to the Sangam Dairy, to the government of Andhra Pradesh and the dairy industry as a whole.

To the Sangam Dairy:

1. At present Sangam Dairy has a good brand image in the milk market of Guntur district. Using this image, the dairy can think of producing a new product, which has good market in the future. The younger generation now is going for fast foods like burgers and pizzas where cheese is one of the main ingredients. Therefore, the management of the dairy can think of adding cheese to the product line.

2. When compared to the productivity of other countries, like other dairies in the country, Sangam Dairy is also lagging behind. Therefore, the dairy has to improve its productivity through adopting cost control methods, using modern techniques in the processing and imparting training and development to its employees.

3. The organization structure of Sangam Dairy is well planned. But in practice the authorities and responsibilities are not flowing as specified. It sometimes causes confusion and havoc in decision-making. Therefore, the management should take all necessary steps to follow the structure scrupulously and avoid confusion.
4. It is observed that the decision making delayed at the lower level and causes problems and results in increasing costs. For example, if any breakdown of vehicle takes place some where in the remote area, to rectify the defect, they are taking long time and sometimes they fail to run the vehicle for that day. Therefore, lower level managers must also be empowered to take routine decisions without any delay.

5. The Sangam Dairy thinking it as the dominant player in dairying in the district is not concentrating much on advertising. It has to remember, to keep the existing customers and to attract the new customers, advertising on large scale, now a days, is inevitable. Private dairies have started in this line. Therefore, the Sangam Dairy should follow rigorous advertising mainly using electronic media (citi cable, in cable, S G network etc.) through out the district and reach all the customers in the coming years too.

6. Sangam Dairy has been depending on leased vehicles for transport. It is a never-ending cost to the dairy. Therefore it is suggested to acquire vehicles of its own in phased manner and save expenditure in the near future.

7. For the purpose of its employees, various safety and welfare schemes are in existence in the Sangam Dairy. But as observed by the researcher, they are not effective in practice. The management of the dairy should take serious steps for effective implementation of all introduced schemes.

8. Guntur is a big district with an area of 11,328 Sq.K.ms and had 57 revenue mandals. To procuring and supplying of milk will not be an easy thing in future. Sangam Dairy and its four chilling centers are not sufficient to cater the needs of the public. Private dairies are utilizing this limitation of expansion tactfully. Identifying the potential in the district it, the private
persons are planning to establish dairies at many places in the district. It is expected that more than 10 dairies may enter into the market in the near future. It is a well known fact that due to the entry of private dairies, the procurement and sales of Sangam Dairy started declining from the year 2002-03 as seen from the financial statements. Therefore, it is high time to the Sangam Dairy to expand its operations through starting four more chilling centers at Chilakaluripet, Bapatla, Sattenapalli and Amaravati and can continue its services to the people of the entire district.

9. Though Sangam Dairy acquired quality control certification of 9001:2000, it is lagging behind in its quality when compared to prominent dairies in the country like Amul in Gujarat. One of the major reasons for low quality and high cost of production identified by the researcher is that the milk testers while procuring milk do not follow the standards laid down by the dairy. Many a times instead of trained testers, their friends and relatives play their role. Identifying this root cause, the dairy should take stringent measures and save the dairy from low quality and high cost.

10. Sangam Dairy can export milk powder to other countries and earn some foreign exchange. But the quantity of production of milk powder during 2002-03 is less than that of 2001-02 by 75 tons. If this trend continues, the Sangam Dairy cannot utilize export opportunities. Therefore the management of the dairy should take all necessary steps to increase the production of milk powder keeping in view the return of foreign exchange.
fill the posts. The state government should give **freedom to the dairy**

**in recruitment and selection** of employees.

**To the Dairy Industry:**

1. The cooperative dairies in the country are not earning sufficient net profits mainly due to their limitation in fixing the prices of their products. The government of India should encourage and **liberalize the export policy** of dairy products to other countries. It is a well coming feature that the government of India is liberalizing its policies in this direction. If this is done, the big cooperative societies like Amul, Sangam Dairy etc. can export some of their products and improve their net profit base.