

CHAPTER = III

CHAPTER – III

SHIVAMRUT SAHAKARI DUDH SANGH, AKLUJ

- 3.1 Introduction
- 3.2 Dairy Development in Solapur District
- 3.3 Total Milk Collection of the last five years in Solapur district
- 3.4 Profile of Malshiras Taluka
- 3.5 Co-operative Movement in the Malshiras taluka
- 3.6 Shivamrut Sahakari Dudh Sangh, Akluj
- 3.7 Objectives of the Shivamrut Dudh Sangh
- 3.8 Milk collection growth rate of Shivamrut Dudh Sangh
- 3.9 Artificial Insemination Done by Shivamrut Sahakari Dudh Sangh
- 3.10 Cattle Feed sale growth rate of the Shivamrut Sahakari Dudh Sangh
- 3.11 Share Capital growth rate of the Shivamrut Sahakari Dudh Sangh
- 3.12 Reserve Funds growth rate of the Shivamrut Sahakari Dudh Sangh
- 3.13 Loans growth rate of the Shivamrut Sahakari Dudh Sangh
- 3.14 Investment growth rate of the Shivamrut Sahakari Dudh Sangh

- 3.15 Growth rate of Assets of the Shivamrut Sahakari Dudh Sangh
- 3.16 Growth rate of current assets of the Shivamrut Sahakari Dudh Sangh
- 3.17 Deposits growth rate of the Shivamrut Sahakari Dudh Sangh
- 3.18 Profits growth rate of the Sangh
- 3.19 Aggregate performance of Shivamrut Sahakari Dudh Sangh
- 3.20 Direct benefits from the Shivamrut Dudh Sangh
- 3.21 Indirect benefits from the Shivamrut Dudh Sangh

CHAPTER - III

SHIVAMRUT SAHAKARI DUDH SANGH, AKLUJ

3.1 INTRODUCTION

Chapter III has been devoted to the discussion on the progress of the co-operative development on dairy sector and socio-economic development of the Malshiras Taluka. In this chapter, we observed that the dairy development in the Malshiras taluka has achieved a measurable amount of success. However, in the context of the dairy co-operative in Maharashtra there is a quantitative development with respect of the membership, societies, collection of milk, animal health, etc.

The economic and social benefits of co-operative dairy societies in Malshiras taluka are studied and examined herewith reference to Shivamrut Dudh Sahakari Sangh, Akluj, economic condition and other effects in the taluka. There are some direct and some indirect benefits from the Shivamrut Sahakari Dudh Sangh. Sangh provides some facilities to the milk producers, members, and primary milk co-operative societies.

3.2 DAIRY DEVELOPMENT IN SOLAPUR DISTRICT

Dairy industry started in the Solapur district during 1970. It has attained substantial development during last four decades

on co-operative basis. Dairy is the major source of income for landless, small farmers, marginal farmers, and large farmers. It has an important bearing on the economy of the rural people. Along the cultivation of crop, the milch animals and the fodder available from their farms has been utilised to feed milch animals. Such interrelationship has been encouraged farmers to direct their attention towards dairying. Besides the positive role of co-operative in the collection and distribution of such perishable commodity, farmers here also fight the development of farming in the Solapur district. It aims at to provide hygienically processed milk to people in the cities at reasonable rate and also provide subsidiary occupation to farmers, landless labourers etc.

Presently in Solapur district four milk unions are working in dairying

- 1) The Government Dudh Dairy, Solapur
- 2) Shivamrut Sahakari Dudh Sangh, Akluj
- 3) Solapur District Co-operative Milk Producers Union, Solapur
- 4) Shrikrishna Dudh Sagar, Velapur

Government Dudh dairy with the help of town milk supply scheme started in 1965. Three chilling centres came in to existence in 1965 at Akkalkot, Pandharpur and Akluj. The amount of Rs. 9.5 lakhs was provided for the erection of each plant. The milk collected from rural area was chilled in these chilling plants and for further processing. During the

Akkalkot plant 2000 liters and the Pandharpur plant 10,000 liters of milk was processed. Now a days Solapur Dudh Sangh's milk collection is from total 1226 milk co-operative societies. The Shivamrut Sahakari Dudh Sangh at Akluj has been started from 27th January 1976 on the basis of 'Anand Pattern' in the Operation Flood II Scheme. Now-a-days Shivamrut Sahakari Dudh Sangh is working only in Malshiras taluka with 351 primary milk societies.

The district milk union collected about 8,92,89,596 liters of milk in 1998. The Solapur Milk Union's operation area is Karmala, Barshi, Madha, Pandharpur, Mohol, North Solapur, South Solapur, Sangola, Mangalwedha and Akkalkot. The Solapur milk union collected milk from 1226 primary milk co-operative societies in 1998.

3.3 TOTAL MILK COLLECTION IN THE SOLAPUR DISTRICT

Table No. 3.1

Total Milk Collection in the Solapur District

(in liters)

Year	Solapur Milk Union	Growth Rate	Shivamrut Sangh	Growth Rate	Shrikrushna Dudh Sagar	Growth Rate
1993-94	4,81,07,169	-	50,82,9,497	-	-	-
1994-95	6,62,59,035	37.73	56,25,0,570	10.66	-	-
1995-96	7,71,46,388	14.11	59,73,1,579	6.18	-	-
1996-97	8,05,43,635	4.40	5,53,88,814	(-) 7.27	-	-
1997-98	8,92,89,596	9.79	5,63,63,066	1.75	3,00,555	-
1998-99	-	-	5,33,48,307	(-)5.34	60,98,567	95.07
Total	36,13,45,823		33,19,11,833		63,99,122	
Coefficient of variation		4.58		1.75		0.56
	$\bar{X} = 7,22,69,164$		$\bar{X} = 5,53,18,638$		$\bar{X} = 31,99,561$	

Source : Computed

Above table clearly indicates that the milk collection growth rate of Solapur District Milk Union, Shivamrut Sahakari Dudh Sangh and Shrikrishna Dudh Sagar and also Coefficient of Variation.

The coefficient of variation of Solapur District Milk Union in the six years milk collection has shown 4.58. It means Solapur Milk Union shows fluctuations in the milk collection. The growth rate of Solapur Milk Union in the year 1994-95 is high i.e. 37.73 and in the year 1996-97, it is minimum i. e. 4.40.

The coefficient of variation of Shivamrut Sahakari Dudh Sangh is 1.75 in the duration of six years milk collection. It is less than half of the Solapur Milk Union. The growth rate of milk collection of Shivamrut Sahakari Dudh Sangh in the year 1994-95 is maximum i.e. 10.66 and less in the year 1996-97 i.e. (-) 7.27.

The coefficient of variation of Shrikrishna Dudh Sagar is 0.56 in the two years milk collection i.e. 1996-97 and 1998-99. This Sangh was started in the year 1996-97 so the record concerned available only of two years.

Average milk collection of the Solapur Milk Union is 72269164 liters and average milk collection of the Shivamrut Sahakari Dudh Sangh is 55318638 liters per year. The average milk collection of Shrikrishna Dudh Sangh is 3199561 liters per year.

3.4 PROFILE OF MALSHIRAS TALUKA

Malshiras taluka it is on the western boundary of Solapur district. The total area of the taluka is 1,60,800.48 hectares. Out of which, 84.35 percent is cultivable area and 23.27 percent irrigated area to total cultivable area. The cultivated area is 1,29,787.84 hectares, of which, 32,659 hectares are irrigated. The census of 1991 has recorded the population, as 3,49,420 of which, 1,81,305 are male and 1,68,115 are female spread over 109 villages.

On the eastern side the Pandharpur taluka is bounded, on southern side the Sangola taluka is bounded, on western side Phaltan and Man (Dahiwadi) talukas of Satara district. And on northern side Indapur taluka of Pune district. There is main hills range on the western side of Malshiras taluka called as "Mahadeo Range". The Nira is the main river and most of the Malshiras taluka in the west drains northwards into the Nira. The Nira river which falls into the Bhima river in the north eastern side of Malshiras taluka near Sangam village.

3.5 CO-OPERATIVE MOVEMENT IN MALSHIRAS TALUKA

Co-operative movement encouraged the farmers to produce more crops since 1960. This was increased much in taluka. Now every village has their Vividh Karyakari Sahakari Societies, this provided financial support to the village farmers.

Late Shankarrao Mohite Patil encouraged the farmers to join co-operative movement. There are four sugar factories on co-operative basis. There are co-operative soot girni, co-operative poultry farming, co-operative consumer store, co-operative dairy industries, co-operative feed factory etc. So many co-operative societies and co-operative agro based industries are there. All these are the tools of rural development. The total changes of Taluka are mainly because of co-operative movement. It proved useful to the farmers and it resulted better way of life. All the subjects, products are interdependence each other and interrelated to each other.

The economical development concerned all factors, which are related to life. But, this can be achieved by way of co-operation to each other. This is the basic principle of co-operative movement.

In Malshiras taluka all types of co-operative industries, co-operative milk societies, and other co-operative societies are successfully working.

3.6 SHIVAMRUT SAHAKARI DUDH SANGH, AKLUJ

The area of operation allocated to Shivamrut Sahakari Dudh Sangh is the entire Malshiras taluka, which has energized out recently as sugarcane production part of the district due to the irrigation facilities made available from Nira and Bhima river in the north and east. Shivamrut Sahakari Dudh Sangh registered on 27th January 1976. With its jurisdiction of the 109 villages in Malshiras taluka occupying

mainly western, most part of the Solapur district. The village milk co-operative societies were established to collect the milk from member farmers sent to Akluj for chilling purpose. Late Shankarrao Mohite Patil encouraged the farmers to keep improved species of breaded cows for higher yields. The green fodder in the form of sugarcane tops is available. Besides this feeds are also through the villages milk co-operative societies to milk producers regularly in season. The payment also made at every month end.

Consequently, the area of operation of Shivamrut has been emerged out as milk production zone. In the region Malshiras taluka covering an area of 1008 sq./km (i.e. 0.11 percent) of total area of Solapur district.

In 1976, co-operative milk societies were only 28 and now-a-days there are 351 co-operative milk societies in 1998-99. In addition, milk collection in 1976 was 14,62,806 litres. Now in 1998-99 milk collection is 5,33,48,307 litres.

Sangh is continuously marching ahead on the path of progress. Due to effective implementation of this programme, income generated from dairy business turned to Rs. 80 crores annually in this area and creating self-employment to about 30,000 rural families.

Tale No. 3.2

**Primary Milk Co-operative Societies and Total Milk Collection
1989-90 to 1998-99**

Sr. No.	Year	No. of P.M.C.S.	Milk procured (in litres)	G. R. of milk collection
1	1989-90	135	22953713	-
2	1990-91	147	19392486	(-)15.51
3	1991-92	178	32664793	40.63
4	1992-93	255	43458926	24.84
5	1993-94	273	50829497	14.50
6	1994-95	311	56250570	9.64
7	1995-96	316	59731579	5.83
8	1996-97	331	55388814	(-)7.84
9	1997-98	330	56363066	1.73
10	1998-99	351	53348307	(-)5.34
		$\bar{X} = 262.70$		

Source: Annual Reports of Shivamrut Dudh Sangh

3.7 OBJECTIVES OF THE SHIVAMRUT DUDH SANGH

The Sangh is offering to the beneficiaries a package deal of basic necessities of different needs to the milk producers in various fields such as procurement, marketing of milk, biological and medicinal inputs, cattle feed etc. To achieve this aim the following aims and objectives are defined and implemented by the Sangh.

1. To organise and arrange the activity of milk procurement from the milk producers to the Sangh.
2. To process milk by Homogenization and pasteurization in a highly sanitary condition.

3. To find assured and remunerative market for milk and milk product.
4. To provide veterinary and breeding service.
5. To perform a role of catalyst in the process of securing financial inputs and purchasing dairy animals for the beneficiaries in the areas.
6. To make available medicinal and biological inputs for the dairy animals in the area.
7. To undertake production and supply of nutritious and balanced cattle feed.
8. To work as an agency for insuring the dairy cattle and for pursuing the insurance settlement claims of cattle owners with insurance companies.
9. Provided the modern technical knowledge to farmers in the area by organising extension and training programme.

Initially share capital of the Sangh was Rs. 51,000/-. At present this has gone up to Rs. 6,69,44,770/- and special reserved fund raised as per Government rules generated to Rs.8,37,77,595/- like depreciation fund on vehicles, machinery and different buildings owned by Sangh. In the year 1976 milk procurement was 2000 to 2500 litres per day. Presently daily 1,80,000 litres of milk is procured by the Sangh.

Presently Sangh transported fluid milk to Mumbai, Pune, Plaghar, Latur, Nanded, Miraj etc.

Presently 30 artificial inseminators appointed and each person is provided with a motorcycle. Modern technology of using frozen semen for breeding service is adopted in this area. Good quality germ plasma provided through modern genetically evaluation method is secured and used for this purpose. About 45,000 high-grade dairy cows are borne out of this programme.

Shivamrut Sangh working is known as 'Akluj Pattern', and accepted by N. D. D. B. in their working pattern through out the country. Today Sangh proposes to install 100 Mt/day produce to cattle feed. In 1997-98 Sangh has distributed bonus to feed customer at the rate of Rs. 10.00 per 70 kg bag purchased and Rs. 0.43 bonus on per litre milk those who have supplied milk.

The Sangh has installed it's own seed processing plant at Akluj. The seed produced and processed are of maize, pigeon pea, cowpea, soybean etc. Sangh has own ice factory of 10 MT capacity per day with capital structure of Rs. 11.25 lakhs. The ice factory was started in 1982.

Sangh has started milk by-products like Ghee, Shrikhand, Paneer, Flavoured milk, Pedha, Barfi, Gulab Jamun, Tetra pack aseptic fibre pillow packed milk etc.

In Sadashivnagar 20,000 litres, Tandulwadi 10,000 litres and Shankarnagar of 30,000 litres milk alongwith homogenization facility and sending it to our retail outlet at Washi and Pune.

The milk procurement has gone upto 1.85 lakhs per day. The Sangh has adopted the policy to supply electronic milk testers at subsidised rates to the primary milk societies to have immediate fat testing at the society level. Till now 333 milk testers have been distributed to the societies by the Sangh.

3.8 MILK COLLECTION OF SHIVAMRUT SAHAKARI DUDH SANGH

The Sangh started its milk procurement activity on 10th November 1976. Initially the dairy milk procurement in this area was about 2000 to 2500 litres per day. Since then it is constantly, the Shivamrut Sahakari Dudh Sangh procures increasing quantity of milk procurement in this operation area, presently 1,80,000 liters of milk per day. Now 351 primary dairy co-operative societies are working under the Sangh. This success story is self explanatory for degree of faith of milk producers, farmers, commanded by the Sangh and rightly proves the success of implementation of the dairying in this taluka.

The table given below clearly indicates that the progress of the primary dairy co-operative, total milk collection, and its growth rate.

Table No. 3.3

Milk Collection and Growth Rate of Shivamrut Sahakari Dudh Sangh

Year	No. of M.P.C.S.	Milk procured litres	Change in milk collection litres	Growth rate of milk collection
1989-90	136	22953713	-	-
1990-91	147	19392486	(-)3561227	(-)18.36
1991-92	178	32664793	13272307	40.63
1992-93	255	43458926	10794133	24.84
1993-94	273	50829497	7370571	14.50
1994-95	311	56250570	5421073	9.64
1995-96	316	59731579	3481009	5.83
1996-97	331	55388814	-4342765	(-)7.84
1997-98	330	56363066	974252	1.73
1998-99	351	53348307	(-) 3014759	(-) 5.65
		$\bar{X} = 262.70$	$\bar{X} = 45038175$	

The above table clearly indicates that the growth rate of milk procurement by the Sangh. Due to the Sangh and Operation Flood milk, production is increased in the Malshiras taluka. Milk procurement growth rate is high in the years of 1991-92 i.e. 40.63 compared to other year. Growth rate is decreased since 1994-95 to 1998-99. The growth rate 9.64 in 1994-95, 5.83 in 1995-96, 7.84 in 1996-97, 1.73 in 1997-98 and (-)5.65 in 1998-99.

Milk procurement growth rate is decreased due to the loss in the dairy industry and one private Sangh has been started in the taluka. The private Sangh procured some milk in the taluka. Due to this reason Shivamrut Sangh milk collection growth rate is decreased.

The coefficient of variation of milk collection of Shivamrut Sahakari Dudh Sangh is calculated as 2.73 and Compound Growth Rate of the Sangh has calculated as 12.03 percent and average per year milk collection is 45038175.1 litres.

The average of primary milk co-operative societies are 262 and Compound Growth Rate of primary milk co-operative societies is 5.06 percent and compound growth rate of milk collection is as 2.73 percent.

3.9 ARTIFICIAL INSEMINATION DONE BY SHIVAMRUT SANGH

Shivamrut Sangh provided best quality artificial insemination to the milk producers in the taluka. Due to this reason acclaimed and recommendation by N. D. D. B. as 'Akluj Pattern; of artificial insemination and animal health service. Sangh provided at all the door step of farmers. It is a typical evolution and its implementation is a special feature of livestock resources development through cross breeding and animal health coverage. Presently there are 24 artificial insemination centres, 18 treatment centres equipped with scientific material and qualified veterinarians.

This programme was started in February 1984. Till 1999 this programme is widely spread all over taluka and milch animal productivity is increasing. About 45000 crossbreed cows are borne under artificial insemination programme. Table No. 3.4 clearly indicates per year

artificial insemination done in the operation area of the Shivamrut Sahakari Dudh Sangh.

Table No. 3.4
Artificial Insemination

Year	No. of A. I. done	Change in A. I. done	Growth rate of A. I.
1989-90	26305	-	-
1990-91	19610	6695	34.14
1991-92	32302	12692	39.24
1992-93	43182	10880	25.20
1993-94	48350	5168	10.69
1994-95	55630	7280	13.09
1995-96	57545	1915	3.33
1996-97	62644	5099	8.14
1997-98	63099	455	0.72
1998-99	60095	(-) 3004	(-) 5.00
	\bar{X} =48876.20		CGR = 18.80

Source: Annual Reports of Shivamrut Sahakari Dudh Sangh (1989-99)

The above table indicates that the growth rate of artificial insemination done in the operation is of Shivamrut Sahakari Dudh Sangh. The service is organised in such way that needful farmers get the required service at their doors. Due to this fact, the growth rate of artificial insemination is high in the year of 1990-91 i.e. 39.24. Then artificial insemination growth rate is decreased i.e. year of 1995-96, 1996-97, 1997-98 and 1998-99 i. e. 3.33, 8.14, 0.72 and (-) 5.00 respectively.

About 4500 high grade dairy animals borne out of this Artificial Insemination programme. But last five years the growth rate of Artificial Insemination is decreased because Sangh has been adopted new policy about Artificial Insemination programme. They have started changing the fee for it, those who are not supplied milk to the Sangh. Sangh recover the fee about the Artificial Insemination done. Due to this reason growth rate is decreased. Average number of Artificial Insemination done by the Sangh is as 46876. The compound growth rate of Artificial Insemination is as 18.80.

3.10 CATTLE FEED SALE BY SHIVAMRUT SAHAKARI DUDH SANGH

Cattle feed being a costly and essential input of dairy farming, nutritionally balanced and high quality cattle feed is manufactured and supplied to the milk producers through the co-operative dairy societies at reasonable rate.

Initially Sangh started with 20 MT capacity feed plant in 1982; presently it is operating at 80 MT per day capacity. Sangh proposes to install a 100 MT/day capacity project. The table No.3.5 clearly indicates the per year growth rate of cattle feed sale.

Table No. 3.5
Growth Rate of Cattle Feed Sale

Year	Cattle feed sale MT	Change in cattle fee sale MT	Growth rate of cattle feed sale
1989-90	2795.500	-	-
1990-91	3126.900	331.00	10.60
1991-92	5807.900	2681.00	46.16
1992-93	10205.600	4397.70	43.09
1993-94	13750.720	3545.12	25.78
1994-95	18619.370	4868.65	26.15
1995-96	22218.210	3598.84	16.20
1996-97	27580.840	536263	19.44
1997-98	24900.400	(-)2680.44	(-)10.76
1998-99	NA	-	-
	$\bar{X} = 14331.71$		CGR (-)32.53

Source: Annual Reports of the Shivamrut Sahakari Dudh Sangh (1989-99)

The above table shows that the growth rate of cattle feed sale by the Sangh during 1989-90 to 1998-99. The growth rate was high in the year of 1991-92 i.e. 46.16 and 1992-93 i.e. 43.9. Growth rate is decreasing since 1995-96 to 1999-98 i.e. 16.20, 19.44 and (-) 10.76 respectively.

Growth rate of cattle feed sale is decreasing due to less demand of Shivamrut cattle feed and competition increased in the market. Other reason is Sangh stopped rebate/bonus on the cattle feed. In 1995-96 Sangh has distributed bonus to feed customers at the rate of Rs. 20/- per bag purchased and in 1996-97 Rs. 5.00, 1997-98 Rs. 10.00 distributed per bag purchased.

But since 1998-99 the bonus and rebate has been stopped. Due to this reason, the sale of cattle feed is decreased.

The average of cattle feed sale by the Shivamrut Sahakari Dudh Sangh is 14331.71 metric tonnes and the Compound Growth Rate of cattle feed sale of Sangh is as (-) 32.53 percent.

3.11 SHARE CAPITAL GROWTH RATE OF SHIVAMRUT SAHAKARI DUDH SANGH

Share is the one of the most important factor in the capital formation process. Sangh has been started to gather share capital from 1976. Initially share capital of the Shivamrut Sahakari Dudh Sangh was Rs. 51,000/-. Presently, it is Rs. 6,97,12,500/- generated by the Sangh. In this share capital contribution of dairy co-operative societies, Government of Maharashtra and non-refundable share amount.

Share capital limited only Rs. 5 crores till 1994-95, but in 1995-96 share capital limitation was increased upto Rs. 10 crores. Sangh deducts P.M. C. societies 10 paise per liter and generate share capital. After distribution of profit such as milk, rebate and bonus remaining funds are transferred in the share capital. Due to this reason growth rate of share capital is going up and down.

Table No. 3.6 shows the growth rate of share capital.

Table No. 3.6
Share Capital Growth Rate

Year	Share Capital (Rs.)	Change in Share Capital (Rs.)	Growth Rate of Share Capital
1989-90	9238073	-	-
1990-91	13378191	4040117	32.20
1991-92	20379957	7001766	34.36
1992-93	39431146	19051189	48.31
1993-94	49196014	9764868	19.84
1994-95	54622105	5426091	9.93
1995-96	60431416	5809311	9.61
1996-97	34113700	26317716	(-)77.14
1997-98	66944700	32831000	49.4
1998-99	66912500	2767800	(-)0.05
	\bar{X} =41464780.20		CGR 22.17

Source: Annual Reports of Shivamrut Sahakari Duddh Sangh (1989-99)

The above table clearly indicates that the growth rate of Share Capital of Shivamrut Sahakari Duddh Sangh. The growth rate is high in the year 1997-98 i.e. 49.4 during 1989-90 to 1998-99. The growth rate is high because Sangh has started new dairy plant. The growth rate is (-) 0.05 due to Sangh invested more funds in the new dairy plant. Growth rate is increased in 1990-91, 1991-92 and 1992-93 i.e. 32.20, 34.36 and 48.31 respectively, because primary milk co-operative societies are increased 135 to 255, therefore, the Share Capital growth rate is increased in this year.

The average of share capital of Shivamrut Sahakari Dudh Sangh is Rs. 4.14,64,780 and Compound Growth Rate of Share Capital is as 22.17 percent.

3.12 RESERVE FUNDS GROWTH RATE OF SHIVAMRUT SAHAKARI DUDH SANGH

Presently Sangh holds different funds as depreciation fund on vehicles, machinery and different buildings by the Sangh. And special reserve fund raised as per government rules on new machineries and other funds such as co-operative fund, bad date fund, milk rebate fund, animal development funds, business research fund, utilisation fund, share reid fund. These funds are hold by Sangh.

Presently, Sangh has generated Rs. 9,53,94,473 through all the above provisions in 1998-99. The table No. 3.7 clearly indicates that the growth rate of reserve funds hold by the Sangh.

Table No. 3.7

Reserve Funds Growth Rate

Year	Reserve funds (Rs.)	Change in Reserve Funds (Rs.)	Growth Rate of Reserve Funds
1989-90	15616358	-	-
1990-91	19447216	3830858	19.70
1991-92	27863077	8415861	30.20
1992-93	35804838	7941761	22.18
1993-94	42603823	6798988	15.96
1994-95	50143695	7539869	15.04
1995-96	59954326	9810631	16.36
1996-97	76784608	16830282	21.92
1997-98	83777595	6992987	8.35
1998-99	95394473	11616878	12.18
	X = 50739000.90		CGR 22.22

Source: Annual Reports of Shivamrut Sahakari Dudh Sangh (1989-99)

The above table clearly indicates the growth rate of Reserve Fund. Reserve funds growth rate is very high in 1991-92 i.e. 30.20 and very less in 1997-98 i.e. 8.35. Because in 1997 Bad date fund, depreciation fund on vehicles and animal development funds are hold very less by Sangh, compared to other years. The growth rate was high in 1991-92 i.e. 30.20 because Sangh hold more funds on share redemption fund, subside of N.D.D.B., milk rebate fund and bad date funds, thus the growth rate is high.

Growth rate is nearly equal in the year 1993-94, 1994-95 and 1995-96 i.e. 15.96, 15.04 and 16.36 respectively. In 1997-98 the growth rate of reserve fund was very less.

The average of reserve fund is Rs. 50739000 per year and Compound Growth Rate of Reserve Fund is as 22.22 percent.

3.13 LOANS GROWTH RATE OF SHIVAMRUT SAHAKARI DUDH SANGH

The borrowing of a sum of money by one person, company, government or other organisations from another, loans may be secured or unsecured, interest bearing or interest free loans may be short or long term.

Sangh has been borrowing N.C.D.C., Ereda loan, N.D.D.B., Indo Shindh Bank, Bank of Baroda, Bank of India etc. for the various type

of dairy development. The table No. 3.8 shows the growth rate of loan taken by Shivamrut Sahakari Dudh Sangh.

Table No. 3.8
Loans Growth Rate of Shivamrut Sahakari Dudh Sangh

Year	Loans (Rs.)	Change in loan	Growth Rate of loan
1989-90	12711338	-	-
1990-91	16920659	4209321	24.88
1991-92	25166801	8246142	32.77
1992-93	25740883	574082	2.23
1993-94	27303041	1562158	5.72
1994-95	27249753	(-)53288	(-)0.20
1995-96	33928954	1204192	30.65
1996-97	78704736	74775782	56.89
1997-98	138080005	59375269	43.00
1998-99	201938100	63858095	31.62
	\bar{X} =58774427.00		CGR 32.24

Source :Annual Report of Shivamrut Sahakari Dudh Sangh (1989-99)

The above table indicates that the growth rate of loan taken by Sangh for various dairy development project. The growth rate of loan in 1991-92 i.e. 32.77 due to New Bombay project started by Sangh in 1988 and in 1995-96 the growth rate is 30.65, the growth rate is high compared to 1992-93, 1993-94 and 1994-95 because Sangh started 2 lakh litres capacity processing unit. N.D.D.B. provided 7 crores loan to this plant. In 1996-97 the growth rate is very high compared to other years due to Sangh has been started new dairy plant with the assistance of N. D. D. B. Sangh has installed a one lakh liter/day dairy at Vijaynagar. Sangh has undertaken expansion of 2 lakh liter/day with

an Ultra modern dairy processing unit with the provision of diversifying manufacturing of milk products. Due to this reason growth rate of loan is high.

Average loans borrowed by Shivamrut Sahakari Dudh Sangh is Rs. 58,774,427 and Compound Growth Rate of loans is as 32.24 percent.

3.14 INVESTMENT OF SHIVAMRUT SAHAKARI DUDH SANGH

Investment is expenditure on real capital goods. However, in everyday language it is also taken to mean purchase of any asset or indeed the undertaking of any commitment which involves an initial sacrifice followed by subsequent benefits.

Sangh has been investing in various types of investments schemes such as Shares, National Savings Certificate, Post Office Fix Deposit, Deposit on National Banks, R. D. Accounts, Kisan Vikas Patra, Indira Vikas Patra and deposit on co-operative banks. These are investments done by Sangh.

The table No. 3.9 clearly indicates the growth rate of investment.

Table No. 3.9
Investment Growth Rate of Shivamrut Sahakari Dudh Sangh

Year	Investment	Changes in investment	Growth Rate of Investment
1989-90	6427312	-	-
1990-91	2387381	4039931	(-)169.22
1991-92	16810214	14422833	85.80
1992-93	11740014	5047200	43.19
1993-94	9077773	266224	(-)29.33
1994-95	10143375	1065602	10.51
1995-96	14783048	4639673	31.39
1996-97	19366027	4582979	23.67
1997-98	26671890	7305863	27.39
1998-99	14639614	12032276	82.19
	$\bar{X} = 13204664.80$		CGR 16.46

Source : Annual Reports of Shivamrut Sahakari Dudh Sangh (1989-99)

The growth rate is high in the year 1989-90 i.e. 169.22, because Sangh invested more funds in the Shankarrao Mohite Patil Shetkari Sahakari Bank, Akulj and Sangh received fixed deposits amount from National banks. In the year 1994-95 growth rate is very less i.e. 10.51, because Sangh reduced Post Office Deposits, Kisan Vikas Patra and Indira Vikas Patra. Due to this the growth rate of investment is less.

In the 1998-99 the growth rate is high i.e. 82.19 because Sangh increased deposits on Bank of Baroda Fix Deposit, Bank of India R. D. Deposit and Krishna Khore Vikas Mahamandals Deposits. Due to this investment growth rate increased.

Average investment of Shivamrut Sahakari Dudh Sangh is Rs. 13204664 and Compound Growth Rate of investment is 16.46 percent.

3.15 FIXED ASSETS OF SHIVAMRUT SAHAKARI DUDH SANGH

On the balance sheet of a company everything that the company owns and which has a money value is classified as an assets. Total assets being equal to total liabilities. Assets such as current assets, trade investment etc.

Sangh holds number of buildings, generator sets, boring units, land, moter vehicles, cans, crates, various type of machines, feed plant, stores, animal hospitals, processing units, Bombay project, computers, gardens, telephone systems, boilers etc. These are various types of assets hold by Sangh.

The Table No. 3.10 clearly indicates the growth rate of fixed assets hold by the Shivamrut Sahakari Dudh Sangh

Table No. 3.10

Growth Rate of Fixed Assets of Shivamrut Sahakari Dudh Sangh

Year	Fixed Assets	Changes in Fixed Assets	Growth Rate of Fixed Assets
1989-90	25615920	-	-
1990-91	34876954	9261034	26.55
1991-92	36717449	21840495	38.50
1992-93	70457780	1374033	19.50
1993-94	81955540	11497760	10.02
1994-95	91706319	9750779	10.63
1995-96	109675264	17968945	16.38
1996-97	136680673	27005409	19.75
1997-98	160398648	23717975	14.78
1998-99	320508634	160109986	49.95
	\bar{X} =106859318.10		CGR 28-54

Source : Annual Reports of Shivamrut Sahakari Dudh Sangh (1989-99)

The growth rate of fixed assets is high in the year 1998-99 i.e. 49.95, because Sangh started new dairy plant at Vizori, therefore, the assets growth rate is high. In 1991-92 the growth rate is high i.e. 38.50, because Sangh has started new dairy plant unit II at Vizori. In 1996-97 the growth rate is high as compared to 1992-93 and 1994-95 i.e. 19.75 because Sangh started Seed Processing Unit at Akluj, therefore, the buildings and other assets increasing, so the growth rate is high in this year.

Average rate of fixed assets of Shivamrut Sahakari Dudh Sangh is Rs. 106859318 and Compound Growth Rate of fixed assets is 28.54.

3.16 CURRENT ASSETS OF SHIVAMRUT SAHAKARI DUDH SANGH

Assets is the most important factor in the balance sheet of a company. Everything that the company owns and which has a money value is classified as an assets. Total assets being equal to total liabilities. Assets such as current assets, trade investment, fixed assets etc.

Sangh has been generating tyre, oil, diesel store, milk processing, feed plant, medical store, animal service, seed processing etc. These are the current assets hold by Sangh.

The Table No. 3.11 clearly indicates the growth rate of current assets. The growth rate of current assets is high in 1991-92 i.e. 50.25, because cattle feed and fodder development programme was stressed by the Sangh. In 1997-98 the growth rate is very less i.e. 4.7 because Sangh reduced seed processing funds. Due to this growth rate is less. In 1996-97 the growth rate is high i.e. 34.43, because Sangh increased current assets in tyre, oil, animal service, fodder development programme etc.

Table No. 3.11
Current Assets Growth Rate of Shivamrut Sahakari Dudh Sangh

Year	Assets (Rs.)	Change in Assets (Rs.)	Growth Rate of Assets
1989-90	2478906	-	-
1990-91	3821011	1342105	35.12
1991-92	7680098	3859087	5025
1992-93	8265575	585477	7.8
1993-94	9772167	1506592	(-)15.42
1994-95	13572069	379902	28.00
1995-96	16310897	2738828	(-)16.79
1996-97	24877336	8566439	34.43
1997-98	25932818	1055482	(-)4.07
1998-99	29212959	3280141	11.23
	\bar{X} =14192383.60		CGR 30.28

Source :Annual Reports of Shivamrut Sahakari Dudh Sangh (1989-99)

Average current assets of Shivamrut Sahakari Dudh Sangh are Rs. 14192383 and Compound Growth Rate of current assets is 30.28 percent.

3.17 DEPOSITS GROWTH RATE OF SHIVAMRUT SAHAKARI DUDH SANGH

Deposit means money placed in an account at a bank and constituting a claim on the bank. The terms bank deposit includes deposits on all type of accounts.

Sangh has been holding non refundable deposits and non refund optional deposits. The Table No. 3.12 shows the growth rate of deposits by Sangh. During the years 1989-90 to 1998-99.

Table No. 3.12
Deposits Growth of Sangh

Year	Deposits (Rs.)	Changes in deposits	Growth Rate of deposits
1989-90	831477	-	-
1990-91	839758	8281	0.99
1991-92	852016	12258	1.44
1992-93	867222	15206	1.75
1993-94	884551	17329	1.96
1994-95	905394	20843	2.30
1995-96	926155	20761	2.24
1996-97	970325	44170	4.55
1997-98	976113	5788	0.59
1998-99	976113	0.0	0.0
	$\bar{X} = 1736912.40$		CGR 2.6

Source : Annual Reports of Shivamrut Sahakari Dudh Sangh (1989-99)

In the year 1996-97 the growth rate is high i.e. 4.55, because primary milk co-operatives are increased. Sangh deducted 10 paise per litre and grew deposit through the primary milk co-operative societies. In the 1997-98 the growth rate is less i.e. 0.59 and in 1998-99 the growth rate is zero because Sangh started new dairy plant at Vizori. Therefore, the growth rate went to zero. In the year 1992-93, 1993-94, 1994-95 the growth rate is nearly equal i.e. 1.44, 1.75, and 1.96 respectively.

Average number of deposits by the Sangh is Rs. 1736912 and Compound Growth Rate of deposits is as (-) 2.6.

3.18 PROFIT GROWTH OF SHIVAMRUT SAHAKARI DUDH SANGH

It is important to distinguish clearly between the definitions of profit which are used in accounting calculations in firms and the definitions of profit made in economic theory.

Shivamrut Sahakari Dudh Sangh received profit from various types of activities such as the sale of milk in Bombay, Nanded, Poona, Latur and local area such as Pandharpur, Barshi, Indapur, Natepute, Baramati, Kurduwadi, Shripur, Paranda etc. N. D. D. B. grants artificial insemination fee, feed sale, fodder seed sale, by-products sale etc. Sangh has distributed bonus and rebate on milk purchased and feed provided to the milk producers. And remaining funds are transferred to the profit account. Due to this reason the growth rate of profit is going up and down. The Table No. 3.13 clearly indicates the growth rate of profit.

Table No. 3.13
Growth Rate of Profit

Year	Profit (Rs.)	Change in Profit	Growth Rate of Profit
1989-90	639958	-	-
1990-91	150221	489737	(-) 326.1
1991-92	307922	157701	51.51
1992-93	179124	128798	(-) 71.90
1993-94	69426	109698	(-) 158.01
1994-95	53900	15526	(-) 28.81
1995-96	107611	53711	49.91
1996-97	88754	18857	(-) 21.25
1997-98	55998	32756	(-) 58.49
1998-99	278959	22296	79.93
	$\bar{X} = 193187.30$		CGR (-) 13.73

Source : Annual Reports of Shivamrut Sahakari Dudh Sangh (1989-99)

The growth rate of profit is high in the year 1990-91 i.e. 326.1, because Sangh received more profit from the milk sale in the various cities in the Maharashtra and local market. In 1993-94 the profit growth rate is 158.1 compared to other years. This growth rate is low. In the year 1998-99 the growth rate is 79.93 because Sangh introduced tetrapack milk project specially to sell the milk in urban area. But it received less response from the customers so the amount of profit in this year is low.

Average profit of Shivamrut Sahakari Dudh Sangh is Rs. 193187 and Compound Growth Rate of profit is as (-)13.73 percent. The reason of decline of profit is given above paragraph.

3.19 AGGREGATE PERFORMANCE OF SHIVAMRUT SAHAKARI DUDH SANGH

Shivamrut Sahakari Dudh Sangh is one of the well established, reputed and esteemed organisation running successfully and leading ahead towards progress for the last three decades. Shivamrut Sangh was founded with great efforts, dedication, determination and enthusiasm by the Late Shankarrao Mohite Patil on the 10th November 1976. His approach to rural development brought about significant socio-economic changes in the lives of small marginal and landless farmers.

Initially the dairy milk procurement in this area was about 2000 to 2500 litres/day. Presently, 1,80,000 litres of milk is procured per day by the Sangh. Now 351 primary dairy co-operative societies are working under the Sangh. Shivamrut Sangh is to support milk producers with a package of inputs required for promoting milk production on the one hand and undertake processing and marketing on the other hand.

The table given below shows that the aggregate performance of Shivamrut Sahakari Dudh Sangh. Such as milk procurement, Artificial Insemination, Cattle feed sale, Share Capital, Reserve Funds, Loans by Sangh, Investment, Fixed Assets, Current Assets, Deposits, Profit etc. The compound growth rate calculated on last ten years aggregate performance of the Sangh.

Table No. 3.14
Aggregate Compound Growth Rate of Shivamrut Sahakari Dudh Sangh (1989-99)

Sr. No.	Particulars	Compound Growth Rate (%)
1	Milk collection	2.73
2	Artificial Insemination	18.80
3	Cattle feed sale	(-) 32.53
4	Share Capital	22.17
5	Reserve Funds	22.22
6	Loans	32.24
7	Investment	16.46
8	Fixed Assets	28.54
9	Current Assets	30.28
10	Deposits	2.6
11	Profit	(-) 13.73

Source : Computed

Initially Sangh started milk procurement in this area was about 2000 to 2500 litres/day with 28 P. M. C. S., presently Sangh procured 1,80,000 litres/day with 351 P.M.C.S. But last ten years compound growth rate of milk collection is very low i. e. 2.73 percent. Only P.M.C.S. are increasing but milk collection is not more increasing.

Sangh provides veterinary and breeding service by undertaking Artificial Insemination programme with use of high quality germ plasm. This has resulted in increasing the milk production per animal. Some high yielding crossbreed animals were brought from out side. Above table shows that the compound growth rate of Artificial Insemination last ten years. i.e. 18.80 percent. Due to Artificial Insemination programme near about 45000 cow borned in this programme in operation area of Sangh.

Cattle feed is the costliest and essential input requirement of the dairy farmers. Production and supply of quality feed at minimum costs will certainly result in bringing down the cost of milk production and simultaneously enhancement in net gains. Sangh replaced the 20 MT/per day feed plant for mash production and installed on April 1982 a 80 MT/day. Now 100 MT/day totally automatic cattle feed plant is in operation. Above table clearly indicates that the compound growth rate of cattle feed sale by Sangh is (-) 32.53 percent. Compound growth rate is decreasing due to less demand of Shivamrut

cattle feed and competition increased in the market and Sangh stopped rebate on the cattle feed sale.

Initially share capital of the Sangh was Rs. 51,000/-. Presently it is Rs. 6,97,12,500/- generated by the Sangh. Sangh deducts P.M.C.S. 10 paise per litre and generates share capital. After distribution of milk and cattle feed rebate remaining funds are transferred in the share capital. The compound growth rate of last 10 years i.e. 22.17 percent. Sangh generate capital in this way and made progress.

Presently, Sangh hold different funds such as funds on vehicles, machinery and different buildings by Sangh. Bad dead fund, animal development fund etc. above table clearly indicates that the compound growth rate of reserve fund i.e. 22.22 percent. The growth rate of reserved fund is good therefore, Sangh operate various programme such as Artificial Insemination, feed plant, milk processing, etc.

Sangh has been borrowing from N.C.P.C., Ereda loan and other National Bank loan, Co-operative bank loan. The last 10 years compound growth rate of loan by Sangh is 32.24 percent. Sangh started various new plant and programme such as new dairy plant, feed plant, cans, various types of machines, stores, computers etc. Due to this loans compound growth rate is high. Due to the loans Sangh made progress.

Sangh has been investing various types of investment such as N.S.C. fixed deposits on national banks, R. D. account, Indira Vikas

Patra, Co-operative banks deposits etc. The last ten years compound growth rate of investment is 16.46 percent.

Sangh holds number of buildings, generator sets, land, motor vehicles, cans machines, feed plant, store, processing units, Bombay projects, computers, etc. these are the fixed assets hold by Sangh. Last 10 years compound growth rate of fixed assets is 28.54 percent. The fixed assets growth rate is good.

Sangh has been generating current assets such as tyre, oil, diesel, store, milk processing, feed plant, medical store etc. these are the current assets hold by Sangh. The compound growth rate of current assets is 30.28 percent. The growth rate is high. Due to this fact Sangh made progress in various sector such as Artificial Insemination Programme, milk collection, feed plant, milk sale units, etc.

Deposits compound growth rate is 2.6 percent. The growth rate of Deposits is very less. Sangh started new dairy unit that time Sangh use some deposits sum. Due to this the growth rate is less.

Profit is the most important factor in any business. Sangh has distributed the bonus and rebate on the milk and feed provided to the milk producers and remaining funds are transferred into the profit account. Last ten years compound growth rate of profit is (-) 13.73 percent. The compound growth rate is negative due to Sangh is going into loss. Sangh introduced new tetrapack milk project specially to sale milk in urban area. But it is received less response from the customers

and other reason is the milk collection growth rate is very less i.e. 2.73 percent. Due to this the profit is (-) 13.73 percent in the last ten years.

Above table clearly shows that how the Sangh is not in well economic condition. it is going under critical financial situation. The milk collection is not properly improving but co-operative milk societies increasing. Besides this the profit is very less or negative. Sangh has stopped giving dividend and rebate. The milk producers are unenthusiastic about their milking business. Due to this today Sangh is having limited progress.

3.20 DIRECT BENEFITS FROM THE SHIVAMRUT SAHAKARI DUDH SANGH

The economic and socio benefits of co-operative dairy societies and Shivamrut Dudh Sangh in Malshiras taluka are studied in this chapter. There are some direct and indirect benefits from the Sangh. Sangh provides some facilities to the milk producers and primary milk co-operative societies in the operation area. Sangh provided essential facilities to the milk producers. It is clear that the Malshiras taluka development is through the Shivamrut Dudh Sangh and co-operative dairy societies. In order to study the socio-economic condition of the milk producers. In this study 100 milk producers are interviewed, those who are members of primary milk society. 20 societies were randomly selected and each society's 5 milk producers were selected at randomly.

The following are the possible socio and economic benefits from co-operative dairy and Shivamrut Dudh Sangh.

Direct Benefits

1. Economic help
2. Proper price of milk
3. Guidance
4. Regular payment
5. Employment opportunities
6. Social changes
7. Creating co-operative view in the rural people
8. Supply of feed
9. Cow breeding programme
10. Seed processing and seed sale
11. Incentive for milk production
12. Loan for purchase of milch animal
13. Supply of chop cutter
14. Training programme

1) ECONOMIC HELP

Capital is the most important factor in any business. Capital is required for dairying for the purchase of milch animal cattle feed, fodder, cattle shade, chop cutter and other equipments of dairying. Some milk producers are using their own capital and some other take loans from financial institutions and commercial bank or pat sanstha.

But banks and other financial institutions are not providing direct loan to the milk producers. Therefore, Sangh gave guaranty for loan and then after financial institutions provided loan to the milk producers. Dairy business provided income support to the milk producers and they meet their needs. Thus due to Sangh economic help for milk industries in rural area is made possible.

2) PROPER PRICE OF MILK

Milk is a perishable commodity. It is not possible to store it for a long time. Therefore, it is to be sold soon after its production. Co-operative dairy societies meet the problem of milk. If the production of milk increases the prices decline. Thus it is essential that the milk producers should receive proper price of milk. If the producers depend on private vendors for the sale of milk they would not get more price.

Hence, the co-operative societies can play a vital role in it. The co-operative societies not only provide reasonable price of milk but also feed, fodder. These milk societies are based on co-operative principles.

3) GUIDANCE

The Shivamrut Sahakari Dudh Sangh provided guidance for increasing the milk production and high quality cow. In dairy business there are so many difficulties in process of rearing cattle milking, feeding and other difficulties therefore, proper guidance is necessary.

Without guidance the milk producers can not become successful in their activities for dairy development guidance is necessary. The Sangh has arranged visits. Training camps and seminars for their members.

Sangh arranged the visits to different places where dairy plants are working properly. The visitors can observe and learn the methods of improving the dairy activity Anand at Gujarat, Array in Mumbai are working well known dairying centres.

Shivamrut Sangh arranged training camps for the milk producers and workers arranged seminars for the milk producers, lecture, film, video show etc. such type of guidance helps the development of dairying.

4) REGULAR PAYMENT

Co-operative dairy societies make payment regularly for the milk purchased from the members. Such payment is made at every month end. Milk rate is fixed by Anand Pattern. Higher fat and S.N.F. give higher rate and low fat and S.N.F. give low rate.

5) EMPLOYMENT OPPORTUNITY

Indian economy is facing unemployment problem. The Government has adopted various measures to solve the problem of unemployment. Eighth Plan gave more stress on the employment generation through various schemes like J.R.Y., I.R.D.P., P.M.R. etc. The co-operative dairy societies create employment opportunities

in rural landless labour, marginal farmer and educated unemployment. Each and every co-operative dairy society need a few clerks and helpers for milk collection and other official work. At the end of 1998-99 there were 351 co-operative societies working under Shivamrut Sahakari Dudh Sangh. Each society requires one secretary and two or three helpers. Such as total employment create near about 1053 only milk collection. About 30,000 families engaged in milk production.

Dairying develops co-operative movement in Malshiras taluka and to remove poverty through dairy activity. Dairying reduce such disguised and seasonal unemployment. In Malshiras taluka major people depend upon the dairying.

6) SOCIAL CHANGES

Malshiras taluka is well developed taluka in the Solapur district. Dairying is the most important factor to the social changes. Farmers and landless labours gave more employment opportunities therefore, their income is more. Due to this reason education, standard of living have improved, co-operative dairy societies are working on the co-operative basis, people are living day-to-day life with co-operative principles, members and chairman elected through get together discussion. It saves time and money. This is the social change in the villagers.

7) SUPPLY OF FEED

Sangh has started feed factory in 1980, with production capacity of 80MT per day. High quality feed is supplied through co-operative dairy to the milk producers. Therefore, the milk productivity of cow is increasing and balance of health is kept good. Therefore, the demand for Shivamrut feed is increasing day-by-day. Due to this reason Sangh has adopted other feed schemes. The feed made at Sangli and Miraj is supplied to the milk producers. Milk productivity is increased due to Shivamrut feed. Co-operative dairy supply feed with credit. The feed bill is paid at month end by deducting from the milk bills.

8) COW BREEDING PROGRAMME

The Shivamrut Dudh Sangh's main objective is to provide veterinary service and breeding to the milk producers. Presently 24 artificial insemination centres and 21 veterinary clinics are established in the Shivamrut Sangh operation area and 30 inseminators appointed and each person is provided with a motorcycle. Frozen semen for breeding service is adopted in this area. In the operation area about 45000 high-grade dairy cows are borne out of this programme.

Average productivity of milk is high i. e. 30 liters per day per cow. In 1989-90, 60095 artificial inseminations were made by the Sangh and veterinary calls 53354 and immunization calls are 54270 were completed in the operation area. Sangh has provided veterinary and

A. I. programme at very low cost. Therefore, milk producers have not to face any difficulty in his dairy business due to Sangh.

9) SEED PROCESSING AND SEED SALE

Sangh has started a new programme namely, "Seed Processing and Seed Sale" because the farmers sold their production in harvest season without any processing. Due to this reason they get very low rate for their foodgrain. Sangh started seed processing unit in 5th September 1997. The main target of the Sangh is to increase milk production food grain and fodder. But high quality fodder is not available throughout year. Therefore, Sangh started high quality seed supply for the fodder such as African Maize, Cow pea, Hara Sona, Ahamednagar Local, Yashwant these are supplied for the fodder.

10) INCENTIVES

The milk production is depend upon the profit and incentives. Sangh has provided some incentive to the dairy business through societies who supply best quality milk to the Sangh. All remunerative price are offered to the milk producers on the hand and the profits earned through marketing of milk at metropolises are ploughed back to producers over the years in the form of Bonus/Rebate. During 1995-96 the Sangh paid 42 paise per liter of milk and Rs. 20 per bag of cattle feed supplied to the individual members. And in 1997-98 the Sangh paid 43 paise per liter of milk and Rs. 10 per bag of cattle feed supplied by Sangh to the individual members. Sangh gives

incentive prizes to co-op. dairy societies for supply of good quality and hygienic milk.

11) LOAN FOR PURCHASE OF MILCH ANIMALS

In the operation area Shivamrut Sangh provided loan through the national bank to purchase high quality milch animal. During 1996-97 total 280 milk producers purchased milch animals by this scheme. Due to this scheme insurance facilities were also given to them.

12) SUPPLY OF CHOP CUTTER

Dry and green fodder are saved due to use of chop cutter, and 50 percent fodder is saved by this cutter. The milk production and productivity is increased. So the milk producers are now using chop cutters and Sangh provided the chop cutters to them on loan. The loans are recovered by small instalments.

13) SUPPLY OF MILCO TESTERS

According to the N. D. D. B. policy the milk rate depends upon the quality of milk. Milk producers milk is correctly checked by this Milco testers and co-operative society pays proper rate of milk. Milco tester easily check the quality of milk. Due to this reason the Sangh has provided Milco testers to the co-operative societies. Till 1998-99 total 333 Milco testers are supplied by Sangh.

3.21 INDIRECT BENEFITS FORM SHIVAMRUT SAHAKARI DUDH SANGH

Dairy development depends upon the co-operative development. The co-operative movement has developed in Malshiras taluka from last four decades. Due to the Shivamrut Dudh Sangh co-operative dairy members give some indirect benefits from dairying of Sangh as given below.

1) SALE OF COW DUNG

Milk producers receive income regularly from the milk and sale of cow dung. Cow dung sale one or two time in the year. Landless milk producers sell the cow dung and get the amount and other type of milk producers use it as a manure in their field. It increases the fertility of the land and the crop production is increased.

2) CONSUMPTION OF MILK

A part of the milk production has been kept by the producers for daily consumption purpose and the remaining is sold. In this study the milk consumption is very low in case of landless milk producer i.e. 1.92 litres and very high in case of medium farmer i.e. 3.23 litres. It indicates that the increase in milk production also increase milk consumption. It is not possible for some of them to purchase and consume more milk. Another thing is that the consumption of milk in the society increased due to the dairy development in Malshiras taluka.

3) INCREASING AGRICULTURAL PRODUCTION

Cow dung is the best natural fertilizer to use in agriculture. Due to use of cow dung agricultural productivity has increased tremendously. Chemical fertilizers reduce productivity in the long run. Thus the milch animal has also increased with dairy activity and availability of more cow dung has also used in agriculture. It increased agricultural production and soil fertility.

4) MILK PRODUCERS STATUS

Every persons social status depends upon various factor such as economic condition, land holding, job, family background etc. Now-a-days keeping crossbreed cows is an index of status in rural area. This is important point for the landless milk producers. Milk producers receiving income regularly by and their credit is increasing in the society. Therefore, the co-operative dairying is the most important tools of rural economy.