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4.2 DUDHSAGAR DAIRY - MEHSANA

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SAMPLE PROFILE

4.1 INTRODUCTION

There are 17 leading District Co-Operative Milk Producers’ Unions in all over the Gujarat. Researcher has taken them 7 District Co-Operative Milk Producers’ Unions as the study for research purpose. The study of these units mostly shows the financial picture from various aspects. Before analyzing the data of the units undertaken for the study, here is the overview of the District Co-Operative Milk Producers’ Unions.

This chapter consists with sample profile of the sample unit. The list of sampled District Co-Operative Milk Producers’ Unions is as under:

5. Valsad District Co-operative Milk Producers’ Union Ltd., Vasudhara Dairy’ - Alipur.

In this chapter, the researchers have given the information about vision, mission, activity and company profile, its plant capacity of each unit under taken for the study.
4.2 MEHSANA DISTRICT CO-OPERATIVE MILK PRODUCERS’ UNION LTD., ‘DUDHSAGAR DAIRY - MEHSANA’:

4.2.1 OVERVIEW OF DUDHSAGAR DAIRY

In 1958 Ahmadabad municipal corporation Dairy was supplied 600 to 700 liters of milk per day which was collected from 11(eleven) villages near vihar, Tensile vijapur (Mehsana District). Ahmadabad municipal corporation Dairy took milk according to their requirement so quota system had to be used from the milk purchase. UNICEF surveyed about this situation at that time in 1958. They delivered that in Mehsana District some quality of milk staged as marketable surplus, so they gave the report accordingly and recommended that it should be planned to start milk business on co-operative line based on Amul (Anand) pattern. So the farmer members can take the benefit of it. Then Mehsana, District Co-operative Milk Producers, Union Ltd. Dudhsagar Dairy was registered on 8th November 1960 under Mumbai Co-operative Societies Act-1925.

On the lines of Amul-model, Dudhsagar dairy initiated in Mehsana more than 50 years ago, to organize the rural milk producers to help themselves had its benefits in building a strong co-operative movement that has pooled together the resources of milk producers. The union is exist as a purposeful organization in the Nation building process - Enhancing the milk production capacity, providing self-employment and sustainable income generation to the rural farmers, enhancing the per capita availability of milk etc.

Dudhsagar is proud of its contributions to making India the largest milk producing nation in the world, and in the process empowering lakh of co-operative dairy farmers of Mehsana and parts of Patan and Gandhinagar districts - socially, politically and economically. Today, Dudhsagar Dairy has a membership of over 5.2 lakh dairy farmers. Its consolidated turnover in 2012-13 was over Rs.3400 Crores and procurement of milk 92.53 Crores kilogram.
4.2.2 PLANT LOCATIONS

The Union has 4 dairy Plants (Gurgaon, Mehsana, Dharuheda and Kadi) of total capacity of 40 LLPD (lakh litre per day), 3 cattle feed plants at Mehsana of total capacity of 1900 MT per day, 5 Chilling Plants of total 15 LLPD capacity, 4 Milk Powder Plant of total 142 MTPD capacity. 26 Animal Health Centres, one Frozen Semen Centre, 665 BMCs (Bulk Milk Coolers), 4 Butter Plants of 85 MTPD capacity, one Ghee Plant of 30 MTPD capacity and 2 Sweetened Condensed Milk Plants of 24 MTPD capacity.

4.2.3 ORGANIZATION STRUCTURE

4.2.4 SOCIAL RESPONSIBILITY

Corporate Social Responsibility is in-built in the dairy cooperatives. The union policies are framed keeping in view the welfare of their farmer-members and the society at large. Many initiatives are taken by the union to include:
**Milk Powder for army**

Dudhsagar dairy has actively involved in various quality movements and performed well. The union was the first to supply the milk powder to defence service in 1966 (During Indo-China War) with the order of 750 MT and also the union is regular supplier of Sweetened Condensed Milk and whole milk powder with strictly following army’s product specifications.

**Eco Friendly Milk Production**

Towards achieving highest standards of quality in each link in the value chain many initiatives are taken by the union to include:

- Automatic Milking Machines by farmers
- Automatic Milk Testing Machines at Societies
- Installation of Bulk Milk Cooling Systems
- Implementation of ISO 9001 at society

**Supplies To Product "Kuposhit Children"**

In order to fight against malnutrition, the union produce special batch of some product like Amul spray for children suffering from malnutrition and supplied to Gujarat Government.

**4.2.5 ANIMAL CARE**

**Compound Cattle Feed**

Cattle Feed has important role in milk production business; about 60 per cent milk production cost covers the balance feed of milch animals. Cattle feed has important role in quality of milk, health, production and reproduction of the Animals. As per the basic requirement of member milk producer’s first cattle feed plant was established by the union in 1969 at Boriavi and as per increasing demand of cattle feed second plant was established in 1981 at Ubkhal, after step by step expansion in both the plant production capacity was 900 M.T. per day in the year 2011. Demand was increasing more than the union production capacity. To fulfil the requirement of cattle feed third
cattle plant of 1000 M.T. capacity per day with full atomization was established in 2012 at jagudan.

The Dudhsagar dairy is producing Purak Dan, SagarDan, Highpro SagarDan, Pashu Poshak, Calf Starter and Medicated feed as per the demand of their members Milk producers, they demand as per the production efficiency of milch animals. The union is supplying the cattle feed through village DCS on no profit no loss bases. Milk replacer, calf starter and medicated feed have important role in calf rearing. Calf rearing is important in Animal Husbandry. Now the union is strong in cattle feed production capacity, so the union is providing cattle feed to other needy cooperative milk unions and in their milk shed of Rajasthan and Haryana States as per the demand of milk producers and in open market too. The union have Separate Laboratory for raw material and finished good laboratory equipped with Automatic Protein Analyser, Automatic Fat Analyser, and NIR (Near Infrared) Analyser.

❖ Animal Treatment

More than 100 veterinary doctors are engaged in animal treatment round the clock. They also provide the necessary medicines to the animal. Information about various aspects of animal husbandry is disseminated through the doctors to the farmers. Last year they have attended more than 5 Lakh cases.

❖ Vaccination Programmes

Vaccinations against major diseases are provided to the farmers. During the year 2009-10, under this program 6,04,372 animals for FMD, 2,02,655 animals for HS, 5,422 animals for Theileriosis and 6,546 animals for anti Rabies were covered.

❖ Progeny Testing

This program is implemented since 1985. Union has entered into a MOU with NDDB for 5 years with the objective of achievement of steady genetic progress in Mehsana Buffalo population by Progeny Testing and Production of top progeny tested bull. It is also help to meet the requirement of Mehsana Buffalo bull semen all over the country.
From the project, it is observed that the first lactation milk yield was 1931 kg (5778 Observations).

- **Artificial Insemination**

To increase in milk yield it is necessary to improve the germ palms of the animal. Artificial insemination is one such technology. The union have around 585 AI centres located in different region of the milk shed area. During the year 2009-10 more than 5 Lakh cows and near about 4 Lakh buffalo have been inseminated.

- **Cattle Insurance**

Mehsana Milk Union provides a strong shelter to its member milk producers through cattle group insurance scheme. Union pays 34 per cent of premium subsidy and 33 per cent is being paid by concerned DCS. Hence, a milk producer has to pay only 33 per cent of total premium.

<table>
<thead>
<tr>
<th>Year</th>
<th>No of Soc.</th>
<th>No of Cattle under Insurance</th>
<th>Total Sum Insured Rs.</th>
<th>Premium Paid by DCS Rs.</th>
<th>Premium Paid by Union Rs.</th>
</tr>
</thead>
<tbody>
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<td>10982516</td>
</tr>
</tbody>
</table>

**Source;** Annul Reports of Dudhsagar Dairy

### 4.2.6 AWARDS & ACHIEVEMENTS

The Dudhsagar Dairy has been awarded by national productivity council with the underwritten awards.

- Second Best Productivity Performance Award1985-1986
- Second Best Productivity Performance Award1986-1987
• Second Best Productivity Performance Award 1988-1989
• Best Productivity Performance Award 1991-1992
• Second Best Productivity Performance Award 1992-1993
• Best Productivity Performance Award 1994-1995
• Best Productivity Performance Award 1995-1996
• Best Productivity Performance Award 1997-1998
• Second Best Productivity Performance Award 2004-2005
• Second Best Productivity Performance Award 2005-2006

4.2.7 ISO POLICY AT SOCIETY LEVEL


4.3 RAJKOT DISTRICT CO-OPERATIVE MILK PRODUCERS’ UNION LTD., ‘GOPAL DAIRY - RAJKOT’:

4.3.1 OVERVIEW OF GOPAL DAIRY

Rajkot District Co-operative Milk Producers' Union Ltd rooted its existence before 56 years in the year 1956. The dairy was first established in Rajkot by the Animal Husbandry (AH) Department of the Gujarat State under a pilot project of UNICEF.

Under the leadership of Shri Devendrakumar R. Desai, Rajkot District Co-operative Milk Producers' Union Ltd. was registered during 1961 and managed by Animal Husbandry of Government of Gujarat under Milk Conservation Project, Rajkot.

During 1970, the department of Animal Husbandry handed over the management of Rajkot dairy to Gopalak Sangh. In a period of two years, the dairy was handed over to Rajkot Milk Union during 1972 with total assets, liabilities and manpower.
Rajkot Milk Union's effort to manage the activities from 1972 to 1977 was unsatisfactory and so a Joint Management with Gujarat Dairy Development Corporation Ltd (GDDC) was established from 1977 to 1981. But still due to inefficiency in bringing the desired result, the management of Gopal Dairy was again handed over to Gujarat Dairy Development Corporation till 1982. In this time period, GDDC incurred a heavy loss which was equally shared by GDDC and RMU. It was a struggle for existence to come out with some workable solution and so, from 1983 to 1988, the milk union was again managed by the GDDC as per leave & license agreement.

In the year 1988, the Rajkot District Co-operative Milk Producers' Union Ltd. got the membership of the State Federation, which is the Gujarat Co-operative Milk Marketing Federation Ltd. (GCMMF) and since then the dairy is being independently managed by the milk producer’s representatives.

After 1988, the Union's activities started to stabilize. During 1990, the Union became the ordinary members from Associate Members of GCMMF. The Gopal dairy was also covered under the Operation Flood programme of NDDB.

4.3.2 PLANT LOCATIONS

The organization is wide spread and procures milk mainly from 14 Talukas with 751 functional Dairy Co-operative Societies (DCS) including 410 Women DCS in 2012-13 and also from four other districts namely, Junagadh, Amreli, Porbander and Jamnagar. The milk is procured from the small scale producers from these Talukas and is sent to their nearest chilling centers. The Gopal Dairy has 5 chilling units at Wankaner, Jamkandorna, Lajai, Vichhia and Majevadi besides one composite dairy plant at Rajkot. Future plans are proposed for the expansion of the existing units and setting up new world class plant thereby increasing the milk procurement, processing capacity and to give a consistent supply of liquid milk to consumers.

Plant capacity utilization has significantly improved from a relatively small turnover of Rs.50.0 Crores in the year 2001-02 to Rs.305 Crores in the year 2010-11, a significant growth within tenure of 10 years.
4.3.3 MILK PRODUCTS

Gopal Dairy manufactures products of truly International quality under brand names AMUL and Gopal comprising of milk and various other milk products like Ghee, Butter, Butter Milk, Flavoured Milk and Peda. It is also planning to its product portfolio by addition infrastructure to manufacture Probiotic Dahi, Probiotic Lassi, Probiotic Butter Milk, Ice Cream, Paneer etc. Today in 2012-13 Gopal Dairy procured 3,66,375 Kg milk daily (on the average) and daily average milk sales 2,24,749 Litter.

4.4 KAIRA DISTRICT CO-OPERATIVE MILK PRODUCERS’ UNION LTD., ‘AMUL DAIRY – ANAND’:

4.4.1 OVERVIEW OF AMUL DAIRY

In the 1940s, in the district of Kaira in the State of Gujarat, India, a unique experiment was conducted that became one of the most celebrated success stories of India. At that time, in Gujarat, milk was obtained from farmers by private milk contractors and by a private company, Polson's Dairy in Anand, the headquarters of the district. The company had a virtual stranglehold on the farmers, deciding the prices both of the procured as well as the sold milk. The company arranged to collect, chill and supply milk to the Bombay Milk Scheme, which supplied milk to the metropolis of Bombay, and to cities in Gujarat. Polson's Dairy also extracted dairy products such as cheese and butter. Polson's Dairy exploited its monopoly fully; the farmers were forced to accept very low prices for their products, and the decisions of the company regarding the quality and even the quantity of the milk supplied by the farmers were final.

In 1946, inspired by Sardar Vallabhbhai Patel, a local farmer, freedom fighter and social worker, named Tribhuvandasbhai Patel organized the farmers into co-operatives, which would procure milk from the farmers, process the milk and sell it in Bombay to customers including the Bombay Milk Scheme. Purely by chance, in 1949, a mechanical engineer named Dr. Verghese Kurien, who had just completed his studies in engineering in the USA, came to India and was posted by the Government of India to a job at the Dairy Research Institute at Anand. Dr Kurien's involvement with the Kaira District Co-operative Milk Producers' Union Limited grew rapidly.
### 4.4.2 GROWTH OF THE ORGANIZATION

Its objective was to provide proper marketing facilities for the milk producers of the district. The union began pasteurizing milk in June 1948, for the Bombay Milk Scheme just a handful of farmer in two village co-operative societies producing about 250 letters a day.

An assured market proved a great incentive to the milk producers in the district. By the end of 1948, 432 farmers had joined village societies, and the quantity of milk handled by the Union had increased to 5000 litters a day. In the early stages, rapid growth brought in its wake serious problems. Their solution provided the stimulus for further growth. For example, as the co-operative movement spread in the district, it was found that the Bombay Milk Scheme could not absorb the extra milk collected by the Union in winter, when buffaloes yielded an average of 2.5 times their summer yield. Thus by 1953, the farmer-members had no regular market for the extra milk produced in winter. They were again forced to sell a large surplus at low rate to middlemen.

The only remedy was to set up a plant to process the extra milk into products like butter and milk powder. The logic of this step was readily accepted by the Government of Bombay and the Government of India. The government of India helped the Union to get financial help from UNICEF and assistance from the Government of New Zealand under the Colombo Plan. Technical aid was provided by F.A.O. an Rs.50 lakh factory to process milk powder and butter was blueprinted. Its foundation stone was laid by the then President of India the late Dr. Rajendra Prasad on November 15, 1954. The project was completed by October 31, 1955, on which day the late Pandit Jawaharlal Nehru, then the Prime Minister of India, declared it open. The new dairy provided a further fillip to the co-operative movement among milk producers.

The union was thus enabled to organize more village co-operative societies and to handle more and more milk each year. This event also brought a breakthrough in dairy technology as the products were made processing buffalo milk for the first time in the world. Kaira Union introduced the brand “Amul” for marketing its product.
range. The word “Amul” is derived from Sanskrit word ‘Amulya’ which means ‘priceless’ or precious’. In the subsequent years Amul made cheese and baby food on a large commercial scale again processing buffalo milk creating a history in the world. 1964 was the turning point in the history of dairy development programme in India. Late Shri Lal Bahadur Shastri, then the Prime Minister of India who visited Anand on 31s October for inauguration of Amul’s Cattle Feed Plant, having spent a night with farmers of Kaira and experiencing the success wished and expressed to Mr. Kurien, then the General Manager of Amul that replicating Amul model throughout our country will bring a great change in the socio-economic conditions of the people. In order to bring this dream into reality, 1965 The National Dairy Development Board (NDDB) was established at Anand and by 1969-70 NDDB came out with the dairy development programme for India popularly known as “Operation Flood” or “White Revolution”. The Operation Flood programme, even today, stands to be the largest dairy development programme ever drawn in the world. This saw Amul as model and this model is often referred in the history of White Revolution as “Anand Pattern”. Replication of “Anand Pattern” has helped India to emerge as the largest milk producing nation in the world.

4.4.3 PRODUCTS

Under the Amul brand, Amul dairy sells Amul ghee, Amul Ice-Cream, Amul Butter, Amul cheese, Amul shrikhand, Amul curd, Amul butter milk, Amul chocolate, Amul baby milk powder, other milk powders, condensed milk, and even Amul bread, Amul pizza, Amul lassie. Amul dairy has its own plant producing Amul cattle feed for milk giving animals.

4.4.4 AMUL RESEARCH AND DEVELOPMENT PROGRAMMES

As a part of milk production enhancement programme and improve cattle breeds of farmer producers Amul initiated various development programmes. Amul Research and Development Association (ARDA) is a step towards it.
Today ARDA is a centre of excellence in the field of research and development of cattle breeding and animal health care and its activities conform to the Quality Management System of International Standards, and carries out various activities for sustainable dairy husbandry.

4.4.5 ANIMAL HEALTH CARE PROGRAMMES

The union began first Mobile Veterinary Dispensary was flagged off by Late Dr. Rajendra Prasad, then the President of India way back in 1950. In order to provide 24 hrs services, Amul has today twelve veterinary-sub-centers with the Head Office at Anand and supported by more than 75 veterinary mobile vans with the best communication system. This programme is well taken care by a dedicated team of 125 veterinarians.

Amul has further established mobile and static animal disease diagnostic laboratories at Balasinor equipped with sophisticated equipments and professional to assist the veterinary services for specific treatment of the ailing animals. The objective of these facilities is to maximize milk production by ensuring sustainable sound reproductive and overall health of milch animals of our milk producers by accurate diagnosis of different diseases of livestock through doorstep and static diagnostic facilities.

4.4.6 ACHIEVEMENTS OF THE ORGANIZATION

4.5 SURAT DISTRICT CO-OPERATIVE MILK PRODUCERS’ UNION LTD., ‘SUMUL DAIRY – SURAT’:

4.5.1 OVERVIEW OF SUMUL DAIRY

Sumul or Surat Milk Union Limited, which is now renamed as the Surat District Co-operative Milk Producers’ Union Ltd, is one among the 17 district unions which acts as manufacturing units of dairy products for Gujarat Co-operative Milk Marketing Federation Limited, the marketers of Amul brand of products. Surat District has been a Pioneer in India in channeling trade in Cotton and Milk through co-operatives. Before Sumul stepped in, traditional Private Milk Traders were dominant in the area.

The private trade was monopolizing the Milk market and exploiting both the Milk Producers and Consumers alike. The milk procurement price which used to be fixed by the traders (traditional Bhatia’s) was very low and was fluctuating from time to time at their sole discretion. This has capitalized on the absence of any infrastructure and processing facilities and has managed to keep producers from deriving equitable benefits from the marketable surplus generated. As such their income from milk was very low and they had no incentive for modern dairy farming. The farmers resented the system, but were helpless in the face of these traditional constraints and to their own lack of resources. Dairying on the other hand, was never popular with tribal's (a major rural population in the District) as practically no infrastructure existed for milk marketing in their talukas, inaccessibility to their villages as well as taboos regarding keeping of buffaloes prevented the entire population of tribal's from considering dairying as a source of income. The tribal's kept their cows to produce bullocks rather than milk, which was insufficient even to nurse the calves. Most of the tribal's were unaware of the usual milch breeds, what to say of Scientific Animal Husbandry? Hygienic and pure milk was almost unknown in the market.

In fact unbridled adulteration of milk was practiced by these traders to meet the growing demand of milk in the city. To salvage the poor producers from the clutches of these Private Traders, Organisation and integration of procurement, processing and marketing of milk and milk products by the producers themselves on a sound co-
operative line was essential; this would also ensure elimination of middlemen, equitable distribution of benefits to Rural Milk Producers and indirectly to urban milk consumers as well. Hence, the Surat District Co-operative Milk Producers' Union Ltd., SUMUL is trade name and literally meaning sound price, came into existence on August 22, 1951.

The Sumul district co-operative milk producer’s union ltd is a co-operative endeavor committed to help marginal farmers and down trodden tribal to lead to a healthy life and better standard of living through scientific animal husbandry practices. Today’s Sumul enjoys the pride to serve milk and milk products to populous Surat city and surrounding towns of it. Sumul is holding strong brand equity in Surat district and command more than 70 per cent of the liquid milk in Surat city, to make the distribute system fast and the delivered milk in time they have as many milk transportation routes and 2903 agents. The area of operation of Sumul is the entire district of Surat. In 2013 the present milk procurement of 3979, 98,669 Kg of milk annually makes it, and the present market milk sale 2955, 56,560 litters.

4.5.2 EXPANSION OF DAIRY PLANT

The plant with the capacity of 50,000 liters per day was inaugurated by shree kurian on 24-1-79 to fulfill the requirement of increasing population, capacity was increases from 50,000 liters per day to 1,00,000 liters per day on 24-4-79 under O.F.II and subsequently to 4,00,000 liters per day in 1991 and for that Rs. 6,42,03,000/- was granted by N.D.B.B. under O.F. II to handle the problem of additional milk supply and to avoid milk holiday declaration, a powder plant with the capacity of 12.5 M.T. per day and was commissioned.

4.5.3 TETRA PACKAGING

Due to increased milk supply, to avoid milk holiday and to decrease refrigeration cost as well as to keep the collected milk in good quality, a modern tetra packaging plant was commissioned in 1994 but it was not found viable. Hence, the plant was handled over to Dhara with effect from 5-3-92.
 Powder
To face the question of disposal of excess milk supply and to avoid milk holiday, the union had decided to install a powder plant. According the most modern plant of 12.5 M.T. capacities started functioning.

 Butter Milk
As the milk supply was to be sent the union, the activity of Ghee making was stopped at rural level and hence, the deprival of getting butter milk, therefore the Sumul dairy started selling of butter milk with effect from 1-6-87. Today selling of butter milk stands at 45000 liters per day, approximately.

4.5.4 DEVELOPMENT PROGRAM

 Integrated Dairy Development Programme
For the BPL & tribal beneficiaries, the purchase of milch animals & the provision of infrastructure Tribal development department of government has granted 60.32 Crore for this programme in which 34.24 Crore rupees will be subsidized.

Till today, 3908 loan forms of beneficiaries have been approved out of which 3472 milch animals were distributed by arranging Cattle fair at nearby area with the assistance of 10,000 tribal beneficiaries are made engaged in this profession with the assistance of 3 years Animal insurance, Training to beneficiary, one bag cattle feed.

 Co-operative Development Programme
With active participation of G.C.M.M.F. Ltd, Co-operative Development programs are being implemented with sole objective of more strengthening co-operative institutions & awareness of co-operative members of each class, presidents & Secretaries regarding their rights & duties for that various training programmes, Camps, awareness programmes, Seminars & constant supervision for the members developing programmes are being conducted.

 Development of Information Technology
Sumul Dairy has implemented an effective "Information Technology" for the attraction of new customer & for the benefit of growth to present customers by which
A system is arranged for its facility in the recent competitive period. A software developed by the union "Enterprise wide Digitization" which is made up of oracle 9i & Oracle developer 6i in which the requirement of various department of the union like Milk procurement & sale arrangement, Strength extension work, Cattle feed management, Material Management, Maintenance Management, Human resource, Financial accounting and plant maintenance are covered with safety about 2500 data entry forms, 500 query forms, and 3300 various reports are being developed to activate the system by which about 325000 data being collected daily in the main data base received from computerized system of various places the union.

4.6 VALSAD DISTRICT CO-OPERATIVE MILK PRODUCERS’ UNION LTD., ‘VASUDHARA DAIRY- ALIPUR’:

4.6.1 OVERVIEW OF VASUDHARA DAIRY

Valsad District Co-operative Milk producers Union Limited has been registered in 1973 and initiated Dairy Development Activities on ANAND pattern since 1975. A survey conducted by National Dairy Development Board in the year 1973-74 suggested that the low yielding animals and poor economic conditions of tribal farmers coupled with adverse geographical conditions would come in the way of developing this district as milk shed area.

The milk union did not have any processing facilities of its own till November 1981 and all the milk procured from the rural producers of this District used to be sent to the neighboring dairy plant of Surat district at Surat. In 1981, Dairy plant of 30000 liters per day capacity was commissioned at Alipur village taking commercial loans from Financial Institution and assistance from the state Government. In the beginning there was not enough milk in the District, even to meet the requirement of new 30000 LPD capacity plant. People used to keep the cattle only for manure and whatever little milk they got was used for their own household consumption. The milk Union took up the responsibility to develop dairying in this district and introduced cross-breeding of the local un-productive animals to harvest a new generation of high yielding animals achieve the breakeven point of the plant’s installed capacity. Milk started
flowing as a trickle which subsequently, a 100 KLPD capacity dairy plant came into existence in the year 1993-94 under “operation flood-3” programmed, wherein National Dairy Development Board provided required financial and Technical assistance. Since then the milk producers’ of the Valsad District particularly the women of small and marginal farmers and land less laborers have strengthened the movement called “Vasudhara” (the stream of Goddess Earth) Vasudhara grew from strength to strength and had to again expand its capacity from 100 KLPD to 200 KLPD.

The rural population particularly in tribal belt under the Union’s operations poor and have very too little agricultural income. The tribal areas are facing with water scarcity during the summer season. Hilly and rocky surfaces play crucial part in non development to this was from agricultural point of view. The farmers are also marginal and do not have any other reliable source of income. “Vasudhara” has focused on this segment and today it gets nearly 80 per cent of its total milk from tribal societies. Dairying has been major activity and a reliable source of income for the farmers of this tribal belt. The dairying has always been considered as a subsidiary income in agrarian economy and probably has not been given its due as a major economic activity. Vasudhara dairy has demonstrated that dairying can play a pivotal role in development of rural areas, particularly among the weaker sections having poor resources base and low risk taking capabilities. Today there are around 62000 tribal families [out of total 105000 members] in this districts directly participating in this dairy Co-operative. Vasudhara Dairy has grown as a pioneering organization which has charted its growth track through innovation and visionary actions in Milk procurement as Well as in the area of Milk marketing. Milk procurement has increased many folds. The network of milk producing village societies is increasing and developing rapidly. The footprint of Vasudhara Dairy has covered most of the villages in its area of operation. Vasudhara Dairy is having a strong presence in tribal areas of both the districts i.e. Navsari district and Valsad district. The focus of growth in fact, is in tribal belt. The population of village societies is 762 societies as on 31" march 2005. Out of which 533 societies are conducted and run by the women. Women Societies in tribal belt is 484 which is around 73% of the total tribal Societies.
4.6.2 PRESENT STATUS OF VASUDHARA DAIRY

What started out as a trickle in 1981 has grown to be an ocean known as Vasudhara dairy? This glorious saga of achievement has become possible due to the “can do” approach of Vasudhara Dairy team and a Zeal to do thinks in innovative and effective manners at present Vasudhara Dairy Stands tall for its pioneering creative concepts as well as its Willingness to adopt newer ways and means for the business and its development. Vasudhara Dairy is committed to its cause of existence as sincerely as to the concern for the environment and to the ultimate customers. Vasudhara has been the best performing dairy on National level. Vasudhara Dairy prides itself for dreaming and implementing the involvement of women in the milk business at Village level very successfully. Vasudhara Dairy has added one more feature in its cap by commissioning the production of “AMUL” Ice-cream in November 1997. This plant is modernized and expanded to two times from its original production capacity. In May 2002, another ice-cream plant is commissioned at Nagpur and is developed aggressively to cover the market demand. The saga just goes on and on. Vasudhara Dairy has also embarked on the global level of business quality by inheriting the TQM, HACCP and ISO Concepts today the Capacity of plant is 300 ton liter per day and with the help of total functional Societies Vasudhara Dairy procures 2,66,420 kegs’ milk averagely.

4.6.3 STANDARDIZATION AND QUALITY ASSURANCE PROGRAMME

Standardization and Quality Assurance programme improve the quality of manpower, machinery, products, marketing and financial management. It covers each end every field of management, under this programme. Dairy industry is a highly perishable industry where milk if not processed within four hours after excretion from animal udder, may get spoiled. So, all the staffs are required to be altering anytime. To improve the quality of the entire manpower, dairy structure and staff were reallocated the work according to their taste and interest in different sections. Vasudhara Dairy has got ISO – 9001:2000 certifications for standardization and products. The dairy was got these Certificates from QAS – Australia for Alipur dairy plant.
4.6.4 OTHER ACTIVITIES OF DAIRY

❖ Clean Milk Production Training

To meet with the changing expectations of the market, Vasudhara dairy has initiated clean milk production programme. Under this programme, the focus is on quality of milk at the production level. Thirty two societies are covered at present under this programme. The result achieved is encouraging enough for taking up this programme on large scale. Special indoor as well as outdoor trainings are provided to the farmers, employees of the societies and also to the management committees of the societies. Trainings on various subjects related to the milk business in rural areas like management of society, skill development, and leadership development, book keeping, computer operations, animal husbandry management and also personality development are undertaken on intensive basis.

Twenty vision mission programmes at society level are handled during the year. So far, 32 societies are covered under this. A special programme aimed at enhancing the institute building abilities among the management committee members of 51 societies has also been done during the year. This apart, milk societies are provided with state of the art equipments meant for increasing the record keeping efficiency as well as accuracy of milk weight and quality testing. Wide range of automatic equipments like – EMI, ACLR, AMCS, and processor based milk collection system, Generator sets for standby power requirement and also the solar panels to the areas, which have acute electricity problems, are given to the milk societies. During the year 2004-05, 120 societies are adopted under this programme. The outcome is encouraging.

❖ Participation of Rural Women

Another new terrain Vasudhara dairy ventured was to involve the rural women in to the business of dairying at village level. It is the woman, who does all the work of grooming the cattle, feeding it milking it and pouring the milk to village society. Taking a clue from this, Vasudhara decided to give the management rights of the village societies to women. Wherein all the activities of the milk society taken care of by the elected management committee from the society which comprises all the
women members. What started as a novel concept has become widely popular and got accepted very well by the women milk pours of the rural villages. Today, Vasudhara boast of no less than 533 successfully run women societies out of the total of 762.

This turns out to be around 70 per cent of the total milk pouring societies affiliated with Vasudhara dairy. The membership strength is around 51,000 women in these societies. This number is growing rapidly and the result of this concept implementation is very encouraging.

❖ **Swavilambi Gramin Nari**

Aim of the Swavilambi Gramin Nari which is to making the rural woman independent, self sufficient and to provide self-employment through milk business. Under this scheme, Vasudhara dairy has till date covered 11670 women members and has arranged to finance worth of Rs. 1401 lacs. The recovery rate of 75.37 per cent of the finance is very high and also indicates the sincerity with which the women members have been utilizing this scheme for their benefit.

❖ **Cross Breed**

Vasudhara drive for higher yield per animal and improvement in the hygienic conditions around the farmers’ residence and also around the cattle shed has germinated host of other schemes targeted mainly towards improving the Productivity of milk. Under Productivity Enhancement Programme, various programmes are implements aims at up gradation of cattle through network of 192 A.I. centres spread throughout milk shed area. The union from the very beginning has believed in preventive way to increase the milk production like vaccination, de-worming, calf rearing pregnant cow care, conservation of fodder, supply of balance cattle feed, fodder seeds and mineral mixture.

❖ **Calf Rearing Scheme**

Calf rearing scheme is aimed at improvement of the breed of cow at farmer level. Rather than buying the cows from outside agencies the women farmers are encouraged through this scheme to nurture the cow calf, right from its birth in
scientific way. Vasudhara dairy provides all the guidelines and required support for this scheme that includes the vaccination, insurance coverage, nutritional feed and finance. This scheme has been in implementation since last 6 years and has been accepted by 3955 women members, taking finance of Rs. 117 lacs and rearing Rs. 48 lacs after successful utilizing the fund. The offspring is 1108 calf calving till date.

**Fodder Bank**

This scheme aims to provide dry fodder to the society members every time. At the time there requires. Through this scheme members are given finance to purchase & stock dry fodder which can fulfill the requirements of the cattle round the year for food. This scheme was introduces in 1997-98. During the year 2004-05 through 56 women dairy co-operative society 14500 women members are given 9 per cent interest loan to the tunes of Rs. 43 lacks, which should be repaid in eight installments to the dairy.

**Worm compost Scheme**

The purpose of this scheme is to provide how to produce the organic fertilizer by utilizing agriculture, cattle and kitchen wastage at farmer's place. Vasudhara dairy gives necessary training and technical inputs to the interested members. This scheme is conducted and managed by self-help group. In the year 2004-05 worm compost pits are established at members place. This fertilizer is utilized by the members to increase their yield. In case a surplus production of such fertilizer, Vasudhara dairy will buy back such production and will do the marketing of this fertilizer to the farmers’ community using its vast network.

**Bio-Gas Plant**

This scheme aims to serve multiple objects i.e. hygiene, savings on fuel and preservation of environment. The waste and manure that the cattle shed greatest are utilized in best possible way by generating methane gas which is used for cooking purpose. The left over manure after the gas separation is again used as fertilizer for agricultural purpose. Till date Vasudhara dairy has helped to put up 4,096 bio gas
plants to women members. The finance deployed was Rs. 122 lacs and recovery is to the tune of Rs. 117 lacs.

4.6.5 TECHNICAL INPUT SERVICES

Vasudhara dairy also provides technical input services farmers for their animal’s viz. artificial insemination, first aid, vaccination, de-worming of cattle, infertility treatment, insurance coverage, and cattle feed quality fodder seeds, area treatment of paddy straw, chaff cutters etc. Vasudhara dairy also helps farmer members on aspect of wasteland development; water shed management and compost pit etc. Farmer is given protection of insurance cover under respective scheme.

4.6.6 INSURANCE SCHEME

Vasudhara dairy also provides insurance scheme for animals. It means that the dairy gives insurance facility to farmer members for their cow & buffaloes. The insurance premium rate is applied at the rate of 4.3 per cent. The insured amount is Rs. 12,000 per animal. The vasudhara dairy gives contribution of 33 per cent of the total premium for insurance of animals. In the year 2001-02, management has introduced the insurance scheme for farmer members which are known as “jan shree vima yojana.” Under this scheme farmer is insured for Rs. 20,000 for natural health and Rs. 50,000 for accidental death. Moreover, the farmer member has been given Rs. 25,000 in case of he/she will lose their any two physical parts of the body. In the year 2004-05, 11040 animals are covered and 8849 farmer members are covered under this scheme.

4.6.7 ACHIEVEMENT

Winning national Productivity council awards seems to have become a habit at Vasudhara dairy. Vasudhara dairy has won these prestigious awards as second best liquid milk plant in India for the years 1993-94, 1995-96 and 1996-97. Boisar Ice-cream plant has been awarded the best ICMU in stock age monitoring by GCMMF during the year 2003-04. During the year, Boisar Ice-cream plant also received the award for exceptional manufacturing performance for the year 2002 from Tarapur
Industrial Estate Association (TIEA). Milk procurement during the year 2012-13 was 17,54,66,824 kilogram. Registered milk Vasudhara Dairy sales ghee, butter milk, curd, ice-cream, flavored milk etc. Vasudhara has its own cattle feed plant also.

4.7 SABARKANTHA DISTRICT CO-OPERATIVE MILK PRODUCERS' UNION LTD., ‘SABAR DAIRY- HIMMATNAGAR’:

4.7.1 OVERVIEW OF GOPAL DAIRY

The Sabarkantha District Co-operative Milk Producers’ Union limited, (Sabar Dairy) was established in the year 1964. The milk union started collecting raw Milk from 19 primary co-operative milk societies on 29-10-1965 and started Supply it without any process to Municipal dairy, Ahmedabad (now known as “Abad dairy” run by Gujarat dairy development corporation). Municipal dairy being a consumers oriented dairy they could not accept more quantity of milk during the flush season. This resulted in rotational stoppages of milk collection from societies during flush season. The milk union could not expand its activities for the first seven years due to inadequate financial resources. In the year 1971 under Operation Flood-I programme of Indian Dairy Corporation (A Government of India undertaking) a dairy project was sanctioned for handling 1.50 lakhs liters of milk per day. The total cost of the dairy plant was Rs.2.52 corers which were received from Indian Dairy Corporation through government of Gujarat.

The milk union acquired about 40 acres of land on national highway No. 8, near village Boria, which is six kilometres away from Himmatnagar. The foundation stone of sabar dairy project was laid by Dr.V.Kurien, Chairman, National Dairy Development Board and Indian Dairy Corporation on 11th June 1971. The reception and pasteurization of milk was started on 12th may 1973. The condensing and spray drying plant was commissioned in the year 1974. Looking to the potentialities of the milk collection, dairy plant was expanded so as to handle 4 lakhs liters of milk per day under operation flood-ii programme of Indian Dairy Corporation.
The 1st chilling center of the Union was established near Dhansura with the financial assistance received from Small Farmers Development Agency. The chilling centre was commissioned in October, 1976. The milk processing capacity of this chilling centre was 30,000 liters of milk per day.

The 2nd chilling centre of the Union was established at Khedbrahma; one of the four tribal talukas. The other three are Meghraj, Vijaynagar and Bhiloda. The chilling centre was inaugurated by her Excellency the Governor of Gujarat State Smt Sharada Mukherjee in March 1979. In October, 1976. The initial milk processing capacity of this chilling centre was 25,000 liters of milk per day.

The 3rd chilling centre of the Union was established at Shamlaji, another tribal dominated area. The milk processing capacity of this chilling centre was 25,000 liters of milk per day. The milk collection from Bhiloda and Meghraj talukas was processed at this new chilling centre. The milk processing capacity of these two chilling centres was further expanded with the financial support from the State Government.

Besides the above three milk chilling centres the Union presently operates three other milk chilling centres at places like Bayad, Prantij and Idar to cover all the milk collected from the entire district. Besides these milk chilling centres, the Union also got installed Bulk Milk Cooling Units (BMCUs) in large numbers to keep the sour percentage of milk to "zero" level.

4.7.2 MILK PRODUCTS


4.7.3 CATTLE FEED MANUFACTURING PLANT

The union a cattle feed manufacturing plant of 100 metric ton per day capacity was established under Operation Flood-III programme of the Indian Dairy Corporation through the Government of Gujarat. The plant was commissioned in September, 1976.
With the increase in demand for balanced cattle feed the processing capacity of the plant was periodically expanded. Presently the manufacturing capacity of the plant is 450 metric ton per day. Still the expansion activities are underway and when the expansion is complete the plant would have the processing capacity of 950 metric ton per day cattle feed.

4.7.4 ANIMAL HUSBANDRY ACTIVITIES

The Union has established a network of animal health care centres covering the entire district, where qualified veterinarians are posted with emergency visits and vehicles to attend the sick animals. The centres work round the clock. In case of emergency visits a token fee is charged and the medicine is supplied at purchase cost.

4.7.5 AWARDS & ACHIEVEMENTS

The Sabar Dairy has been awarded by with the underwritten awards;

- Gujarat State Safety Award-1979
- Gujarat State Safety Award-2002
- Gujarat State Safety Award-2004
- National Productivity Certificate-2005
- National Safety Award-2005
- National Productivity Counciling-2008
- National Productivity Awards-2008

4.8 GANDHINAGAR DISTRICT CO-OPERATIVE MILK PRODUCERS' UNION LTD., ‘MADHUR DAIRY-GANDHINAGAR’:

4.8.1 OVERVIEW OF MADHUR DAIRY

The highest milk producer in the entire globe-India boasts of that status. India is otherwise known as the ‘Oyster’ of the global dairy industry, with opportunities galore to the entrepreneurs globally. Anyone might want to capitalize on the largest and fastest growing milk and milk products' market.
The Gandhinagar District Co-operative Milk Producers’ Union Ltd. was registered on February 06, 1971 under the Gujarat State Co-operative Act, 1961 by few prominent co-operators of Gandhinagar district with limited members and limited societies. Shri Jethabhai Fulabhai Patel was appointed as a first chairman of the union. Co-operative member of the district frequently requested for the individual dairy plant to the N.D.D.B. and Dr. Kurien also. But the government and N.D.D.B. found that the Gandhinagar milk union cannot run the individual dairy plant. So they state to the union to accept milk as a chilling center of Ahmedabad dairy or Sabar dairy.

Finally, as a result of a frequent request to N.D.D.B. and government, the individual dairy plant was permitted to the union. From 1971 to 1979 the milk union supplied the milk to Ahmedabad Municipal dairy. Due to insufficient milk supply and not having the individual dairy plant, the milk union had to pay penalty; the financial position of milk union was weakening day to day. And the co-operative societies started to sell their milk to the private traders. Taking the financial position of the milk union in mind, the management of the union was handed over to Gujarat Dairy development corporation (G.D.D.C.) on 8th April 1982. In the initial stage, G.D.D.C procured 13000 liters milk per day from 21 milk co-operative societies. G.D.D.C had also the management of Saurashtra’s dairies. All the dairies got the equal price of the milk according to their policy. Gujarat dairy development corporation (G.D.D.C) had not given sufficient price to Gandhinagar district’s producers. These producers were given the price according to Saurashtra dairies G.D.D.C had given the milk prices to Gandhinagar districts producers according to their policy instead of theirs milk quality. So, milk producers were not satisfied with their price.

Due to these conditions, district milk producers established the advisory committee. This committee urged many times to GDDC to give sufficient milk prices to the district milk producers. In this way, some persons also requested to the government to take away the administration of the dairy from G.D.D.C. and finally as a result of this movement, the Gandhinagar district milk producers had taken the administration of the dairy from G.D.D.C. on 22nd September, 1988. At that time, Shri Dashrathbhai Nathabhai Patel was elected as the first chairman of the union.
In the year 1988, the Madhur Dairy sold 13000 liter milk per day. In this initial stage the Madhur Dairy produced the confidence of the milk producers by during the economical management of the Madhur Dairy and by giving the sufficient prices of milk and input facilities to the milk producers. Year by year, the Madhur Dairy became the profitable position, and today in 2012-13 the total milk procurement of the Madhur Dairy is 504 lakh kegs. Per day and the total selling figure of the dairy is 1,43,418 liter per day. In the year 1996-'97, the total turn-over of the Madhur Dairy was Rs. 29.02 Crores and the profit was Rs. 4.84 laces and today, in 2012-13 the total turn-over of the dairy is Rs.160.40 crores and the profit is Rs.80.67 lacks. It means, the total turn-over of the dairy has multiplied to more 5 times and the profit has multiplied to more 20 times in between the period from 1996-97 to 2012-13. Moreover, the capacity of the dairy plant has also been increased by the union. The capacity of the dairy plant was 60000 litres per day in the year 1996-97. And today the capacity of the daily plant is 250000 litres per day.

4.8.2 MARKETING

The union has accepted the responsibility about the nutritional value of milk, the quality standards and hygienic condition of dairy plants technically, which are getting tremendous response. In spite of throat cutting competition of private dairies, the union has remained the market leader and has achieved 80 per cent market of the district.

Today, 115 milk co-operative societies have working under the union. In the year 2012-13, The Madhur Dairy has procured 1,38,105 kegs milk per day, with the help of 42635 co-operative farmer members. In this year 2012-13, the Madhur Dairy has procured 5,04,08,496 kegs milk, In this year the Madhur dairy has marketed 1,43,418 milk per day. The Madhur dairy has sold 15,656 litre Pasteurized chhaas per day and 1,618 kegs Ghee per day. The Dairy has sold 1,50,097 kegs Madhur sweets and 60,224 litre Madhur ICE-Cream during the year.
4.8.3 PRODUCTS MANUFACTURED

The Madhur Dairy products and markets milk and various milk products under the “Madhur” brand name, and also manufactures and markets under the “Amul” brand name on behalf of Gujarat Co-operative milk marketing Federation Ltd. (GCMMF Ltd.). The Dairy has offered buffalo milk, cow milk, and various milk products like chhaas, ghee, flavoured milk, sweets, Ice-cream, cow-ghee. Consistent quality assurance standards, hygienic condition and automated production process and attractive packing have helped to establish these products in the market.

The Dairy has a commitment to provide remunerative price to the milk producers on one side and set high quality of milk to consumers in Gandhinagar city and Gandhinagar district at a reasonable price. In a short period, The Dairy Will launch three new milk products like “Madhur Shrikhand”, “Madhur Matho” and “Mashur Dahi” in the market. This could be achieved only due to proper planning of milk routes, ideal managerial, increasing in milk procurement and low lost in handling through sheer managerial pragmatism.

4.8.4 QUALITY ASSURANCE PROGRAMME OR TOTAL QUALITY MANAGEMENT

Since last six years various quality management actions have been taken by the top management. Dairy industry is a highly perishable industry. So all the staff was required to be alert any time. Under the Total Quality Management programmer, the top management has started Internal consultant Development programmed (ICDP). It has improved the quality of manpower, machinery, money, marketing and management. The Madhur Dairy has got ISO-9002 certificate and HACCP-9000 Certificate for quality product and management in the year 2000-01.

4.8.5 OTHER ACTIVITIES OF THE DAIRY

- Animal Health Service

The prevention of the health hazard parents a challenge, So Madhur Dairy is providing Mobile veterinary services to fulfil the basic requirement through network
system which ensures special visit to each village once in a week. Veterinary service also takes care of control measures like vaccination and special treatment during the emergency. Emergency service is made available in no time throughout the year at nominal cost.

❖ **Insurance Scheme**

The Madhur dairy contributes 33 per cent of premium for insurance of animals to insure companies. The dairy also provides the soup insurance scheme of former members also. Under this scheme, farmer is insured for Rs. 20000/- for natural death and for Rs. 50000/- for a cliental death. The dairy contributes an insurances premium at the rate of 33 per cent to the total premium. At the end of year 2012-13, 12291 animals and 18848 farmer members have taken the benefit of this scheme.
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