4.0 Introduction:

In this chapter, an effort has been made to highlight the functions of milk union, which is working towards welfare of milk producers and trying to sustainable growth of dairy farming in the district. Belgaum milk union is a cooperative organization it covers entire district of ten talukas area and some part of neighbouring Maharashtra and Goa states. Belgaum district is situated at North-West part of Karnataka bordering state of Maharashtra and Goa state. In the district number of private dairy plants have been established to collect available surplus milk which they are dominated in milk procurement in border area of the district. Among 28 districts in Karnataka State, Belgaum district is a pioneer in dairy forming. In the district agriculture has been more developed, most part of the district has covered by irrigation which made more potential for dairy forming. Major crops are sugarcane, cotton, paddy and tobacco are considered as commercial crops. In the district 8 rivers flowed and made green prosperous and progressed in agriculture which provided more advantages to dairy farming. Due to good irrigation facilities green and dry fodder availability is plenty to feed cattle and dairy animals. In the district union has established 434 Dairy Cooperative societies at village level and 28 women dairy cooperative societies also established at village level under step programme. Union average daily milk procurement cross 50000 liters which it stands 8th place both in procurement and marketing in the state. Union enrolled 66630 members who provide milk to union. The union provide all necessary facilities to its members to keep their interest. The union is working towards the welfare of milk producers and trying to sustainable growth of dairy forming to upliftment of form community. So, an analytical study regarding
MAP -2
LOCATION OF BELGAUM MILK UNION LTD.,
the functions of Belgaum district cooperative milk producers societies union and its milk shed area has been studied in this chapter.

4.1 Location of Belgaum District:

Belgaum district is located in North-West part of the state. It lies between 15°23' to 16°58' North latitude and 74°51' to 75°28' East longitudes. The district is between 450 to 900 mts above MLS (Mean Sea Level) and extends over an area of 13379 Sq.mtr. The district is surrounded by Maharastra State in the North, Bagalkot District in the East, Dharwad and Uttar Kannada Districts in the South and in the West by Goa and Maharastra States. Similarly the district occupies an area of 13,46,348 hectares. On an average one fifth of its cultivable land is provided with irrigation and it ranks fifths in area among the districts of the State. Krishna, Malaprabha, Ghataprabha, Doodaganga, Vedaganga, Markandeya and Hiranyakesi rivers have flowed in the district and have made green prosperous location for dairy where the green and dry fodder availability is more to feed cattle and dairy animals. Hence, Belgaum district is pioneer in dairy farming. Agricultural farmers have made more progress in milk production. Buffaloes milk is famous not only in the district, but also in Maharastra and Goa. Buffalo milk has got its name for good quality and nutrition.

Therefore, dairy employers and traders have got plenty opportunity of milk production and have made a milestone in the product of "Khunda" a sweet product, which has got good name and demand not only in Karnataka, it has become exporting item to other states and also in abroad.

4.2 Brief Profile of Belgaum District:

In the state of Karnataka there are 28 districts among which Belgaum district is situated in North part of the state. It lies between 15°23 to 16°58 North latitude and 74°51 to 75°28 East latitudes. District is surrounded by Maharastra state in the North, Bagalkot district in the East,
Dharwad and Uttar Kannada district in the South and in the West by Maharashtra and Goa states. It occupies an area of 13415 Sq.km. and ranks fifth in area among the district of the state. In the district agri-based activity have been more developed where major output come from agriculture and main economic crops of the district are Sugarcane, Paddy, Cotton, Tobacco and Bazra. In the district there were 10 talukas, 35 hobalies, 1138 villages 20 towns are found. Belgaum city is main administrative center for smooth administration whole district has been divided into three revenue divisions. In the district one City Corporation, two Town Municipals, 17 Pursabhes, 6 Town Panchayats functioning, all development programs are implemented through the cooperation of Zilla Panchayat, 10 Taluka Panchayats and 485 Gram Panchayats.

In the district, Krishna, Dudaganga, Vedaganga, Malaprabha, Ghataprabha, Markandeya and Hiranyakeshi rivers have flowed and have made green prosperous location for dairy where green and dry fodder availability is more to feed cattle and milch animals.

According to 2001 census district has total 42.07 lakh pollution, among which 21.48 males and 20.59 lakh females indicates that male population slightly higher than the female population. Where female constitute 51.01% and female 48.19%. The literacy rate with a total of 64.42 %, male literacy rate dominates with 75.89 % over that of female 52.53 %. The density of population was 314 per Sq. km. high density of 786 per Sq.km observed in Belgaum city and with low density of 139 per Sq.km. observed in Khanapur.

In the district area, 75.94% and 24.06 % living in urban and rural area respectively. According to 2001 census 23.23 lakh people were literate.
The performance of South-West monsoon rainfall was nearly normal in this district. The average rainfall over the district was 785 mm as against its normal rainfall of 808 mm. Out of ten talukas, in the district, excess rainfall occurred in Belgaum, Chikkodi and Khanapur talukas normal rainfall occurred in Bailhongal, Gokak, Hukkeri, Ramadurga and Raibag talukas and deficit rainfall occurred in Athani (-58% of the normal) and Soundatti (-35% of the normal).

Month-wise performance of South-West monsoon rainfall indicates that the district had excess rainfall during June and August months and deficit rainfall during July and September months. Maximum dry spell weeks (13) occurred in Athani taluka followed by less (11) by spell weeks in Soundatti. In the remaining talukas, the dry spell duration ranged from 4 to 8 weeks.

The climatic condition in the district is characterised by general dryness, except during the monsoon season, one peculiarity of the rains during June to September period is that they are continuous and occasionally heavy. Soils of the district comprise red soils, medium black soils and deep black soils. Th major soils are deep black soils.

In the district out of total area 75.26 percent of which grass cropped area and 63.37 percent is net sown area. Nearly 30 percent of the total grass cropped area is net irrigated area in which 30 percent in irrigated by canals. In the district Jowar was the major food crop, which has the highest area (19.37%) of total grass cropped area followed by maize (11.55%) and wheat (5.36%). Among the commercial crops, sugarcane covers major area (13.84%) followed by cotton (4.83%) and ground nut (10.7%) Horsegram and tur are also grown in the district.
Belgaum district has 275418 of total livestock of which 18.6% are cattle, 26.93 percent buffalo, 33.07 % sheep, 15.88 percent of goat and remaining are other livestock. Due to good irrigation facilities agriculture has more developed which given more incentives and advantages to develop in dairy farming. Milk production and yield comparatively high than other ports of the state and dairy farming is growing very fast in the district and dairy farmers are meeting their day today expenditure by dairy income in this region. The present study covers whole Belgaum district where there is one district level cooperative milk union 325 village level dairy cooperative societies are functioning under control of district union. All facilities are channelised through these Dairy Cooperatives, and these societies collect milk every day from milk producers and make payment on the basis Fat and SNF content, payment is made weekly in the society office. So, this study is focussed light on dairy farming, makerting of milk and milk product by union, and also to understand problems hidden in the dairy farming in day today life of dairy farmers and it is a new and modest study in this region.

4.3 Background of Belgaum Milk Union (BEMUL). : An Historical Prospective

The AMUL pattern of dairy cooperative led to the establishment of the National Dairy Development Board in 1965 and Indian Dairy Corporation in 1970. At that time in Karnataka, most of the dairy plants were underutilised and the milk handled was even 50 per cent by the plants. To circumvent this problem an Integrated Dairy Development Projects designed on the lines of AMUL pattern cooperative infrastructure which started functioning during 1974-75 in 4 major milk sheds namely Bangalore, Mysore, Hassan and Tumkur covering 8 southern districts with the financial assistance of international Development Agency (IDA) with an outlay of Rs.51 crores. In the year 1974 Karnataka Dairy Development Corporation
was set up to implement the project. The main objective of this project was for developing an integrated programme for increasing milk production in rural area of southern Karnataka, providing milk collection, processing and marketing facilities and technical services for artificial insemination and animal health. Milk cooperative societies were organised and grouped into unions. The unions were provided technical support by the NDDB through the Karantaka Dairy Development Corporation for recruitment, training and supervision. At the end of the 1984, the project ended and the dairy development activities were continued under operation Flood-II on completion of International Development Agency Project. The State Government took a decision to extend the projects scope to the entire length and breadth of the state. Then dairy development activity was continued under the organization of Karnataka Milk Federation (KMF) that came into existence as a successor to Karnataka Dairy Development Corporation (KDDC) in May 1984. The Karnataka Milk Products Limited, which was established in the year 1980 was transferred to KMF in the year 1984. In the year 1985, Government transferred the dairies to the control of KMF. The successive phase of operation Flood Programme started during 1987 and continued (operation Flood III) until April, 1996 covering the entire state through 13 milk unions.

Earlier in the year 1966 the government of Karnataka, established dairy in Belgaum District with a capacity of 10,000 litres per day and it started functioning by procuring 3000 litres per day. After KMF came into existence in the year May 1984, all milk unions were brought under the control of KMF. Under Operation Flood Programme II in 1983, Karnataka Milk Federation sent 16 members of experienced leading officers team to get survey for establishment of Amul pattern co-operatives in the district. Initially first milk route was started procuring 500 litres of milk per day by twelve cooperatives. Thereafter, establishment of co-operative societies
have increased. The district level cooperative role was got more importance to lead and manage milk and milk products in the district and provide appropriate remuneration to milk producers for welfare of farm family with development of dairy farming. Belgaum Milk Union was registered by help of Karnataka Milk Federation for fulfillment of all above functions on 24th December 1985. Now, union's average procurement is about 47,481 kg per day by 341 Dairy Cooperative Societies which are working in villages. Since then BEMUL is a cooperative organization having 65179 cooperative member farmers in the district. Since its inception, union has established 431 village Dairy Cooperatives out of which 325 are functioning. The collected milk is processed and supplied to the consumers of the urban and town areas. The union has been striving to give reasonable support price to the milk producers of the rural area. Thereby it aims at to supply best quality milk to the population of urban and town areas to match to money paid by them.

According to the Karnataka Government Order to achieve more progress of unions and an intensive of all business, oversees by milk unions, Karnataka Milk Federation transferred all administrative responsibilities to Belgaum Milk Union on September 1st 1988. With the increased functions of cooperatives in the union, and with the increasing milk procurement dairy daily capacity has been increased to 20,000 litres. It is important that Belgaum Milk Union is a pioneer having made separate procurement system of Buffaloes and cow milk in the Union. It is the first union of having system of separating milk in the state with increased milk production in the district and to cope up with the situation under Operation Flood III in the year 1995. With 60,000 litres per day processing capacity a major dairy unit worth of Rs.5.53 crores has been established in Belgaum city with financial assistance of National Dairy Development Board, which is a backbone of dairy sector. The newly established dairy plant has modernised machine,
having a technological facility of separating milk of Buffalo and Cow, makes large quantity of ghee, butter and other products in a short time.

Karnataka Milk Federation has a wide range of products under brand name of "Nandini"; but, federation has restricted BEMUL to produce only some products, the products which are manufactured and marketed under the brand name of "Nandini". They are Nandini Ghee, which is available in 200 ml and 500 ml pouches and containers of 1 kg to meet requirement of all categories of people. It is obtained after heating cream butter. Second product is Nandini Pedhas, which are prepared from pure milk with low sugar contents. Another solid product is skimmed milk powder which is used to prepare any time it is available in 100 gm, 200 gm and 500 gm pouches along with these products. Union has also been producing cream flavoured milk, curds, butter milk and Khunda in recent years.

Besides producing products, BEMUL is marketing the milk in city and town areas under the brand name of "Nandini". There are three types of Nandini Milk with various prices, viz. Tonned Milk is sold at present with price of Rs.18 per litre, full cream milk is sold with the price of Rs.22 per litre and standardised milk with 17 per litre and Shubam milk is sold with Rs. 24 per litre. Like this the BEMUL is trying to get wide market in the district to reduce middlemen in rural and urban area.

4.4. Objectives of BEMUL:

Belgaum Milk Union is a member of Cooperative Apex Body in the State of Karnataka for representing dairy farmers cooperative societies which are functioning in villages. If has been working for implementing dairy development activities to achieve the following objectives viz.:

i) To provide assured and remunerative market for all milk producers through out the year.

ii) To provide hygienic and good quality milk to urban consumers.
iii) To build village level institutions under cooperative principle to manage dairy activities by milk producers themselves.

iv) To ensure provision of technical facilities to milk producers through the cooperatives which are necessary in Dairy.

v) To facilitate rural development by providing for self employment at village level.

vi) To eliminate middlemen and organized institution to be removed and managed by milk producers.

vii) To achieve scale of economy to ensure maximum returns to milk producers and

viii) To supply wholesome milk to urban and town people at lowest possible price.

4.4.1. An Overview of BEMUL Union:

<table>
<thead>
<tr>
<th>Name of the Union and Address</th>
<th>Belgaum District Cooperative Milk Producers' Societies Union Limited. (BEMUL) Dairy Premises, Kanbargi Road, Blegaum.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration No.</td>
<td>GRL-9072 / 1985-86.</td>
</tr>
<tr>
<td>Year of Establishment</td>
<td>24-December-1985.</td>
</tr>
<tr>
<td>Type of Unit</td>
<td>Small Scale Unit.</td>
</tr>
<tr>
<td>Constitution</td>
<td>Co-operative.</td>
</tr>
<tr>
<td>Maximum Operation Capacity</td>
<td>60,000 litre pre day.</td>
</tr>
<tr>
<td>Main Raw Material</td>
<td>Milk.</td>
</tr>
<tr>
<td>Organization Set up</td>
<td>22 Acres of Land. Capital - 5.82 Crores Employees - 146.</td>
</tr>
</tbody>
</table>
4.4.2. Organizational Structure of BEMUL:

Chairman
↓
Board of Directors
↓
Managing Director
↓

<table>
<thead>
<tr>
<th>Manger Dairy</th>
<th>Deputy Manager Finance Section</th>
<th>Manager (P &amp; I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>↓</td>
<td>↓</td>
<td>↓</td>
</tr>
<tr>
<td>Asst. Manager (Engineer)</td>
<td>Administration Section</td>
<td>Procurement</td>
</tr>
<tr>
<td>↓</td>
<td>Purchase Section</td>
<td>Section</td>
</tr>
<tr>
<td>Asst. Manager (OT)</td>
<td>Marketing Section</td>
<td>Input Section</td>
</tr>
<tr>
<td>↓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Control Section</td>
<td>Storage Section</td>
<td></td>
</tr>
</tbody>
</table>

The above chart indicates that the union has various sections. Every section has a head to lead day to day business in the union. Besides section head has other supervision personnel. The Board of Directors chose a person as Chairman, Managing Director oversees the entire administration and give the directions to all staff for smooth functioning the of union.

Belgaum Milk Union has covered whole district area and is collecting milk from all 10 taluka sub centres where these centres are established in taluka places. Union has established 60,000 litres capacity plant in Belgaum city, 20,000 litres capacity of chilling a centre established at Gokak, 10,000 litres per day capacity of Bulk Cooler centre at Ramdurg and 4,000 litre capacity of Bulk Cooler at Athani have been established to reduce the time consumption of transport and meet the demand of consumers in the town.
area except Gokak, Ramdurg and Athani remaining seven talukas have milk collecting centres.

4.5. Functional Analysis of the Union:

Belgaum milk union is a member of Karnataka Milk Federation and registered on 24th December 1985. It is a cooperative organization. It covers entire Belgaum District along with some part of neighboring states of Maharashtra and Goa. It is situated at Northwest part of Karnataka bordering Maharashtra and Goa states. The union's processing capacity was 60 thousand litres per day and the establishment cost was 5.83 crores. The Belgaum Milk Union, a District level Cooperative Milk Producers Union is a second level institution in the three-tiered structure of Dairy Cooperatives. As per Anand Pattern Scheme, union is entrusted with the task of procurement, production and processing, then marketing of milks and milk products as well as the supply of inputs through primary cooperative societies which are connecting links between the milk producers and the consumers.

In the union's purview, there are various sections which constitute the operations of the union. All those section activities are carried out by supervision of managing director and department section heads. Each section has its staff to carry out day-to-day work. The responsibility of various sections' activity is left with section head.

4.6 Milk Procurement Activities of the Union:

As the name itself suggests, it is concerned with collection of milk from village level milk producers cooperative societies which are functioning at village areas. Milk producing members supply milk twice in a day to their nearest cooperative societies in the village. Collected raw milk by cooperatives is sent to main dairy, or chilling centres or near Bulk Cooler.
by loading cans in contract vehicles, which function on contract basis on various milk routes. The union undertakes surveys to establish dairy cooperatives in rural area. The union has 434 village milk producing cooperative societies out of which 325 were functioning in March 2007. All their functioning cooperative societies were collecting milk around 53154 kgpd during 2006-07 and each society's average milk collection was 163.55 kg pd at the same time.

The union was collecting milk from 34 milk procurement routes as on march 2007. Out of 34 routes, 5 are discontinued because of low procurement and high cost of transportation. The destination of each route is different and procurement of milk is also different.

The distance covered differs from route to route per day. About 12 routes are attached to main dairy. These routes constitute major share of total milk collection. The union has one chilling centre at Gokak and one each bulk cooler in Ramdurg and Athani. The main dairy has processing capacity of 60TLPD, whereas Gokak CC has processing capacity of 20TLPD with Ramdurg having 10TLPD and Athani has 4TLPD. The raw milk chilled in CC and BC's brought to main dairy for further process and preparation of milk products. Nine milk procurement routes are connected to Gokak CC. It is the second highest collection and storing chilling centre. Five routes are attached to Ramdurg Bulk Cooler and three routes are connected to Athani Bulk Cooler for quick processing of milk to avoid spoilage. The main dairy plant in charge and dairy manager are responsible for processing of milk collected from various routes, information on quantity of milk processed into pasteurized milk and milk products handlings loss record maintained by the section head.
Table 4.1

Milk Procurement Routes and Distance covered by Route Vehicle

<table>
<thead>
<tr>
<th>R. No.</th>
<th>Route Name</th>
<th>Distance Covered</th>
<th>R. No.</th>
<th>Route Name</th>
<th>Distance Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Itagi.</td>
<td>256</td>
<td>20.</td>
<td>Gokak VI</td>
<td>288</td>
</tr>
<tr>
<td>7.</td>
<td>Sanikop.</td>
<td>246</td>
<td>24.</td>
<td>Godachi.</td>
<td>--</td>
</tr>
<tr>
<td>8.</td>
<td>Ankalagi.</td>
<td>244</td>
<td>25.</td>
<td>Katkol.</td>
<td>220</td>
</tr>
<tr>
<td>10.</td>
<td>Anigol.</td>
<td>278</td>
<td>27.</td>
<td>Kurnkeri.</td>
<td>230</td>
</tr>
<tr>
<td>12.</td>
<td>Tirthakunde.</td>
<td>--</td>
<td>29.</td>
<td>Sureban.</td>
<td>140</td>
</tr>
<tr>
<td>15.</td>
<td>Gokak I</td>
<td>214</td>
<td>32.</td>
<td>Athani II</td>
<td>184</td>
</tr>
<tr>
<td>16.</td>
<td>Gokak II</td>
<td>222</td>
<td>33.</td>
<td>Athani III</td>
<td>266</td>
</tr>
<tr>
<td>17.</td>
<td>Gokak III</td>
<td>202</td>
<td>34.</td>
<td>Athani IV</td>
<td>--</td>
</tr>
</tbody>
</table>

Source: Collected from Official Record.

The union carry out various procurement promotional activities. The activities include conducting programmes on dairy development for the benefit of milk producers education, producers to improve the production of milk and advantages of supplying milk to DCS. The milk procurement routes are presented in Table 4.1.

4.7 Production Division:

Production is the basic operating function of every enterprise around which all other activities of an organization such as financing, marketing,
storing, finance department, research and development revolve, production section in the union deals with decision making relating to production process resulting in production of goods of specification after procurement of raw milk from the dairy cooperative societies. Raw milk is processed in the main plant, and in chilling center and bulk coolers. Good quality milk is differentiated in processing time depending on the contents of FAT and SNF (Solid Not Fat) as union decided to differentiate four types of milk based on quality as well as FAT & SNF in the union milk standardized as Tonned Milk containing 3.5% FAT, with 8.5% SNF, second one standardised milk it FAT contains 4.5% and 8.5% SNF where full cream milk is separated which contains FAT 6.0% and 9.0% SNF another one different quality is Shubham Milk of buffalo milk. Its FAT content is 6.0% & 9.0% SNF among four types of milk, two of them are full cream and Shubham milk having high FAT & SNF is fixed high rate to consumer. In the production process, various steps are involved at reaching place and milk cans are marked with two different colours, To differentiate between cow milks and buffalo milk, union has made separate arrangement for four Steps of Sugar Testing. As the payment to the supplies depend mainly on FAT & SNF contents in the milk, supplier may add sugar to increase the FAT and SNF content. Hence, to avoid this adulteration 10 ml of milk is taken in a Test-tube and 1ml of hydrochloric acid little crystal of resorcinol is mixed to it and heated for five minutes. If solution turns orange colour, it is deemed that sugar is mixed in the milk.

4.7.1. Collection of Milk:

Red colour cans used show cows milk and white colour buffaloes milk. Then the various testing methods are used to check quality of milk. In this testing the first step is Lactometer Testing, this testing is important to check water content in the milk. Sample milk is taken and lactometer is dipped into it. If the lactometer shows lower reading below 25°, then it is known that water is added to milk.
Second Testing step is Fat Testing which is to know the fat content in the milk. In this step, the 10ml of Sulphuric Acid is taken in Barometer and 10.75 ml of milk is added through pipette, again 1ml of amyl alcohol and some drops of distilled water are added and the solution is shaken well. This solution is kept in centrifugal machine for 5 minutes, then it shows the water content in milk. If fat content is low then low rate paid.

**Process Flow of Milk**

```
Milk Society
  ↓
Transport
  ↓
Main Dairy
  ↓
Grading
  ↓
Weighing
  ↓
Sampling
  ↓
Storing
  ↓
Chilling
  ↓
Pasteurization
  ↓
Standardisation
  ↓
Packing
  ↓
Cold Room
  ↓
Marketing
  ↓
Sales
  ↓
Cream
  ↓
Ghee
  ↓
Skim Milk
```
Third Testing is Acid Testing Step, to know the acidic nature in the milk. In this testing, 10 ml of milk is taken in a breaker and 2 drops of phenopathelene are added, with sodium hydroxide solution taken in a Bustle and slowly it is added to the breaker, then it turns into pure permanent Pink colour, then if found acidic nature, the normal milk must have 0.135% to 0.153% of lactic acid. If this is more than 0.16% then milk must be reprocessed immediately.

Fourth step sugar testing:

As the payment to suppliers depend mainly on Fat and SNF content in milk, supplier may add sugar to increase Fat and NSF content. Hence to avoid adulteration, 10ml of milk taken in a test tube and 1ml of hydrochloric acid, and crystal of resorcinol mixed and heated for 5 minute, if solution turned orange colour it is deemed that sugar is mixed in milk. Accordingly refer will be decided flowered.

4.7.2. Storage of Chilled Milk:

The collected an milk is stored in storage tank, where union has totally 6 storage tanks of which three are vertical with 30,000 litres capacity each and the remaining three one horizontal among which two are having capacity of 10,000 litres each and one is having 15,000 litres capacity.

4.7.3. Pasteurization:

The stored milk is pasteurized and resulting milk is nothing but processed milk which is ready for packing. The main objective of pasteurization is to kill bacteria and to increase the self life of milk. The process of pasteurization can be done by two methods one is low temperature, longer time method by heating at 63°C about 30 minutes and instant cooled at 5°C. Another method is high temperature shorter time method, by heating at 72°C for about 15 minutes and instant cooled at 5°C.
The union adopted high temperature time method. The pasteurization of milk takes place 10,000 litres per hour while pasteurized milk containing any excess FAT, then it is separated by creams separator. This cream will be used for making ghee.

4.7.4. Standardization of Milk:

After pasteurization process milk is taken to standardization unit. It refers to milk FAT & SNF. Adjustment is made to suit the predetermined value standardization which is done by partially skimming FAT in milk with a cream separator or by a mixture with fresh milk is proper proportions.

4.7.5. Packing of Milk:

After passing through all the stores, the milk comes to packing section to pack in pouches. Machine make automatic packing by operating. Man operate all the buttons packing to it. The union has installed three packing machines, two for packing 500 ml pouches and another for packing 1000 ml pouches. These machines are purely automatic with a capacity of packing 5000 pouches per hour. The speed can even be altered according to the milk suitability. These machines are used for packing all types of milk in polythene bags or plastic bags. These bags are brought mainly from Maharashtra.

4.7.6. Storage of Milk:

After the completion of all the process from collection to packing. Milk pouches are stored. The packed milk in 500 ml or 1000 ml pouches are arranged in caters, each cater containing 10 litre of milk. These caters are stored in a cold room which has a temperature of about 5°C for self life of 48 hour time keeping from any spoils.
4.8. Milk Products Manufacturing Plant Section:

The main plant of the union has been manufacturing various milk products, namely Ghee, Cream, Peda, Kunda, Curd, Lassi, Flavoured Milks, and Butter Milk. Among all these milk products, some products manufacturing plants were utilizing their manufacturing capacity in the study period. The products per day capacity vary from product to product. Among eight products manufactured by union some products like, Ghee, Peda, Kunda, Lassi have high price and demand in market. The manufacturing capacity and capacity actually utilized by the respective plants section has been seen in the following table.

Table 4.2
Milk Products Manufacturing Capacity and Utilized by Product Making Plant

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ghee</td>
<td>500 Kg/pd</td>
<td></td>
<td>33.58</td>
<td>25.50</td>
<td>23.15</td>
<td>20.88</td>
<td>49.51</td>
<td>28.39</td>
</tr>
<tr>
<td>2.</td>
<td>Cream</td>
<td>500 Kg/pd</td>
<td></td>
<td>45.55</td>
<td>1.64</td>
<td>33.60</td>
<td>31.74</td>
<td>41.83</td>
<td>32.58</td>
</tr>
<tr>
<td>3.</td>
<td>Peda.</td>
<td>50 Kg/pd</td>
<td></td>
<td>32.10</td>
<td>15.28</td>
<td>30.68</td>
<td>33.29</td>
<td>43.11</td>
<td>31.44</td>
</tr>
<tr>
<td>4.</td>
<td>Kunda</td>
<td>25 Kg/pd</td>
<td></td>
<td>6.33</td>
<td>7.57</td>
<td>11.50</td>
<td>23.74</td>
<td>30.06</td>
<td>13.90</td>
</tr>
<tr>
<td>5.</td>
<td>Curd</td>
<td>1000 Kg/pd</td>
<td></td>
<td>4.75</td>
<td>3.28</td>
<td>2.81</td>
<td>55.89</td>
<td>46.68</td>
<td>19.57</td>
</tr>
<tr>
<td>6.</td>
<td>Lassi</td>
<td>100 Kg/pd</td>
<td></td>
<td>10.35</td>
<td>18.75</td>
<td>20.04</td>
<td>31.33</td>
<td>32.00</td>
<td>20.06</td>
</tr>
<tr>
<td>8.</td>
<td>Butter Milk</td>
<td>100 Ltr/pd</td>
<td></td>
<td>10.48</td>
<td>8.60</td>
<td>9.05</td>
<td>24.79</td>
<td>26.43</td>
<td>15.28</td>
</tr>
</tbody>
</table>

Source: Record of BEMUL
Fig 4.1

Milk Products Manufacturing Capacity and Utilized by Product Making Plant

In the table 4.2, we can see manufacturing capacity of various units and their capacity utilization in different years. The products like Ghee, Cream & Curds have a capacity of 500 Kgpd. Where curd making plant has a 1000 kgpd and flavoured milk capacity was 500 litres per day, the lowest capacity is left with kunda 25 kgpd. At the same time the various milk products utilized capacity was different, highest capacity utilized in Ghee making plant where it was 49.51% during the year 2005-06 and lowest utilized during 2003-04. In case of cream making plant highest capacity utilized during 2001-02 and low as 1.64% in 2002-03, Kunda and flavoured milks plants were utilized with lowest capacity among all products. It is important to note that the product of Kunda has got demand in market but capacity installed was very low as well as its capacity
utilization was also very low, where its average capacity in five years was 13.90%. Average capacity utilization was good among the products of Ghee, Cream, Lassi. On the other hand, average capacity utilization was low in case of Kunda, Flavoured Milk and Butter Milk.

The steps involved in manufacturing of some more demanded products like Ghee, Peda, Curd and Lussi are as follows.

- **Ghee manufacturing:** The cream obtained is fed to butter churner, the butter and whey is obtained. The butter is first melted at 35°-45° C and then boiled to 115°-120 ° C to obtain ghee. This is allowed to settle for approximately 12 hours then ghee is clarified to separate minute particles of ghee residue, then packed in sachet.

- **Peda Manufacturing:** The whole milk is mixed with sugar at the rate of 7 percent of milk and heated continuously for 4-6 hours with rigorous stirring. The solid mass is formed which is allowed to cool to room temperature, then it is moulded into peda of approximately 50 gms each.

- **Curd Preparation:** The whole milk after pasteurization and cooling added with 1% culture (previous day’s curd) if Lactic acid is 0.6% then it is sweet curd and if lactic acid is 1.0 percent then it is sour curd, the sachets are stored at room temperature.

- **Lassi Preparation:** The lassi is prepared from a curd by adding water to get desired acidity based on sourness, curd and consistency. Sugar is added 15-20% and stirred well so as to mix uniformly and packed.
The milk received from different places is first weighed and then chilled. After chilling, the milk will be sent to cream separator, the Cream and skim milk is obtained, skimmed milk powder is then mixed with whole milk in order to obtain a desired level of fat and SNF then homogenization is done to equalize distribution of SNF and FAT incomplete batch of milk. Followed by pasteurization, heating of 72°C for 15 seconds then chilled to less than 5°C. The chilled milk is then packed in half litre and one litre sachets. The packed milk is stored at cold storage at temperature 5°C. Some products processing methods are shown in flow chart below.

4.9. **Finance Section of the Union:**

Finance is the life blood of every business activity. There must be proper balance between the cash inflow and outflow. Every organization unit tries to maximize its profits by selling a large quantity of its products. Finance is the basement for the establishment and smooth running of a business. Belgaum Milk Union is a cooperative dairy. It maintains very good accounting. All financial matters are mainly dealt by the separate department called Finance Section. The major source of finances for the union are shares of Deposits from Societies, Loan from the Cooperatives, Banks, Nationalised Banks, and Profit from milk and milk products.

The major functions of the finance section are as follows:

- Maintaining proper accounts for milk purchased and sold every day.
- Maintenance of general ledger and stores book.
- To maintain profit and loss account.
- To maintain government fixed assets registers and depreciation register of union.
- Maintenance of payment of Taxes and Insurance Account.
In this section, Deputy Manager is the responsible for all financial matters. He carries out works with the help of Assistant Manager, two Account Assistants with a Cashier and Administrator and also section has a Record Assistant and attender for day to day works.

4.10. Administrative Section of Union:

Among all sections of the union administration section plays an important role in day to day activities of the union. It is one of the major respective sections in the union. As the unit adopted shifting, it administers all works by specific employer for smooth run of particular work. There are three employees working in this section. One of them is office superintendent and two employees are supervisors.

Responsibilities of administration section are:

- To look after the overall administration of time office management.
- Concluding training to the new employees and also to the existing ones.
- To look after section wise activities.
- To make suggestions to all sections heads to smooth run of the specific work.
- To look after over recruitment process and recruit often contract workers required for seasonal works.
- To maintain shift timings.

The union runs in three shifts daily which includes general shift also. The shift timings is day and night. First shift is 6.00 am to 2.00 p.m.. Second shift timing is 2.00 pm to 10.00 p.m. Third shift timing is 10.00 p.m. to 6.00a.m. General shift is 9.30 a.m. to 5.30 p.m. each shift except general is eight hours. Administration section observes all shift activities.
4.10.1. Management Information System (MIS)

The whole administration section has one subsection by name management information System which looks after the documentation of all departments / sections. Every unit, has a separate management information system to maintain and report, to make proper plans for the to progress of the unit. The main functions of the management information system are

Functions of MIS Section are as follows:

- To maintain daily all reports.
- To maintain town wise sales report.
- To maintain reports of procurement and inputs
- To maintain project review report.
- To maintain account of daily purchase of ice and water.
- To maintain daily attendance of all employees and workers which will be sent to the managing director.

4.11. Marketing Section of Union:

The marketing section is the nearest of any organization. In today’s highly complex and competitive world, marketing is the tool, which has to be devised properly to sell the product. The marketing is more of a complex job and it requires a great deal of the knowledge about the market i.e. its competitors. The marketing management require planning, analysis, implementing and controlling of programmes designed to create, build and maintain beneficial exchange with the target buyers for the purpose of achieving organizational objectives.

The milk union has 21 staff members in marketing section, out of them four deputy marketing managers, four members are area sales managers, five members are field workers, three members are route
salesmen, two members are office assistants, two members are computer operators and section assistants.

4.11.1 Office Work of Marketing Section:

All works of the marketing section is carried out by office assistants and computer operator. Day today milk marketing activities reports are collected and sent to the section head for further planning of marketing. Following are the office works:

- Checking daily sales as per the respective agents.
- Having information of new area where there is demand for milk.
- Issue of tenders and receiving application for opening new parlours and agencies.
- Fixing / organizing milk distribution router.
- Sending of milk and milk products as per the indents.
- Keep in track with the timings of vehicles and timely supply of milks.
- Collecting of cash from agents and depositing the same to the bank.
- Attending complaints of agents.
- Meeting agent to solve marketing problems.
- Maintaining up-to-date records of milk and milk products sales.
- Planning new advertisement strategies and marketing strategies for large quantity sales.

4.11.2. Field Work:

The staff members marketing section conduct sales promotional activities like advertisement, awareness camps, in city and town area. In reality, selling milk and its products in real marketing is very hard job because of tough competition from large number units. Hence, marketing section field worker and marketing officer have to go to the field to study the market and survey the households, for modern marketing strategies. By
finding milk demand area, they appoint sales agents by taking initial deposit of Rupees 2000/- in Belgaum District and Rs.10,000/- out of district where milk has to be sold. Bonds are issued after receiving deposit. The bonds which contain rules and regulations of the union. The union has been selling major quantity of milk in Belgaum City, towns of the district and in Goa state. The marketing section coordinates with all other sections of the union to achieve the accomplished goals.

4.12 Storage Section of the Union:

The storage section contains all the rigid materials, comprising, semi-finished and finished products, raw materials which are required for final products which are stored in this section. A part of these stationary and other goods are stored.

In Belgaum milk union, the stores section has a capacity of storing goods of raw materials, and stationary materials of worth Rs.30 to 35 lakhs. Various goods required for the daily use are stored. The goods stored in the section includes books of account, packing materials, raw materials, skimmed milk powder, ghee tins and stationary etc. Every section of the union is in touch with the store section. It is maintained by store officer who is responsible for daily activities. This section provides store materials on demand by the head of other section. Goods supplied to various sections are recorded and information regarding material stock, demand and further order for purchase is intimated to the Managing Director.

4.13 Dairy Cooperative Society Activities of Union:

Dairy cooperative societies are basic organization units functioning at the village level. All milch animal owners are eligible to become members of the dairy cooperative societies (DCS). The DCS act as Marketing outlet for the milk produced in the village, input facilities are
also channelised to the dairy farmers through these societies. Union organized DCS at village level to collect milk available and act as market outlet in villages. Each DCS managed by a management committee consisting of nine members elected by members of the general body. The tenure of a committee is three years. The president of the management committee is elected annually and is eligible to contest for the elections to the milk unions Board of Directors. The management committee appoints a paid Secretary who is responsible for the day to day operations of the DCS.

4.13.1. Dairy Cooperative Activities of the Union:

Dairy cooperatives have played a very significant role in the procurement of milk (processing and marketing). As milk is more perishable goods than any other farm product, its daily recovery is twice a day which is faster than any other farm product and its supply and demand are similar throughout the year. Thus the milk cooperatives are being used as milk marketing outlets at village level.

Dairy cooperative societies reduce the cost of milk collection from the individual farmers which would otherwise be time consuming as well as laborious job which is being sorted out with the help of the cooperatives. At present, there is an increasing trend of cooperative societies and their memberships. Simultaneously the increase in the number of dairy animals is also seen. Farmers come in close contact with each other and learning the new technologies and adopting new methods for further improvement of the animals which is basic reason for milk production. The milk unions which have been working in district places have engaged in commissioning village level cooperatives where the milk producing mass are located in rural areas.
4.13.2. **Features of the Dairy Cooperatives:**

The peculiarities of dairy cooperatives are as follows:

1) It brings the rural producer and the urban consumer to direct contact and thereby eliminate middlemen.

2) Dairy cooperatives give incentives to producers by providing assured market remunerative price, regular payment and yearly bonus out of profit.

3) Dairy cooperatives give scope for functional specialization and division of responsibility between primary societies and federation. The farmers concentrating on production and latter taking care of marketing.

4) Payment is made to producers on the basis of quality of milk and it ensures the supply of unadulterated good quality milk.

5) All the needs of the producers like cattle feed forage seeds, veterinary aid and artificial insemination are met by cooperatives themselves at the doors of the producers.

4.13.3. **Dairy Cooperative Societies Activities of the Union:**

The union engages in organization of dairy cooperative societies at village level where the milk production is better. All the these primary dairy cooperative societies are the members of the union. The milk production centers are villages therefore one dairy cooperative society receives milk from village producers. In the union there were 431 organised DCS out of which 325 DCS were functioning as on March 2007. The functional DCS members, daily procurement of milk and the number of DCS under profit and loss profit as well as loss amount is presented in Table 4.3. The table indicates summary of the DCS functions. It is observed that the DCS procured milk in six year period was balanced growth.
The number of DCS functioning was decreasing over the period, but the members of the DCS increased from 56827 in 1999-2000 to 66630 in 2006-07. The average milk procured by DCS was 159.43 kg / pd. The procurement transport cost was 0.52 paise in the year 2001-02 and it increased to 0.64 paise per kg in 2006-07. This is due to increase of fuel price.

Table 4.3

DCS Registered and Members Per day Procurement of Milk During 2001-02, to 2006-07

<table>
<thead>
<tr>
<th>Particulars</th>
<th>01-02</th>
<th>02-03</th>
<th>03-04</th>
<th>04-05</th>
<th>05-06</th>
<th>06-07</th>
<th>Avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCC Registered (No.)</td>
<td>504</td>
<td>458</td>
<td>455</td>
<td>437</td>
<td>443</td>
<td>434</td>
<td>455.16</td>
</tr>
<tr>
<td>DCS Functioning (No)</td>
<td>342</td>
<td>334</td>
<td>324</td>
<td>310</td>
<td>317</td>
<td>325</td>
<td>325.33</td>
</tr>
<tr>
<td>Members (No.)</td>
<td>56827</td>
<td>57764</td>
<td>57323</td>
<td>58193</td>
<td>64867</td>
<td>66630</td>
<td>60268</td>
</tr>
<tr>
<td>Women Members (No)</td>
<td>7871</td>
<td>8313</td>
<td>8320</td>
<td>9423</td>
<td>13468</td>
<td>14822</td>
<td>10369.50</td>
</tr>
<tr>
<td>SC</td>
<td>3574</td>
<td>3533</td>
<td>3045</td>
<td>3550</td>
<td>2523</td>
<td>4620</td>
<td>3474.16</td>
</tr>
<tr>
<td>Other.</td>
<td>43421</td>
<td>43938</td>
<td>43947</td>
<td>43210</td>
<td>46520</td>
<td>44685</td>
<td>44286.83</td>
</tr>
<tr>
<td>Avg. Milk proc. Per day</td>
<td>56380</td>
<td>52468</td>
<td>53299</td>
<td>47305</td>
<td>47741</td>
<td>48571</td>
<td>49259.33</td>
</tr>
<tr>
<td>Avg. Milk proc. By DCS pd.</td>
<td>164.85</td>
<td>157.0</td>
<td>165.39</td>
<td>152.59</td>
<td>153.22</td>
<td>163.55</td>
<td>159.43</td>
</tr>
<tr>
<td>Proc. Transport Cost Rs./Kg.</td>
<td>0.52</td>
<td>0.64</td>
<td>0.74</td>
<td>0.65</td>
<td>0.66</td>
<td>0.64</td>
<td>0.64</td>
</tr>
<tr>
<td>No. of DCS Under Profit No.</td>
<td>330</td>
<td>320</td>
<td>281</td>
<td>287</td>
<td>304</td>
<td>309</td>
<td>305.16</td>
</tr>
<tr>
<td>Profit Amount (in Lakh)</td>
<td>121.95</td>
<td>50.77</td>
<td>62.31</td>
<td>65.68</td>
<td>18.36</td>
<td>35.73</td>
<td>59.13</td>
</tr>
<tr>
<td>No. of DCS under Loss (No.)</td>
<td>12</td>
<td>14</td>
<td>43</td>
<td>23</td>
<td>13</td>
<td>16</td>
<td>20.16</td>
</tr>
<tr>
<td>Loss Amount (in Lakh)</td>
<td>2.37</td>
<td>1.50</td>
<td>3.43</td>
<td>3.14</td>
<td>1.84</td>
<td>0.29</td>
<td>2.09</td>
</tr>
</tbody>
</table>

Source: Record of BEMUL

The table reveals that the number of DCS under profit were decreased from 330 in 2001-02 to 309 in 2006-07. Where their profit amount was
121.95 lakh and 35.74 lakh in the same period. On the other hand the number of DCS under loss were 12 in 2001-02, it increased in the year 2003-04 and decreased to 16 in the year 2006-07. In this period their average loss of amount was 2.09 lakh.

The table also depicts that women members of DCS constitute major share in decision making of societies. It indicates that large number of women are engaging in dairy farming activities. Women dairy cooperative societies members were increased tremendously year by year. The members were 7871 in 2001-02, then increased to 14822 in the year 2006-07.

4.14 Women Dairy Cooperative Societies Activities of the Union:

The improvement of socio-economic condition of women at village level by organization of women self help groups in rural area is very important. The situation of women in India has been reviewed by planners but failed to introduce newer programmes for the upliftment of women. By studying of all aspects of women. In the year 1997 farmer prime minister Dr. H.D. Devegouda came to know the fact on keen interest of newer project of STEP (Support to Training for Self Employment Programme) to improve the rural women's mentioning the programme as “Role of Women in Operation Flood”. Karnataka is the third state in India which introduced STEP programme in 1998. The programme namely STEP is central government programme working under Human Resource Secretariat, Women & Child Welfare Department. For development of rural women, under this programme 8 traditional rural business are included so far. Among these business dairying is prominent business in rural area for upliftment of poor women. Under STEP programme more preference is given for the establishment of dairy cooperative societies at village level by women members only. Establishment of women milk producer’s cooperative societies under this programme strictly made for women members only.
Administrative Board. Staff as well as workers, are only women, day today all activities and decision making authorities are left with women members.

4.14.1. Experiment:

Support to Training and Employment Programme for Women:

Perceived actively for betterment of women groups in dairy sector through a novel scheme of Government of India "The Women Constitute 48.20% of our Population and yet it is irony that they have no definite role to play in the rural sector"1. The Government of India in its wisdom to alleviate emancipation of women, provided activities to women groups for definite income generation through Support to Training and Employment Programme (STEP) activity the care activities being under Agriculture, Animal Husbandry, Dairying, Fisheries, Handloom, Khadi and Village Industry and waste land development.

STEP programme was launched by Govt. of India in 1986 which came to Karnataka in 1998 to be implemented under aegis of Karnataka Milk Federation. STEP advocates an extensive training at different levels for upgradation of skill for sustainable employment. Dairy activity through organization of women dairy cooperative has come in a handy to women who are adopt in rearing milch cattle from time to time, immemorial and dairy development activity on a cooperative basis having its substructure in rural areas make a perfect institution to be governed, managed and guided by women. Most of the women members are trained in leadership qualities in management of the cross breed cows and buffaloes in scientific way so as to reduce the cost of milk production.

In Karnataka state under STEP programme to be implemented under aegis of KMF directed to cover 20000 women members by

1) A.M. Shivkumar, Director STEP, KMF Bangalore, Paper Presentation in 34th National Conference of IDA)
establishing 400 women Dairy Cooperative Societies per year. At present 1064 women dairy cooperatives have registered out of which 889 are functioning. These women societies are formed through liberal assistances of Government of India to a tune of Rs.26.15 crores and 90% of it is Government of India’s Share and the remaining is contributed by the District coordination Milk Unions. In the state of Karnataka all are women cooperatives under STEP functioning with an average procurement of 2.34 lakh litres of milk per day and getting payment nearly Rs.6.20 crores in each of the month. The women membership in all dairy cooperatives put together is 26% of the total share and this includes women members in all mixed cooperatives. This has to be seen and to be believed that maintenance, collection of equipments and record writing are much better than most of the societies managed by men.

The Govt. of India’s programme STEP is now implemented by State Apex Body of KMF which in turn is implementing the programme effectively through is 13 Unions which are working in district places in this direction. Belgaum Milk Union has made its efforts to implement the programme effectively in rural areas of the district and commissioning women dairy cooperatives in Village under guidance of state milk federation.

4.14.2. An Overview of STEP (Programme) in Belguam District:

The development and Welfare of rural poor, backward women’s community depends on implementation of programmes effectively rather than enacting law for safeguarding the women. Women are to be organized to get available facilities. Empowerment of women through self help groups like setting up dairy cooperatives at villages is need of the hour. In this context programmes under STEP are pioneer to change socio-economic status of rural household. The STEP launched by Govt. of India in the
country has been introduced in Karnataka and implemented by KMF through its Unions.

The programme STEP is implemented by Belgaum Milk Union in the district under guidance of KMF. The Union has the authority to commission women dairy cooperatives according to the norms of Central Govt. Plan. The organized women dairy cooperatives are affiliated to district milk union for guidance and acid managerial strategies and working under supervision of union. The union is the guiding body to register and function of women cooperatives.

The notable difference in women cooperative is to provide awareness, generation, programmes on the subject like health, of women, nutrition of the child, education of girl child, legal literacy and gender sensitization. The scheme STEP makes a provision for Rs.3000/- margin money to purchase cross breed cows by the Target Group Members which include widows, daily wage earners, SC/ST and green card holders, tribal and other dispossessed groups, Rs.12000/- is given as management grant to each women DCS to nurture these DCS in the initial stages. Forward linkage like marketing of entire milk procured by these cooperatives is done by the District Milk Union while backward linkage of technical inputs like Artificial Insemination, Fodder Development, Cattle Feed is provided by District Milk Union.

The organized women dairy cooperative societies are given training to all members secretary and Board members to carry out their functions smoothly. Organization is the first step and training by providing necessary materials is second step. The organization of women dairy cooperatives and their collection of milk and members of societies are presented in Table 4.4.
Table 4.4
Organization of WDCS and Quantity of Milk Collection and Women Members

<table>
<thead>
<tr>
<th>Year</th>
<th>01-02</th>
<th>02-03</th>
<th>03-04</th>
<th>04-05</th>
<th>05-06</th>
<th>Avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. WDCS Registered</td>
<td>28</td>
<td>08</td>
<td>14</td>
<td>13</td>
<td>05</td>
<td>13.50</td>
</tr>
<tr>
<td>2. Functioning.</td>
<td>24</td>
<td>32</td>
<td>46</td>
<td>59</td>
<td>64</td>
<td>45</td>
</tr>
<tr>
<td>3. Total Members</td>
<td>2385</td>
<td>3299</td>
<td>4274</td>
<td>5710</td>
<td>7492</td>
<td>4632</td>
</tr>
<tr>
<td>SC</td>
<td>217</td>
<td>312</td>
<td>344</td>
<td>366</td>
<td>404</td>
<td>328.60</td>
</tr>
<tr>
<td>ST</td>
<td>72</td>
<td>129</td>
<td>151</td>
<td>193</td>
<td>244</td>
<td>157.80</td>
</tr>
<tr>
<td>4. Avg.Milk Collection (Lpd)</td>
<td>2995</td>
<td>3770</td>
<td>3540</td>
<td>6215</td>
<td>8800</td>
<td>5064</td>
</tr>
</tbody>
</table>

Source: Record of BEMUL

In the table it is clear 28 WDCS registered out of which 24 were function in the year 2001-02. The total members were 2355 where the milk collection was 2925 litre per day in beginning year. But in later years few WDCS were increased year by year from 2003 to 2005-06. The average number of members was 4632. At the same time, milk collection was also increased tremendously from the year 2004-05 to 2005-06. The average milk collection from all functioning societies was 5064 lpd on 2006 March. There were 64 women dairy cooperative societies functioning at the end of year 2006. The societies members increased due to awareness among women.

The aim and purpose of the STEP programme was to organize women cooperative milk dairies but it was not achieved because large number of women are out of this programme in rural area. Now effective steps should be taken to organize the societies to increase women members and to enable to get benefit and improve socio-economic status of the women. Then goal may be achieved.
4.15 Training and Extension Activities of the Union:

Training and extension activities are basic functions of every enterprise. Unless proper training to carry out a particular business is given its very difficult, with concerned to dairy farming and dairy cooperative management training activities have not an important place in dairy enterprise. So far we discussed the dairy cooperatives, mainly centered in rural area. Training increases work efficiency and reduces time and cost itself.

Training and extension activities with respect to DCS staff, farmers, trained, management committee members farmers sent to AMUL, farmers awareness camps held, film shows covered by DCS and all day today's activities of DCS were given proper training. 17 persons are working as extension officers in milk union. So far, they had to conduct one training camp, each in a month, to create awareness regarding dairy activities, milk production management, skill dairy herds training, and introduce benefits and facilities available in the dairy farming. Extension officers of the union conduct film shows through dairy cooperative societies at village level to carry out dairy farming in a commercial way. Extension officer conduct surveys in rural area to establish DCS and prepare proposal to conduct training camps.

There were 17 persons working as Extension Officers in Belgaum milk Union. So far they have to conduct one camp each in a month for creating awareness regarding dairy activities, likewise milk production, management skill dairy herds. Training and introduction facilities and benefits to milk producers in the dairy farming by conducting camps and also suggest solution for problems faced by farmers. Further, extension officers conduct film shows through dairy cooperative societies at village level to carry out dairy farming in a proper way to get more benefit from dairying. The extension officer conducts surveys in the rural areas to
<table>
<thead>
<tr>
<th>Particulars / Years</th>
<th>Sl. No.</th>
<th>No. of DCS selected</th>
<th>No. of DCS Secretaries</th>
<th>Fat Tester Trained</th>
<th>Management Committee Members Trained</th>
<th>DCS Members Trained</th>
<th>Artificial Training Days</th>
<th>First Aid Training Days</th>
<th>Total No. of Persons Trained and Days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2000-01</td>
<td>25</td>
<td>19</td>
<td>12</td>
<td>5</td>
<td>44</td>
<td>03</td>
<td>15 59 (41*) 5 217 73</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2001-02</td>
<td>25</td>
<td>16</td>
<td>20</td>
<td>7</td>
<td>134</td>
<td>5</td>
<td>11 15 26 20 20 169(41*) 6 417 68</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2002-03</td>
<td>25</td>
<td>6</td>
<td>10</td>
<td>10</td>
<td>138</td>
<td>10</td>
<td>47 11 15 10 71 8 287 59</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2004-05</td>
<td>25</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>169</td>
<td>6</td>
<td>16 15 18 12 655 5 880 68</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2005-06</td>
<td>125</td>
<td>74</td>
<td>90</td>
<td>76</td>
<td>666</td>
<td>32</td>
<td>128 67 97 82 1229</td>
</tr>
</tbody>
</table>

Source: Official Record - BEMUL.
Note: Bracket * Indicate Persons sent to AMUL.
establish the DCS and prepare proposal for final decision and approval of the management committee of union. So extension officer is always engaged in dairy extension activities and conducting camps regularly in various places for creating awareness among rural people.

The training to different persons engaged in different work, and farmer member along with management committee members were also given training by milk union. It is presented in Table 4.5. In the initial year 25 DCS were selected for training where 217 persons were given different training who were engaged in different works. 41 DCS farmer members were sent to AMUL dairy in initial year and in 2001-02 again 41 farmers were sent to AMUL. The union gives training selecting 25 DCS every year but selection persons is different.

The milk producing members and management committee members were in the highest number involving in training camps in all years of the study. The number of trainees was maximum, and there were less training days on the other hand few trainees have undergone 25 to 30 days in a particular training camp. The union every year selects 25 DCS for training camps. A total of 125 societies were selected from 2000-01 to 2004-05. The number of persons trained in different camps were 2252 and the number of days were 355, in five years period.

4.15.1 Training Camps made for Women Dairy Cooperative Societies:

Training and awareness to dairy cooperative members and functioning women staff are necessary to carry out the business properly. The organised women dairy cooperatives were given training and there were provision under STEP programme to provide proper training to all women members. Organization training was first step and giving awareness to women was second step. Training camps conducted for women dairy cooperative societies are presented in table 4.6.
There were 28 registered societies in the year 2000-01 selected for training to lead society in a proper way. In the initial year secretary, Fat Tester, and Veterinary First Aid Training to each societies, similarly 252 women societies management committee members were given training. The training period to Secretary, Fat Tester, and Management committee members was 20-, 5 and 3 days respectively. The expense incurred on each trainee was high in secretary training and artificial insemination training. In training camps dairy animal members were also given training about dairy farming, it was commendable work of the union conducting training camps every year.
4.16 Technical Service Activities of the Union: or Physical Performance of Union:

The union provided many technical / physical services to DCS in order to help the milk producers. The table 4.7 indicates the various services provided by the union during 1999-00 to 2006-07. The union has increased the artificial insemination centre from 115 in 1998-99 to 130 in 2006-07. The number of artificial insemination performed since inception was 425945. The cases with as low as 37260 in 1999-00 and highest in 2006-07. The number of A.I. done is in tremendously increasing trend among where cow calves number is high. It was the highest in the year 2006-07 followed by buffaloes calves 7534 in the same period. Union has mobile veterinary facility of route treatment. The animal treated through this mobile veterinary route in its inception was 128265. The union's doctor visited houses for spot treatment this visit is also in increasing trend. Doctors attended the emergency cases, were 42316 since inception.

The animal treated for first aid also varied between 4730 to 14238. The total cases attended since inception were 72857. The union's doctors personnel visited the village houses weekly and treated as many as 4445 animals since inception by conducting camps at village levels. An average of 444 camps were conducted in each year. The fodder plots raised since inception were 16375 which vary between 1108 to 3515 in a year between 1998-99 to 2006-07. The area under fodder crop raised between 167 to 401.63 hectares. The total area of which fodder cultivated was 2248.3 hectares since inception. The union sold the cattle feed to milk producers at subsidized rate It sold 2460 Metric Tonnes in 1999-00 which gradually increased to 4063 Metric tonnes in 2006-07. The total cattle feed sold since inception was 29592 Metric Tonnes and on an average it was 3699 MT per year.
Table 4.7

Physical Performance Indicators of the Union

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Al Centre</td>
<td>No.</td>
<td>115</td>
<td>123</td>
<td>125</td>
<td>131</td>
<td>119</td>
<td>117</td>
<td>124</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Al Done.</td>
<td>No.</td>
<td>37260</td>
<td>43950</td>
<td>48761</td>
<td>54770</td>
<td>55354</td>
<td>56186</td>
<td>59901</td>
<td>69763</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Calve Born.</td>
<td>No.</td>
<td>10300</td>
<td>12182</td>
<td>13269</td>
<td>12061</td>
<td>13506</td>
<td>13023</td>
<td>15592</td>
<td>16796</td>
<td></td>
</tr>
<tr>
<td>a) Cow Calves.</td>
<td></td>
<td>No.</td>
<td>5809</td>
<td>6281</td>
<td>7328</td>
<td>6865</td>
<td>7015</td>
<td>6973</td>
<td>8058</td>
<td>8915</td>
<td></td>
</tr>
<tr>
<td>b) Buffalo Calves.</td>
<td></td>
<td>No.</td>
<td>4491</td>
<td>5901</td>
<td>5941</td>
<td>5052</td>
<td>5830</td>
<td>6050</td>
<td>7534</td>
<td>7719</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Mobile Veterinary Route Cases treated.</td>
<td>No.</td>
<td>9726</td>
<td>15194</td>
<td>15560</td>
<td>15905</td>
<td>10837</td>
<td>8729</td>
<td>11241</td>
<td>10904</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Houses Visited.</td>
<td>No.</td>
<td>18</td>
<td>19</td>
<td>25</td>
<td>31</td>
<td>21</td>
<td>23</td>
<td>25</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Emergency Cases treated</td>
<td>No.</td>
<td>5065</td>
<td>6387</td>
<td>6934</td>
<td>6593</td>
<td>5282</td>
<td>4498</td>
<td>4722</td>
<td>5112</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Animals treated for FAT.</td>
<td>No.</td>
<td>4730</td>
<td>6211</td>
<td>5319</td>
<td>8612</td>
<td>9616</td>
<td>10830</td>
<td>14238</td>
<td>13260</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>No. of Camps sterility conducted</td>
<td>No.</td>
<td>518</td>
<td>630</td>
<td>428</td>
<td>643</td>
<td>587</td>
<td>505</td>
<td>639</td>
<td>495</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>No. of fodder plots ploraised.</td>
<td>No.</td>
<td>2401</td>
<td>1993</td>
<td>3515</td>
<td>1108</td>
<td>2195</td>
<td>127</td>
<td>1576</td>
<td>1860</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>The area under fodder crops.</td>
<td>Hect.</td>
<td>346.06</td>
<td>388.70</td>
<td>401.67</td>
<td>244.21</td>
<td>292.36</td>
<td>198.18</td>
<td>167.94</td>
<td>272.61</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Cattle Feed Sold</td>
<td>MT</td>
<td>2460</td>
<td>3576</td>
<td>4463</td>
<td>3862</td>
<td>3720</td>
<td>3712</td>
<td>3736</td>
<td>4063</td>
<td></td>
</tr>
</tbody>
</table>

Source: Official Record, BEMUL.
4.17 Cattle Feed Fodder Activities of the Union:

The cattle feed fodder plays key role in enhancing milk yield, productivity besides grazing and stall feeding in open area of farm yard, the dry fodder, green fodder and concentrate on increasing the milk yield of cows and buffaloes. The higher quantity of dry fodder and green fodder were fed to dairy animals to get more milk yield. The union willingly purchase cattle feed fodder, green gross, roots and procure in feed plant in order to encourage the utilization of the cattle feed by the producers. Then provide dairy farmers at subsidised rate. The Belgaum milk union has large number of its members, the union sales large quantity of cattle feed to its members spread over the district area. The union purchases and procure cattle feed fodder and green gross roots and also gross seeds which are sown in farm. Union is actively engaged in selling of cattle feed, gross roots and seeds. It is presented in Table 4.8. The table 4.8 reveals cattle feed quantity sold in five year period.

Table 4.8
Cattle Feed, Fodder Activity

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Cattle Feed sold (Metric Tonnes)</th>
<th>Price of Cattle Feed per tonne (Rs.)</th>
<th>Total value of Cattle feed sold (Rs.) lakh</th>
<th>Green gross roots supply (No.)</th>
<th>Seasonal seeds supplied (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>3862</td>
<td>6350</td>
<td>245.24</td>
<td>98600</td>
<td>5708</td>
</tr>
<tr>
<td>2002-03</td>
<td>3720</td>
<td>6900</td>
<td>256.68</td>
<td>88451</td>
<td>6305</td>
</tr>
<tr>
<td>2003-04</td>
<td>3712</td>
<td>7300</td>
<td>270.98</td>
<td>81000</td>
<td>5420</td>
</tr>
<tr>
<td>2004-05</td>
<td>3736</td>
<td>7200</td>
<td>268.99</td>
<td>17000</td>
<td>2029</td>
</tr>
<tr>
<td>2005-06</td>
<td>4063</td>
<td>7400</td>
<td>300.66</td>
<td>42000</td>
<td>1991</td>
</tr>
<tr>
<td>Average</td>
<td>3818.6</td>
<td>7038</td>
<td>268.51</td>
<td>65410.02</td>
<td>4290.6</td>
</tr>
</tbody>
</table>

Source: Data collected by official records (BEMUL)

The quantity of cattle feed sold was in the year 2001-02 was 3862 metric tonnes at a price of 6350 per tonne. The total value was 245.24 lakh. The highest quantity of cattle feed sold during the year 2005-06 was 4063 MT. On an average sold quantity in five years was 3818.6 MT. The
highest, price of feed was seen during the year 2005-06. The green gross roots supply is seen in the table. It was measured in number. The highest number of roots were supplied in the year of 2001-02 where it was as low as 42000 during the year 2005-06. The union-seasonal seed supply activities is seen in the table. The seeds supply was in form of Kilogram. The seeds sold by the union seasonally to milk producer was highest during the year 2002-03 and lowest during the year 2005-06 on an average it was 4290.6 Kg per year. It shows cattle feed activities were in increasing trend to increase milk productivity of milch animals.

4.17.1 Hybrid Milk Yielding gross seeds:

4.17.2 South African Maize seeds:

The union was purchasing and supplying high milk yielding maize seeds to enable dairy farmer to get more yield from dairy herds. The African maize is mainly grown in South Africa for more productivity of dairy animals. It is intensive feed. These African maize seeds are sown in farm with mixing of fertilizer, after 25 days of sowing it grown up three feet from surface and ready to cut for feeding. 20 Kg seeds gives 16-20 tonnes of green grass in irrigated area and 8-10 Kg in rain based area. Production may increase by spreading farm manual in seeds sown area. The African maize has very intensive milk yield and has good protein for dairy herds. So the union has been supplying these seeds to its members by purchasing in larger quantity to make benefit to dairy farmers. These seeds are mainly brought from state milk federation plant. African maize seeds are provided at subsidised rate to the farmers. The African maize supplying activities are presented in table 4.9.
Table 4.9
South African Maize Seeds Sales

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity Purchased (in Kg)</th>
<th>Quantity Sold (in Kg)</th>
<th>Purchase Rate (Rs/Kg)</th>
<th>Selling Rate to farmers Rs./Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-98</td>
<td>2445</td>
<td>2445</td>
<td>5.00</td>
<td>5</td>
</tr>
<tr>
<td>1998-99</td>
<td>5400</td>
<td>5400</td>
<td>6.25</td>
<td>6.00</td>
</tr>
<tr>
<td>1999-00</td>
<td>6500</td>
<td>6500</td>
<td>12.00</td>
<td>6.00</td>
</tr>
<tr>
<td>2000-01</td>
<td>6100</td>
<td>6100</td>
<td>10.00</td>
<td>6.00</td>
</tr>
<tr>
<td>2001-02</td>
<td>2400</td>
<td>2400</td>
<td>12.00</td>
<td>8.00</td>
</tr>
<tr>
<td>2002-03</td>
<td>1664</td>
<td>1664</td>
<td>10.75</td>
<td>8.50</td>
</tr>
<tr>
<td>2003-04</td>
<td>2000</td>
<td>200</td>
<td>12.00</td>
<td>9.00</td>
</tr>
<tr>
<td>2004-05</td>
<td>2600</td>
<td>2600</td>
<td>12.50</td>
<td>12.00</td>
</tr>
<tr>
<td>2005-06</td>
<td>1000</td>
<td>1000</td>
<td>13.00</td>
<td>12.50</td>
</tr>
<tr>
<td>Avg.</td>
<td>3461</td>
<td>3461</td>
<td>10.38</td>
<td>8.11</td>
</tr>
</tbody>
</table>

Source: Collected from official record of union (BEMUL)

The table shows the quantity purchased, and sold at a subsidised rates except in initial year of 1997-98. As it was quick return and high productivity, the highest quantity was purchased as well as sold during the year 1999-2000 at the rate Rs. 12.00 per Kg. and sold with 50% subsidised rates the quantity purchase and sold with as low as 100 Kg with least subsidised rates of which 50 paise per Kg. during the year 2005-06 the higher quantity was 6500 Kg. which purchase at Rs. 12.00 per Kg and sold at Rs. 6.00 per Kg. It indicates the union sold seeds at 50% subsidised rates similarly the union sold least quantity at higher rates during 2005-06 it indicate the union subsidy amount was least due to introduction of other gross seeds as alternative adjustment to meet demand. The rate of maize seeds in between the year 2000-01 and 2002-03 remained constant at Rs. 10 and Rs. 10.75 respectively. The average quantity purchased and sold in nine years by union was 3461 Kg per year with an average purchase rate was Rs. 10.38 and selling rate Rs. 8.11 Kg per year.

4.17.3 Hybrid NAPIAR CO3 Gross Seed:

The name indicates newer gross seed called as NAPIAR CO3. It is Hybrid seed which grows fast with more thicker. Its life is upto 5 years.
NAPIAR was grown in all soils and in all climatic condition. NAPIAR CO$_3$ gross yield is more i.e. the quantity of 150 tonnes to 175 tonnes per hecter in a year. Grass may be reaped 6 to 7 time in a year before sowing the roots. Soil land should be cultivated well. About 800 to 900 roots are sufficient per acre. The union activities of NAPIAR seeds roots is presented in Table 4.11.

The union purchase NAPIAR CO$_3$ roots from state federatioin and sold the same to the farmer members of the union. The union started the activities of purchasing and selling of NAPIAR CO$_3$, since the year 2001-02, it is shown in following table 4.10.

Table 4.10
Hybrid NAPIAR CO$_3$ roots sales

<table>
<thead>
<tr>
<th>Year</th>
<th>Purchased roots</th>
<th>Sold roots</th>
<th>Rate per 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>195000</td>
<td>195000</td>
<td>80/1000</td>
</tr>
<tr>
<td>2002-03</td>
<td>82000</td>
<td>82000</td>
<td>80/1000</td>
</tr>
<tr>
<td>2003-04</td>
<td>168000</td>
<td>168000</td>
<td>50/1000</td>
</tr>
<tr>
<td>2004-05</td>
<td>40000</td>
<td>40000</td>
<td>40/1000</td>
</tr>
<tr>
<td>2005-06</td>
<td>78000</td>
<td>78000</td>
<td>90/1000</td>
</tr>
</tbody>
</table>

Source: Collected from official record (BEMUL)

In the table we can see in the initial year 2001-02 highest selling was backed by new introduction. After the initial years there was decrease in sold quantity due to less demand by farmer members during the year 2002-03. The union has increased NAPIAR CO$_3$ roots to 168000 roots at lower rate of Rs.50 per 1000 roots. The quantity sold with as low as 40000 roots at Rs.40/1000 roots in 2004-05.

The total roots sold since its inception were 563000. The union sold roots at higher rate of Rs. 90/1000 roots in 2005-06 due to increase cost of roots and lower rate was fixed in 2004-05 it was 40/1000 roots.
4.17.4 Hybrid Surgham Jawar Fodder SSG 898 F:

This hybrid Surgham Jawar Fodder is a multiple variety crop mainly for dairy herds is shown in rain based area, but the comparative yield was as low as 20-22 tonnes per acre per year. But Surgham Jawar has one more advantage i.e. the long term period of crop. It may be reaped after 60 days of sowing the flower stage. Former, may cut gross up to 6 times in a year for feeding. This Shurgam Jawar Fodder was better than others in comparison with its crop duration as long as 8 years period. The union purchased and sold the same to dairy farmers at the least subsidised rate is presented in table 4.11.

The purchasing and selling activities of union's were started from the year 2001-02 the quantity sold and selling rate is shown in following table 4.11.

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity Sold (Kg)</th>
<th>Union Purchase rate Rs./Kg</th>
<th>Farmers Subsidized rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>1000</td>
<td>13.50</td>
<td>10.00</td>
</tr>
<tr>
<td>2002-03</td>
<td>650</td>
<td>12.50</td>
<td>12.00</td>
</tr>
<tr>
<td>2003-04</td>
<td>613</td>
<td>12.50</td>
<td>12.00</td>
</tr>
<tr>
<td>2004-05</td>
<td>700</td>
<td>11.50</td>
<td>11.00</td>
</tr>
<tr>
<td>2005-06</td>
<td>850</td>
<td>12.00</td>
<td>11.50</td>
</tr>
<tr>
<td>Avg</td>
<td>762.6</td>
<td>12.40</td>
<td>11.50</td>
</tr>
</tbody>
</table>

Source: Collected from official record (BEMUL)

The table shows the quantity of Surgham Jawar fodder seeds sold since its inception. The quantity sold varies between 613 Kg. to 1000 Kg. highest quantity sold was 1000 Kg in initial year where sold quantity was lowest in 2003-04. The rate of seeds per Kg was Rs. 13.50 but sold at Rs. 10.00 with subsidy of Rs. 3.00 in the initial year, but in later years subsidy was reduced between one and 0.50 paise per Kg. The total quantity sold
were 3800 Kg since its inception. On average, quantity sold was 762.6 Kg per year and average price Rs. 11.50 per year.

4.18 Improved Fodder Increases Mills Yield:

Improved cattle feed increases the milk yield of cows/buffaloes. According to a survey, it is estimated that the population of 2000 milch animals producing around 1.200 lakh litres of milk annually suggests that merely improving the quantity of cattle feed can dramatically enhance the output. The fodder in India is made of raw materials like Soyabean, Mustard, Cakes, etc. Most of these items are the major exports of the country. Due to their high demand abroad, essentially from USA, the market is very price sensitive, and we cannot go above Rs. 2-3 per week so we have to bear the bulk of the burden. A manufacturer expert also feels that there has been no effect to educate the customer. Increase in yield is possible provided the government educates the farmers. So far, there has been no effort in this regard. The examples at NDRI, Kornal, testify that even Indian variety of cattle can produce high yields. In 1999, the Government had categorised cattle feed as an essential item.

4.19 An overview of Achievements of the Union:

Although the union collecting milk in its limited area of 10 Talukas, it has extended its milk selling network to Belguam town, Bailhongal, Savadatti, Ramdurg, Raibag Talukas and even to Goa and Maharashtra states. The major achievement are observed as follows.

1) Elected Administrative Board is working since the inception of the union and Milk producers co-operative societies are working through their Administrative Board.
2) All collected and processed milk in Chilling Centre of Gokak, and Bulk Cooler of Ramdurg, and Athani, sent to main dairy for further processing the milk.

3) Union's Functioning with 90% of village level co-operative societies are working under profit.

4) Every day around 56000 litres of milk is collected and at the average rate of Rs. 5 lakh is being distributed milk producers daily.

5) Under the limitations of the union every month about 350 metric tonnes fodder is being used with the help of central and State Government. The union has been implemented low interest rate direct dairy loan scheme since 3-12-1995 through SC/ST and Backward class corporation. Which Scheme is running successfully.

6) Under the aegis of the union 28 women co-operatives are working (under STEP) at the first time union has made separate milk procurement route called (Shabari Marg) which collect womens societies milk only. In the state Belgaum district is the poinner, of harming established women Artificial insemination centre.

7) Under Mini dairy scheme, the unit till 2005 December, 48 rural unemployed have been encouraged to start mini dairy through the Backward Class development corporation.

8) The milch animals with decease and ill-health come in the periphery of the union will be treated with quite treatment medicine and injection will be given at cheap rate. Avoidance of infertility, camps are organized by each societies for every 2-3 months.

9) For providing quality green fodder to milk producers, better by brid seeds roots would be supplied through at the year at concessional rates.

10) Insurance collaboration with Life Insurance Corporation and national Insurance Corporation, Insurance will be provided to milk producers co-operative societies and its employees.
11) In order to brim Social change among rural women, union has provided 5000 smokeless chullahs to selected cooperative villages with the help of National Dairy Development Board.

12) Under the programme Bharat Darshan introduced in the year 1997-98, 31 progress formers, and in 2002-03 25 milk producer farmers of the union had been taken for 10 days tours. In the year 1998-99 and 2002-03 one beneficiary in each year who supplied more milk to the union had been taken freely to foreign tour with the sponsorship of Karnataka Milk Federation.

13) Since the establishment of union 750 milk producers have been sent to AMUL dairy tour of Gujrat.

14) In the district at first time automatic weighing machines and computers installed in seven milk producer's societies to ensure proper rate, and showing to total supply of milk with amount every day to milk producers. It has earned good name, providing better service to producers, thus these societies have been recognised as best societies in services.

4.19 Implemented Complementary Dairy Development Projects of the Union:

In order to increase milk production and to encourage the products to involve themselves in milk production, the Belgaum milk union has implemented some of the dairy development programmes with the help of other institutions.

4.19.1. Dairy Development Schemes:

i) Special Unit Scheme:

This project has been sponsored by Government of Karnataka in the year 1998 meant for schedule caste, it is reserved for only schedule caste. In this scheme 60 percentage of expenditure of the each unit is borne by grant
in aid. Under this scheme 7500 cross breed milch animals purchased and provided to selected beneficiaries.

ii) Girijan Sub - Scheme :

This scheme has been sponsored by the Government of Karnataka in the year 1988 and it is meant for Schedule Tribe. Under this scheme also 60 percentage of the expenditure of each unit is subsidy given by Government. Till 2003 December, 230 cross breed milch animals have been purchased and provided to Schedule Tribe beneficiaries.

iii) Women Development Scheme :

This scheme is sponsored and implemented by Government of Karnataka in the year 1991. Under this scheme cross breed milch cow have been purchased and provided to eligible women beneficiaries of women societies, under this scheme also 60 percentage of expenditure is subsidy from the government up to 2003 December, 80 women beneficiaries have been provided with milch animals lithereto.

iv) Direct Loan Scheme for SC/ST :

Under Direct Loan Scheme, the loan is provided directly to SC and ST household members with the lowest interest rate of Rs. 6% to purchase milch animals. This scheme is meant for SC/ST members only upto 31.03.2003 total of 985 milch animals have been purchased. This scheme total loan amount was 100.17 lakh, the amount of Rs. 48.14 lakhs has been repaid.

v) Direct Loan Scheme to Backward Class :

Under this scheme loan is provided with cheap rate of interest to Backward Class beneficiaries to purchase milch animals. Under this account till 2003 December 980 milch animals have been purchased and given. While sanctioning Rs. 98.18 lakh and lither to Rs. 54.72 lakh of loan has been repaid.
vi) Mini Dairy Scheme :

It is the scheme under which 5 milch animals will be provided to rural educated youth in order to make them self employed in dairy farming. This scheme is introduced in the year 1996 with the help of Karnataka Backward Class development corporation. Till 2003 December, 33 beneficiaries have been sanctioned of Rs. 85,000/- per head at the rate Rs. 7% interest each beneficial have purchased 5 milch animals, and the beneficiaries have been looking after very well their animals and repaid loan is about 107%.

vii) Group Insurance Scheme :

For the benefit and convenience of milk Cooperative Societies working employees group insurance scheme has been implemented with the help of eleven National Insurance Company and Life Insurance Corporation. This Insurance has been implemented in the year 1998-99 till 2003 December total 290 employees are benefited by this scheme so far.

viii) Construction of Smokeless Challahses Covens :

In view of protecting environment eco-friendly view with the financial assistance of the ministry of Non traditional sourer of fuel and energy, Central Government of India through the National Dairy Development Board, the union has constructed and provided 7500 smokeless chullars to the members who are working in the limits of Belgaum milk union.

ix) Bharat Darshan Tour :

In order to make the progressive milk producers more informatic and knowledgeable in dairy technology and agricultural and allied occupation, the union has facilitated the tourers to travel around Dehli and its surrounding places where these Dairy and agricultural research centres are established from the year 1996-97 and litherto 51 milk producers have been benefited by this tour scheme.
x) Training to the Milk Producers :

The milk union has been giving training to its milk producing members executive members and its staff, with regard to looking after their dairy animals keeping of milch herds, milk producing members provided various types of training. In the training camps proper dairy management skill are provided and these training camps are held time to time in villages. Under training facility, the extension officers of the union will be visiting the society every month and discuss with members and giving proper guidance with regard. The quality milk production and collection is this guiding trend is presently running smoothly.

xi) Social Development :

As the results of under taking and involving in dairy development schemes of the union in 20 year period 105 cooperative societies have got their own buildings and 1174 square metre extended building have raised their heals in the rural area and moreover 130 milk producers societies have possessed telephone facility and five societies have owned Television sets.

xii) Provisions of employment opportunities by union :

The union has solutioned the problem of unemployed while making 900 unemployed rural youth to the 185 persons working directly in the union and about 1290 people are self employed in various dairy farming activities.

xiii) Free Foreign Dairy Study tour to progressive milk producers :

In the year 1998-99 the Karnataka Milk Federation had sponsored free foreign tour to its progressive milk producers. It is very proud to say that Sri. Sunil Kulkarni of Bekkeri Village of Raibag Taluka who produced above 100 litres of milk and supplied in a day has been felicitated to travel
freely ten days to Australia, and Newzeland. Thus the foreign tour facility availability is a matter of great respect to the Belgaum milk union.

xiv) Co-operative Institution Building Programme:

In Collaboration with the National Dairy Development Board, a self reliant strong cooperative institution of 80 milk producing Cooperatives Societies taken under this programme among all these societies, the executive members had conducted visionary programmes successfully for three days. In this visionary programmes all developmental projects are prepared to manage all day today activities of the societies themselves in a progressive path/way like that, under the Dairy Development Scheme, camps have been arranged to treat the breeds and drops of mouth deceases, and also sterilization camps were held. In the camps the development of hybrid fodder programmes are arranged and fodder cutting machines are provided at concessional rate.

Under Co-operative build programme awareness with regards to produce pure milk, and quality milk with classes are noticed.

xv) Social Security Scheme:

The Belgaum Milk producer cooperative union has introduced social security scheme to its milk producing members. This scheme is implemented since 1st November 1996 with the collaboration of life insurance corporation of India, under this scheme Rs. 5000/- being paid to decease. Till 2002 Jan 1981 heirs of 81 milk producing members have been paid insured amounts who died litherto.

xvi) Peoples Power Implementation:

In the milk union totally there were 66630 milk producing members on March 2006 among those 4620 member were schedule caste, 2503 Schedule Tribe and 14822 women members were the union members, 146
persons were union permanent staff working in different section and around 150 persons were employed seasonally on contract basis.

The union in connection with animal husbandry, veterinary, milk collection and milk distribution urban and town area there were totally 220 persons employed indirectly and 430 people have been employed in the milk distribution channels. Although over 800 persons have been provided with job opportunities in primary milk producers cooperative societies.

xvii) Newer Schemes:

The union since its inception, so many dairy developmental scheme introduced, union's milk shed area has been increased and turnover has been increasing year by year. The union is a member of state milk federation where its position stand sixth in milk collection, and 7th in milk marketing to make further improvement in all respects and union has been introduced never schemes in recent years to manage more responsibilities with its increased capability. The unions new schemes are as follows.

1) Implementation of scheme with regard to provides direct loan at lower interest rate to its women members through the Karnataka women development corporation.

2) To increase per day processing capacity of main dairy from 60, LPD to 1.0 LPD. (Lakh per day)

3) The Gokak Chilling centre capacity strengthen and to cover more milk shed area in the area of chilling centre.

4) Establishment of chilling centre in Ramdurg having capacity of 10,000 LPD.

5) Establishment of one more chilling centre with having capacity of 20,000/- LPD in Chikkodi area of district border to catch milk producing house holds.
6) Establishment of chilling centre in Border area of Athani Taluka by replacing present working Bulk Cooler. Which has been processing capacity.

7) This scheme reorientation of union with collaboration State Government, Government of India and Natural Dairy Development Board.

8) The union has took keen interest in establishment of cooperative milk producers societies in all villages of the district and it is working towards the scheme success.

**Summing up:**

As so far we have discussed about dairy development projects implemented by the union, it clearly shows that, the dairy activities are growing rapidly under supervision of Belgaum Milk Union. For encouraging the dairy farmers to engage in dairy farming throughout the year, union has introduced many incentive programmes. Union providing loan facilities to all category of farming community to purchase milking animals and also encouraging by providing all facility to women self help group to start Dairy Cooperative Societies in rural area. The union has introduced special unit scheme to schedule caste and Girijan Scheme to schedule tribe and also direct loan to backward class to start dairy unit. Under dairy scheme union has started mini dairy scheme, under this scheme loan is to be given at lower interested to encourage the dairy farming. Inspite of above mentioned programme, the other dairy incentive programmes are also introduced by the union to widen the dairy sector in the district.

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