

## CHAPTER 2

### Co-operative Dairy Development In Baramati Taluka :

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## CHAPTER 2

### Co-operative Dairy Development in Baramati Taluka.

#### Co-operative Dairy Development in Maharashtra State :-

Dairying is the traditional business in Maharashtra, as in other states in India. The total geographical area of Maharashtra is 3,07,690 sq.kms. Of this total land area only 60 percent is under cultivation, of which only 12 percent is under irrigation. Thus, the major part of agricultural land is non-irrigated. According to the 1981 census report, the total population of Maharashtra was 6.28 crores. It is spread over 39,354 villages and 289 cities. Sixty-six percent of the population of Maharashtra state is engaged in agriculture either as owners or wage-earners, and in animal husbandry. But because of inadequate facilities of irrigation, agriculture cannot become a means of livelihood for them. So, there is an acute need for business to supplement agriculture. From this point of view, dairying gets a very important place. It generates more employment opportunities and incomes with better utilisation of available land resources. As a result the Government of Maharashtra has given priority to dairy development programmes. For this purpose, the Government had established a separate department for dairy development in the year 1958.

Success or failure in any development programme depends upon co-operation from the people. Co-operative movement is the best instrument for ~~xxx~~ ensuring such co-operation among people.

So the government has undertaken dairy development programmes on co-operative lines. It has been undertaken mainly from 1960, onwards. The details about the growth of the co-operative dairies in Maharashtra are shown in the following table.

Table : 2.1

Details of co-operative milk societies and federations  
in Maharashtra State (1961-84)

Details	1961	1976	1982	1984
1) Total No. of milk Co.Op.	450	3773	8647	10024
2) Total No. of membership of primary Co-operatives	17500	305200	774244	920000
3) Paid up Shair Capital (Rs. in lakhs)	10	212	303	780
4) Own funds (Rs. in lakhs)	13	424	350	2350
5) Purchase of milk (Rs. in lakhs)	74	6613	7507	18500
6) Sale of milk and milk products (Rs. in lakhs)	77	7276	8570	19000
7) Co-op. societies in profit	162	2162	4229	5100
8) Profit (in lakhs)	2	142	204	300

Source :- A.R. Karve and M.L.Kandalkar;  
Dairy Business and Co-operative  
Management (Marathi) P.64

The above table shows that the number of co-operative dairy societies is increasing. But the proportion of increase in the number of co-operatives and the increase in membership is decreasing. It is as follows.

i) There were 450 Milk Co-operative Societies in 1961, and the number increased to 3773 at the end of 1976. It means that the increase in the number of milk co-operatives on an average was 49 percent per year. In the same period, the membership of these milk co-operative societies increased by 110 percent per year, on an average.

ii) At the end of 1982, there were 8647 milk co-operatives. It means that the increase in the number of milk co-operative societies from 1976 to 1982 was 21.5 percent on an average per year and the membership of the milk co-operatives is increased by 26 percent per year.

iii) The number of milk co-operative dairy societies increased by 15 percent per year, and its membership increased by 19 percent per year in the period 1982 to 1984.

It shows that the total number of milk co-operatives and their membership has increased but ratio of membership to the co-operatives has decreased.

The table also shows another important aspect. Out of the total number of milk co-operatives, 36 percent were in profit in 1961, 57 percent in 1976, 48 percent in 1982, and 51 percent in 1984. It means that there is only quantitative or numerical development in Maharashtra from 1976.

The structure and working of dairy co-operatives in Maharashtra follows the scheme outlined below.

At the village level, there are primary milk co-operative societies. These collect milk from their members and supply it

through the taluka or the district co-operative federations to the Government Milk Scheme. Those societies which are not members of either taluka or district co-operative milk federations, can supply milk directly to the Government scheme for further processing and distribution.

In regard to the dairy development in co-operative sector the Government of India started an ambitious scheme from 1970, known as 'Operation Flood'. The two districts from Maharashtra, Jalgaon and Kolhapur were selected under the operation flood first scheme. In the second stage of the operation flood (OF II) 20 districts were selected. This scheme was to be implemented in three different stages, as follows.

	<u>First stage</u>	<u>Second state</u>	<u>Third stage</u>
1	Kolhapur	Pune	Sangli
2	Jalgaon	Nasik	Dhule
3	Solapur	Beed	Satara
4	Aurangabad	Yewatmal	Chaddrapur
5	Jalna		Qhar Chiroli
6	Usmanabad		Bhandara
7	Latur		Raigad
8	Buldhana		Ratnagiri

The main objective of operation flood is to develop dairy business on co-operative basis following the 'Anand Pattern'. The structure of milk co-operatives in operation flood is a three tier one.

- A) At village level - Primary Milk Co-operative Society.
- B) At district level - District Milk Co-operative Federation.
- C) At state level - State Milk Co-operative Federation.

Under the operation flood scheme there are to be no co-operative unions at taluka level.

Up-to the end of 1970, most of the milk requirements were met through supply from other states, particularly from Anand in Gujarat. However, the position has been altered, as a result of the working of the co-operatives and the efforts of the government. To-day, Maharashtra is exporting milk to other states of our nation. This shows the significance of the development of dairy industry in Maharashtra.

In the words of Dr. VERGHESE KURIEN  
 "Before Operation Flood, the Bombay Milk Scheme put out only four lakh litres of milk per-day; of this one lakh litres came from Anand, another one lakh litres from Aarey Milk Colony and two lakh litres came from imported milk powder used to prepare toned milk.

Today, no milk comes to the Bombay Milk Scheme from Anand. No milk comes from Aarey Milk Colony. And no imported powder is used to prepare toned milk. At the same time, the total milk put out by the Bombay Milk Scheme has increased from four lakh litres to ten lakh litres

per-day. All this milk is produced, today, in rural Maharashtra, thanks to Operation Flood and similar schemes of the Government of Maharashtra. Not only is there now no shortage of milk in Bombay, there is glut."<sup>1</sup>

The Maharashtra Government plays a very important role in the development of dairy industry. At present there are 32 Government Milk Schemes working in the state. The major work of processing and distribution of milk done through these schemes. (Table 2.2)

i) Table No. 2.2 shows that not a single Government Milk scheme is utilising its milk handling capacity fully.

ii) Sixty-five percent milk handling capacity of Government Milk Schemes is used. But 17 (53 percent) schemes are using less than 50 percent capacity. It is the main cause of loss to the Government Milk Schemes.

There are 103 milk chilling centres, with a total capacity of 11.70 lakh litres. Per-day, and six milk powder plants of which three are Government plants located at Udgir, Miraj and Nagpur. ~~There~~ Three plants are in the co-operative sector, located at Pune, Warana and Jalgaon.

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1. The Illustrated Weekly of India. January 1984.

Table 2.2

MILK SCHEMES AND THEIR CAPACITY IN MAHARASHTRA - 1980

No.	Name of Scheme	Date	Milk handling capacity (lakh litre)	Average Milk collection 1980 litres	Percentage of daily average collection to total handling capacity	
1.	Govt. Milk Scheme	Ahmednagar	6/11/69	0.50	42608	85.21
2.	"	Akola	7/2/62	.50	17098	34.19
3.	"	Aurangabad	15/2/62	.75	27216	36.28
4.	"	Amarawati	4/2/62	.50	8218	16.65
5.	"	Beed	1.4.77	1.00	26000	26.00
6.	"	Bhoom	May 78	.20	17506	87.00
7.	"	Chandrapur	15/8/79	.20	4400	22.00
8.	"	Chalisgaon	9/6/69	.15	9600	64.00
9.	"	Chiplun	1/7/66	.40	4300	13.25
10.	"	Dapchari		.10	3500	35.00
11.	"	Dhule	5/8/62	2.00	126000	63.00
12.	"	Mondin	20/4/79	.20	19300	96.65
13.	"	Kankavali	26/12/60	.10	3700	37.00
14.	"	Kolhapur	31/3/61	1.00	65200	65.20
15.	"	Mahad	1/7/66	.20	4300	21.50
16.	"	Nisavar	25/2/66	.10	2600	26.00
17.	"	Miraj	25/3/67	1.20	109300	91.08
18.	"	Nagpur	8/8/58	1.00	57000	57.00
19.	"	Nandpur	21/12/79	.50	9600	19.20
20.	"	Nashik	1/12/60	.50	45400	90.80
21.	"	Nanded	1/4/77	1.00	7000	07.00
22.	"	Parbhani	1/4/79	.50	4900	09.80
23.	"	Ratnagiri	8/7/66	.10	2879	28.79
24.	"	Pune	16/1/50	1.50	104000	69.33
25.	"	Satara	1/10/79	.50	25300	50.60
26.	"	Solapur	15/9/60	.75	61800	82.40
27.	"	Udgir	24/2/64	1.20	33600	28.00
28.	"	Oni	6/8/78	.20	6400	32.00
29.	"	Wardha	1/6/76	.50	13900	27.00
30.	"	Bombay - Aarey	3/3/51	2.50		
31.		Warli	9/11/61	4.50	867500	78.86
32.		Kurla	22/10/75	4.00		
Total			26.72	1731279	64.79	



Co-operative Dairy Development in Pune District :-

Pune district falls in western Maharashtra. The total geographical area of the district is 15,642 Sq.kms. According to the 1981 Census Report the district had a population of 41.64 lakhs. There are thirteen talukas besides Pune city in this district. There are 1595 villages and 22 cities in this district. Taluka-wise area and population are shown in the following table.

Table 2.3Tahashilwise Area and Population in Pune District 1981

Sr.No.	Tahashil	Total area (sq.kms.)	Population
1.	Pune city	184	1380395
2.	Haveli	1317	655439
3.	Khed	1400	231886
4.	Ambegaon	1043	160746
5.	Junner	1985	246425
6.	Shirur	1559	182835
7.	Daund	1280	185608
8.	Indapur	1468	227675
9.	Baramati	1382	257511
10.	Purandhar	1102	161409
11.	Bhor	892	129258
12.	Velhe	497	45379
13.	Mulshi	1039	109105
14.	Maval	1131	187799
Total		15440	4164470

Source : Socio-Economic Review And District Statistical  
Abstract of Pune District, 1981-82. PP-5-6.

Because of suitable conditions for the milk production and collection, the Government had sanctioned a special milk scheme for Pune district. It was started from 16th January 1950. It helps to develop dairy business in Pune district. At the end of Oct. 1985, there were 949 registered and 104 proposed primary milk co-operative societies of which 847 and 104 societies, respectively, supply milk. Details of the growth of milk co-operative societies and average daily milk collection in Pune district are shown in the table. (Table No. 2.4)

The table shows that the number of co-operative dairy societies has increased by 35 percent during the period from 1978-79 to 1982-83. The collection of milk has also increased by 58 % in the same period.

More societies came into existence (62 percent) during 1982-83 and 1984-85 and collection of milk increased by 69 percent. It might appear that the number of primary milk co-operatives and their milk collection has increased, but in reality there is only a slight increase in milk collection (7 percent), where as the number of societies has increased by 23 percent during the period 1982-83 to 1984-85.

The Pune district has two milk co-operative federations functioning. One of them is the Pune District Milk Co-operative Federation and the other is the Baramati Taluka Milk Co-operative Federation.

Table 2.4Progress of Milk Co-operatives in Pune District

Year	: Registered	: Total	: Increase	: Daily	: Increase
	: Co-opera-	: No. of	: in No. of	: Milk	: in Milk
	: tive Milk	: Co-op.	: societies	: collec-	: collection
	: societies	: Milk	: (Percent)	: tion	: (Percent)
	:	: socie-	:	: (litres)	:
	:	: ties	:	:	:
-1-	: -2-	: -3-	: -4-	: -5-	: -6-

At the  
end of

1978-79	408	408	--	N.A.	--
1979-80	14	422	3.5	84000	--
1980-81	42	464	10.00	105000	25.00
1981-82	46	510	10.00	125000	19.00
1982-83	41	551	8.00	133000	6.4
1983-84	119	650	21.00	168000	26.3
1984-85	223	893	33.3	226000	34.5

Source :- Progress Report D.D.D.O's Office, Pune.

Note :- Figures shown in column No. 4 & 6 are calculated)

Pune District Milk Co-operative Federation :

This federation was formed in 1960 and its operational area is the whole district. Its headquarter is at Katraj near Pune city. It has its own chilling plant, milk powder plant and ice factory. It has started the production of milk products at Katraj dairy. It is distributing nearly 63,000 litres of milk perday in Pune city and its suburban areas. In view of

this, the federation has started full-time milk distribution centres in Pune city.

Baramati Taluka Milk Co-operative Federation :-

This is the other milk co-operative federation in the Pune district. It was established in December 1977, but began functioning from 1981-82. The operational area of this federation is limited to the Baramati Taluka. It produces milk products and distributes milk in Baramati town.

In order to implement the dairy development extention programmes, Government has established an office of the District Dairy Development Officers (DDDO) in Pune city, since June 1978. An ambitious scheme for co-operative dairy development was started by the Government of India in 1970. This was known as Operation Flood. Pune district was brought under this scheme from 1st April 1984, for a period of five years and the cost of this programme has been Rs. 15 crores.

In order to increase milk production it becomes highly imperative to improve the quality of milch cattle. Scientifically, judicious cross-breeding techniques become an important policy ingredient in this aspect. A number of cross-breeding centres have been established. There is a large number of cross bred cows in the district. According to the 1982-83 census report there were 2,24,265 cross-bred cows in this area. There are 164 artificial insemination centres. It helps to increase the number of cross-bred cows.

For some time the production and collection of milk is *increasing* has been showing a high rate of increase. The Government has, rightly therefore, decided to extend the capacity of milk processing and chilling facilities in this district. Details of dairies and chilling facilities are as Table No. 2.5.

The table No. 2.5 shows that except for two chilling centres i.e. at Khed and Ambegaon, all other chilling centres are handling more milk than their capacities. From this it is clear that there is a healthy development of co-operative dairies in Pune district.

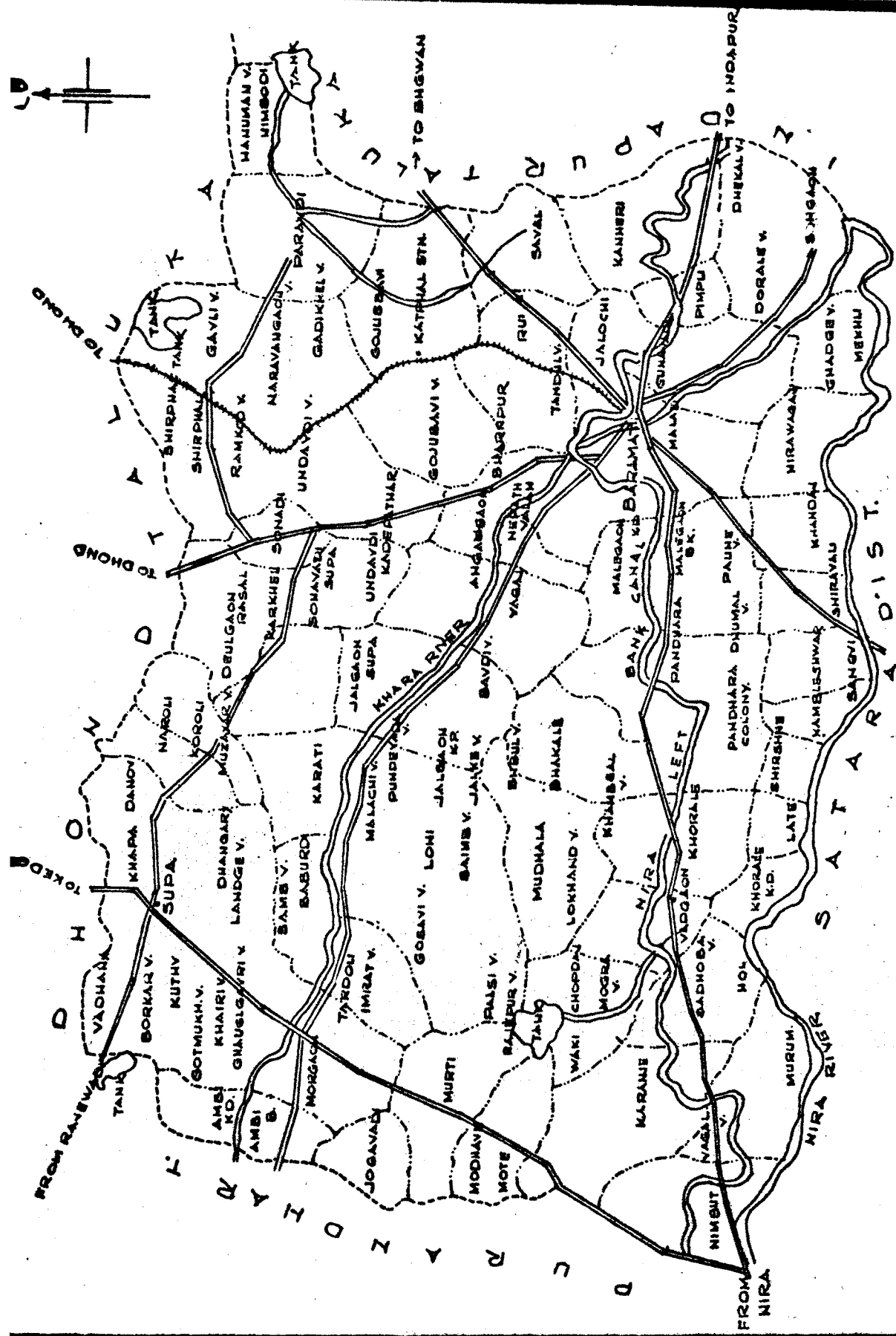
#### Co-operative Dairy Development in Baramati Taluka :-

##### (i) Location of Baramati Taluka

Maharashtra State has been divided, into seven divisions for administrative purposes. These divisions are Aurangabad, Amrawati, Bombay, Konkan, Nagpur, Nasik and Pune.

Besides dividing the state into 'divisions', a further break-up has been made on the basis of districts. There are thirty districts in Maharashtra. Pune district comes under Pune division of Maharashtra. The Pune district comprises the city and thirteen talukas. Baramati Taluka is one of them.

Baramati taluka is situated on the western side of Pune headquarters. It is surrounded by Phaltan taluka of Satara district, and is separated from Phaltan taluka by Nira river to the south. There is Indapur taluka in the ~~xxx~~ east, Purandhar taluka in the west and Daund taluka in the north. Baramati taluka lies on 74°, 39' east longitude and 18°.10' north latitude.



MAP OF THE  
BARAMATI TALUKA DIST. PUNE

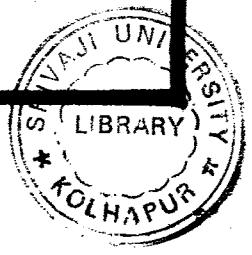


Table 2.5

Dairies And Chilling Centres in Pune District.

Sr. No. :	Name, Place & Taluka :	Daily Milk : Handling : Capacity	Actual : Milk : handling:	Distance : from Pune : (kms.)
1.	Govt. Milk Scheme, Pune	1,20,000	1,45,000	--
2.	Katraj Dairy of Pune District Co.op. Union	30,000	53,000	10
<u>Govt. Milk Chilling Centres</u>				
3.	Baramati - Tal. Baramati	30,000	1,08,000	120
4.	Induri - Maval	10,000	21,000	40
5.	Outur - Junner	10,000	22,000	115
6.	Indapur - Indapur	10,000	13,000	140
7.	Nasrapur - Bhore	5,000	45,000	38
<u>Milk Chilling Centres of Pune Dist. Milk Co.op. Union</u>				
8.	Bhore - Bhore	20,000	22,100	55
9.	Wade - Khed	8,000	7,000	70
10.	Pimpalgaon - Ambegaon	5,000	4,400	70
<u>Proposed Govt. Dairies and Chilling Centres by Govt.</u>				
11.	Malegaon - Baramati	1,00,000	--	110
12.	Indapur - Indapur	10,000	--	140
13.	Kondapuri - Shirur	10,000	--	40
14.	Nira - Purandhar	20,000	--	70
<u>Proposed Chilling Centres by Pune Dist. Co-op. Union</u>				
15.	Gaimukh - Ambegaon	50,000	--	60
16.	Pait - Khed	50,000	--	60
17.	Varvand - Dound	30,000	--	60

Source :- Progress Report of DDDO's office Pune.

(ii) Main Features :-

Baramati taluka is leading in many spheres, namely, historical, cultural, economic, trade and agriculture. It became a separate division during the reign of Shahu Maharaj and it formed a part of 'Swarajya' of Shivaji Maharaj.

Baramati was the residential headquarters of Shri Babuji Naik who had provided loans to the Peshvas to meet their war requirements. Baramati has reason to boast of its historic connections and prosperity.

Baramati is the birth place of genuine treatise in Marathi literature known as 'Shivalilamrut'. It is written by Shridharswami, in the temple of Kashivishveshwar on the bank of Karha river. Baramati has become famous because of the immortal poet Mayurpandit Moropant. He was an inhabitant of Baramati.

This taluka is also leading in trade and agricultural development. Cotton and jaggery markets of Baramati were wellknown not only in Maharashtra but also in India. It is mostly advanced in agricultural sector, and is also leading in adoption of developed techniques in agriculture. This tradition of development is also continued in the production of milk. At present Baramati taluka is a leading producer of milk throughout Maharashtra.

(iii) Population :-

According to the 1981 census report, the taluka has a population of 2,57,511, of which 16.8 percent is urban and 83.2



percent is rural. The growth of population in Baramati taluka is as follows.

Table 2.6

Area & Population of Baramati Taluka

Area in Sq.Kms.	Population		
	1961	1971	1981
1382	173817	227707	257511
Percentage increase in population	--	31.00	13.1

Source : Socio-Economic Review and District Statistical Abstract of Pune District (1981-82)

The above table indicates that the rate of increase in the population fell by 17.9 percent in the last decade.

(iv) Agricultural Scene :-

The total geographical area of Baramati taluka is 1,38,248 hectares of which only 10,0712 hectares (72.8 percent) are under cultivation. Of the total cultivable land 44188 hectares are under irrigation i.e. 45 percent area is irrigated. The main crops of Baramati taluka are sugarcane, jawar, cotton, wheat, bajra etc. There are different types of fruit-gardens (orchards) in this taluka, i.e. grapes, guava and pomegranates.

The main sources of irrigation are wells and canals. At the end of 1983-84 there were 7,244 wells in Baramati taluka. Another and main source of irrigation is canals. Nira Left canal passes through this taluka and forms an important

ingredient of the irrigation system. The total area under canal irrigation is 25588 hectares. These facts indicate that the area is fairly well-developed agriculturally and has a good potential for further growth.

(v) Industries

With a fairly well-developed agricultural sector and with the almost continued and assured supply of water for irrigation and with the major cash crops of the region such as sugarcane and cotton, it would be quite natural to expect the agro-based industries to have been set up in the region and also to be fairly predominant. Some of these industries are,:

(A) Sugar :-

Sugar factories have the means of ushering in agricultural development. Two co-operative sugar factories have been set up and are working in this taluka. One of these is the Malegaon Co-operative Sugar Factory at Malegaon (Shivnagar) and the other is the Someshwar Co-operative Sugar Factory at Someshwarnagar. A number of farmers from the eastern side of this taluka benefit by patronising the Shri Chatrapati Co-operative Sugar Factory, Bhavaninagar, (Sansar), though this factory is in the Indapur taluka.

(B) Grape Industry :-

Baramati area produces fairly large quantity of grapes from its vineyards. With ready availability of the raw material, a number of liquor processing units have been set up since the year 1973-74, at Pimpli village, four kms. away from Baramati

city. Different types of liquors are produced in these units. The setting up of these units has boosted the morale of the grape farmers as they find an assured market for their produce.

(C) There are two large mills producing edible oil and a number of individuals producing oil, privately.

(D) There are six ginning factories in Baramati town which help and are in turn helped by farmers.

(E) There are some metal industries, too, in this area, such as Baramati Engineering, Shirsat Trailer, one ice factory and some other small industries.

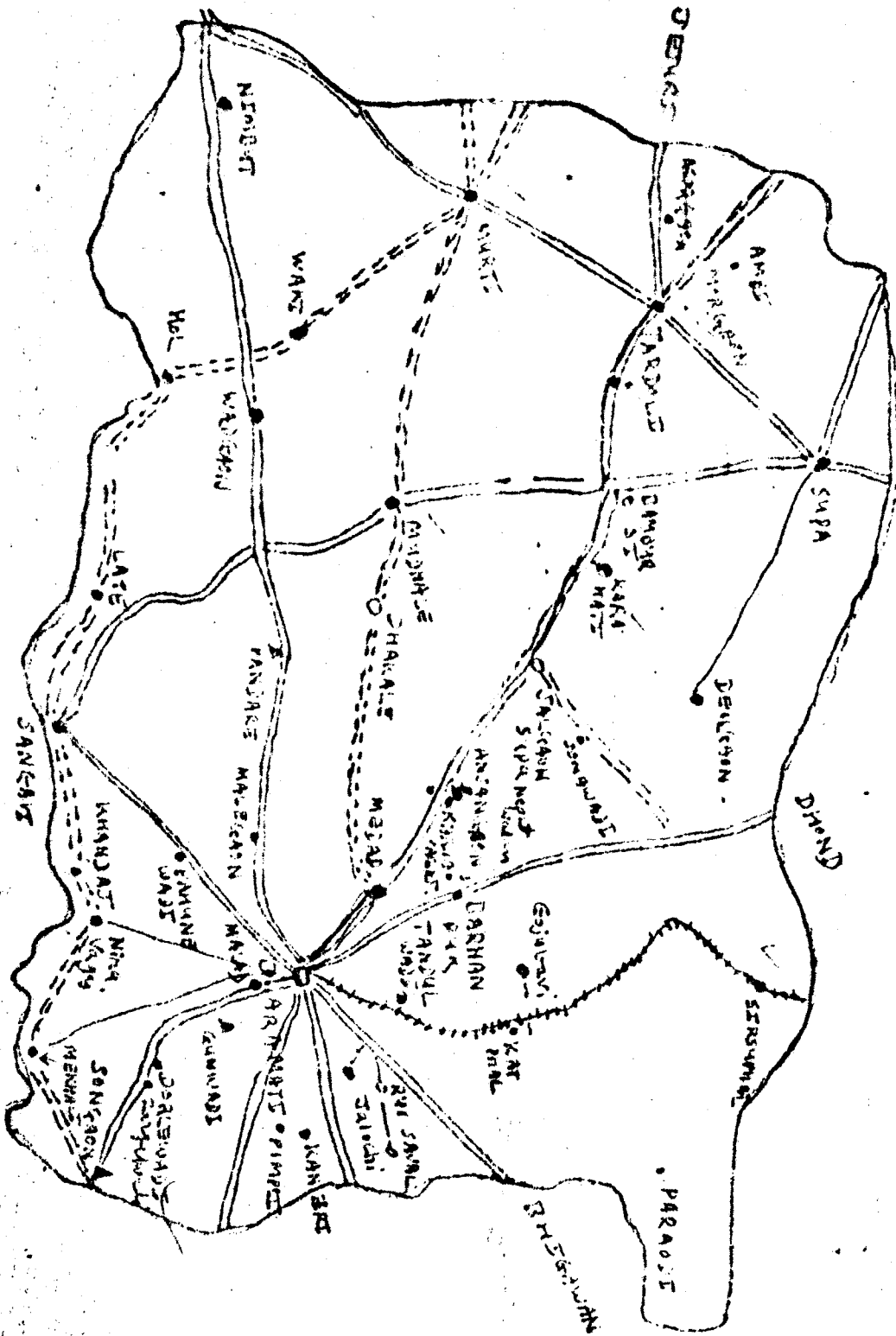
A number of workers are employed in these industries.

(vi) Transport :-

For agricultural and industrial development, transport facility is a must. It is also required for dairy development. The advanced means of transportation can be used if there are well-surfaced (macadamised) roads. Time, cost of transport and damage to commodity can be brought down by using advanced means of transportation. The Baramati Taluka can be reached from five different routes, Pune Solapur high-way passes by the taluka. There is also a narrow-gauge rail-route between Baramati and Daund. The Nira railway station is another nearest railway station.

(vii) Agriculture Development Trust :-

Although the Baramati taluka is fairly well-endowed both by nature and man, the resources can be more fully utilised and therefore greater benefits could accrue to the farmers, in



Scale 1 = 4 miles

particular, and the public, ingeneral, if the farmers are 'educated' in agricultural practices and receive constant guidance. This lacuna was sought to be filled by setting up, the Agricultural Development Trust in 1971 by Shri. Sharad Pawar. The trust is situated at Malegaon colony. The main aim of this trust is to create a 'Model Farm'. Different types of experiments are conducted on this trust farm e.g. drip irrigation, sprinkler system etc. and different methods of cultivation are experimented upon. It provides training facilities of dairying and poultry with nominal charges. It has organized 25 training camps for dairying and poultry. From these camps 1500 farmers have benefitted. ~~As~~ It is providing three months cross-breed calves to the farmers for Rs. 250. It provides different types of seeds to the farmers, such as mango, pomegranates, coconut plants etc. As a result it has become a paradise of this taluka, and it really is a 'Model Farm' to the farmers.

(viii) Live-Stock of Baramati Taluka :-

There are different breeds/types of local cows such as Khillar, geer, sindhi and non-discript ones in this taluka, besides Houston and Jersey cross-breed cows. The types of buffalos are mainly Murra, Maisana, Surati, and Pandharpuri. The milch cattle population of Baramati taluka is shown in the table No. 2.7.

The population of the cross-breed cows has been quite substantial and touched the figure of 8476 (35 percent of the

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Table 2.7  
Cattle Population in Baramati Taluka

Year :	Cows (Breedable) :		Buffalos :	Gouts :	Sheeps
	:-----:		:	:	:
	: Cross-breed :	Local :	:	:	:
1972	N.A.	14,027	5,277	55919	66417
1982	8476	15,521	7,355	52427	63461

Source :- Census Report of Panchayat Samiti, Baramati, 1972 & 1982.

total cow population) by 1982. The increase in milk production could be partially attributed to this fact.

This taluka is not only prosperous in the number of cross-breed animals but also in the best type of cross-breed cows. The results of the All India Milk Yielding Competition which was held in 1983-84, have been declared recently. The Maharashtra State has won fourteen prizes in Houston Freezon group. Out of these fourteen awards five awards winners are from the Baramati taluka alone. The details are given below.

<u>Sr. No.</u>	<u>Name &amp; village of Farmer</u>	<u>Ranks in India</u>	<u>Total milk yield per cow in 24 hrs.</u>
1.	Shri.A.P.Bhagat (Korhale BK)	6th	34.350 Litres
2.	Shri.S.A.Jadhav (Late)	8th	32.550 "
3.	Shri.P.U.Jagtap (Pandare)	9th	31.500 "
4.	Shri.A.G.Kokare (Pandare)	11th	30.975 "
5.	Shri.N.N.Khalate (Late)	13th	29.250 "

(Source :- Daily News Paper 'Sakal' dated 13th Jan. 1986. P.3)

The Population of buffalos has increased by 39 percent in the period 1972 to 1982.

However, the population of goats and sheep has decreased by 6 and 4.5 percent respectively. Drought is the main cause of the decrease in the population of goats and sheep.

It will not be off the mark to remark that this taluka has maintained quality and quantity of milch animals, resulting in increased production of milk.

(ix) Animal Health Cover And Veterinary Services :-

In order to have continued high milk production it is necessary to ensure, among other things, that the animals are healthy and well looked after. The concern for health of the animals must then make it absolutely necessary to have the veterinary services provided on regular basis.

The success or otherwise of dairy development programmes must also depend, besides other factors, on the availability of veterinary services. This becomes still more imperative as the prices of such cattle are high, and these can easily fall victim to many diseases.

The State Department of Animal Husbandry has been responsible for providing animal health cover and veterinary services to the animals in this taluka. The State Government is providing these services through Zilla Parishad and the key village centre scheme (KVC). In the Baramati taluka, the first veterinary service centre was started by the Baramati Nagar Parishad in 1908-1909. The present position of the veterinary services is shown in the table No. 2.8.

Table 2.8Veterinary Service Centre in Baramati Taluka.

Particulars	: Under : Z.P.	: KVC :	: BAIF :	: :	Total
No. of Centres	9	10	1		20
No. of Centres with A.I. Facility	7	10	1		18

Source :- Office Record of Panchayat Samiti & KVC.

There is a fairly sufficient number of veterinary service centres available to the farmers. The ratio between the number of villages and the centres is 3 : 1.

Of the total number of 20 centres, 45 percent are managed and run by the Zilla Parishad at Anjangaon, Baramati (N.M.A.), Katewadi, Loni-bhapkar, Murti, Paravadi, Sanghavi, Shirsufal and Supe. Artificial insemination facilities are not available at Anjangaon and Murti. Main duties of these centres, therefore, are treatment of animals and tendering medical advice.

Key Village Centre Scheme (KVC)

This scheme was started in this taluka from 1971 and is headquarter at Wadgaon-Nimbalkar. Ten veterinary service centres are running under this scheme, at Hol, Khandaj, Korhale (kh), Malegaon, Nimbut, Pandare, Pimpli, Songaon, Undawadi-supe and Wanewadi.

The main object of this scheme is breeding and fodder development. The staff working in these centres consists of



one Assistant Director, two Assistant Live Stock Development Officers, ten Livestock Supervisors and ten attendants. Artificial Insemination facilities for cows and buffalos are available at these centres. Under the fodder development programme sets, seeds, and plots are provided to the farmers. These are provided mainly to the marginal and small farmers.

The breedable population in the functional area of KVC as shown in table no. 2.9 has increased by 68 percent in the period 1980-81 - 1984-85. But in case of cows it increased by 81.5 percent and 33 percent in case of buffalos.

Inseminations conducted by these centres have increased by 133 percent in case of cows and 83 percent in case of buffalos in the same period.

Under the fodder development programme the KVC has supplied 3,98,325 fodder sets, 15,502.5 kgs fodder seeds and 223 fodder plots to the farmers. So it is clear that the KVC is working according to its objectives.

The pride of these centres is the fact that the five award winners from Baramati taluka in the All India Milk Yielding Competition held in 1983-84 are from the area under this scheme. In fact fifteen persons participated in the competition held in 1984-85.

There is one more centre working under BAIF at Malegaon Co-operative Sugar factory. These services help to increase the production of milk fairly rapidly.

(x) Progress of Co-operative Dairy Development In

Baramati Taluka :-

Dairying is the traditional business in Baramati taluka. In the past, milk was being supplied by farmers to the consumers in the city daily on individual basis. Farmers from the nearby villages were supplying milk to hotels and consumers on daily basis. In fact, this practice, which has a long history, is continued even today.

The government had sanctioned separate milk schemes for Pune district in 1950. It gave encouragement to the development of dairying in the Pune district. But there was no proper channel for the collection of milk from the villages. The dairy business took the form of a co-operative in Maharashtra mainly from 1961. However, the co-operative scheme did not reach Baramati taluka till the end of 1972. The first co-operative dairy society registered in this taluka was on the 21st December, 1973, at Hanumanwadi (Pandare) as "Hanuman Milk Co-operative society". It has served its purpose well and continues to do so even today. At the end of 1984-85, there were 139 registered milk co-operative societies and one co-operative federation (Union) in this taluka.

With increasing milk production through various schemes, the problem of milk storage, particularly that of chilling the milk, takes on very serious turns, especially, in the ever prevailing conditions of high temperatures. In order that the milk produced, does not go bad/sour it is necessary to treat

the milk. One of the ways to treat milk is to chill it. In the beginning there were no chilling centres at Baramati. The only chilling facility available was at Pune. So the primary milk co-operative societies were collecting milk from their members and supplying it to the Government Milk Scheme. Vehicles of the Government Milk Scheme go round the villages and collect milk from these co-operative societies and from some private vendors also. Afterwards Pune District Milk Co-operative Federation started the collection and transportation of milk from Baramati taluka.

Production of milk in this taluka has increased with the increase in the number of societies, after 1973-74. It became difficult to collect milk and transport it to Pune city for further processing. In order to overcome this difficulty the government started a chilling centre at Baramati in May 1978, with a capacity of 30,000 litres. Now, all the milk from this taluka is brought to this centre for processing and then it is transported to Pune, Bombay or some other places. Details of growth of co-operative dairy development are shown in table no. 2.10.

The number of registered co-operative dairy societies has increased from 22 to 84 between 1974-75 and 1983-84 (Table 2.10) (7 Per Year) (31 percent per year), But the number increased to 139 at the end of 1984-85. It means that the number of co-operative societies has increased by 62 percent in 1984-85, and the collection of milk has increased by only 20 percent in the same year.

Table 2.10

Progress of Milk Co-operative Societies in Baramati Taluka.

Year	:Regi- :stered: :Milk :Co.op. :socie- :ties	:Total :Milk :Co.op. :Socie- :ties	:Total :Memb- :ers	: Collection of Milk :----- : good : rottan : Total	: Average : collection : of per : society : per year		
1973-74	1	1	N.A.	N.A.	N.A.	N.A.	N.A.
1974-75	21	22	N.A.	N.A.	N.A.	N.A.	N.A.
1975-76	6	28	N.A.	N.A.	N.A.	N.A.	N.A.
1976-77	4	32	N.A.	N.A.	N.A.	N.A.	N.A.
1977-78	10	42	N.A.	N.A.	N.A.	N.A.	N.A.
1978-79	9	51	N.A.	7169349	110908	7280257	142750
1979-80	7	58	N.A.	11511379	368	11511747	198428
1980-81	8	66	N.A.	14730873	--	14730873	223195
1981-82	11	77	N.A.	15550888	--	15550888	201960
1982-83	4	81	N.A.	16842532	130354	16972886	209242
1983-84	3	84	N.A.	21768622	314374	22082996	262893
1984-85	55	139	N.A.	30004807	941114	30945921	222632

Source :- Office record of DDDO's Office Pune and  
Chilling Centre Baramati  
Year - 1973-74 to 1984-85.

The total spoilt milk has increased with the increase in the number of co-operative societies and the production of milk. In 1982-83, the percentage of spoilt milk was only .7 but it increased to 1.5 percent in 1983-84 and 3 percent in 1984-85.

The milk collection of the Co-operative dairy societies per year has increased in the period 1978-79 to 1980-81. The production oscillated thereafter. It decreased in 1981-82. Again it increased in 1983-84, and decreased by 15 percent in 1984-85.

Before 1984 some co-operative milk societies from this taluka were members of the Baramati Taluka Milk Co-operative Federation and some societies were attached to the Government Milk Scheme. In 1984, the Government brought Pune district under Operation Flood Second. According to this scheme, every primary co-operative society had to be attached to a co-operative federation. So the co-operative milk societies in the Baramati Taluka were distributed between district and taluka milk co-operative federations.

At present, the primary milk co-operative societies collect milk from their members and it in turn supplies it to the Government Milk Scheme, through these federations.

The structure of collection and supply of milk by co-operative dairy societies in Baramati taluka is shown in the diagram.

Diagram 1 : Before 1984 e.g. QF.

Diagram 2 : Present Structure

Diagram 3 : Structure according to QF.

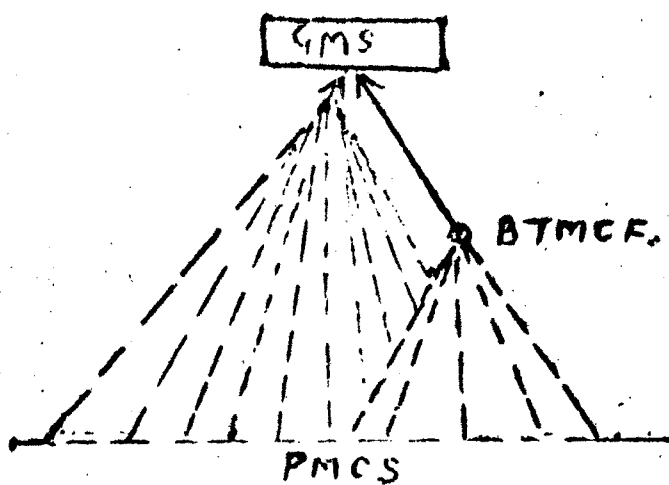
PMCS - Primary Milk Co-operative Societies

BTMCF - Baramati Taluka Milk Co-operative Federation

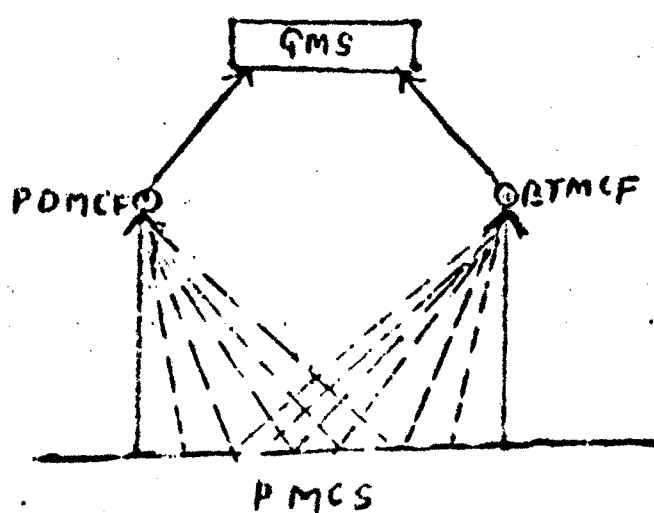
PDMCF - Pune District Milk Co-operative Federation

# DIAGRAM

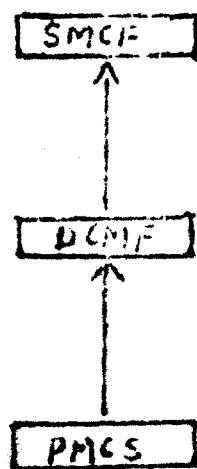
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GMS - Government Milk Scheme

SMCOF - State Milk Co-operative Federation

In the operation flood scheme the structure of the milk co-operatives is three tiered. It is as follows :

- a) At village level - Primary Milk co-operative society.
- b) At District level - District Milk co-operative Federation.
- c) At State level - State Milk Co-operative Federation.

There is no provision for milk Co-operative Federation at taluka level. However, the Taluka Co-operative Federation in Baramati taluka is working on certain conditions. These are as follows.

- i) It should have its own chilling plant.
- ii) It should have its own ice factory.
- iii) Daily milk collection should be more than 50,000 litres per day. etc.

There are two milk co-operative federations working in this taluka. These are,

- A) Baramati Taluka Milk Co-operative Federation.
- B) Pune District Milk Co-operative Federation.

Details about working of these federations are given below.

(A) Baramati Taluka Milk Co-operative Federation :

This federation was registered on 1st December 1977, but it actually started functioning from 1981-82. The jurisdiction of this federation is limited to Baramati Taluka only.

Objectives :-

- i) To collect milk from primary milk co-operative societies and supply it to Government Milk Scheme.
- ii) To provide improved breed milch cattle, veterinary services, cattle-feed and fodder to the milk producers of the taluka.
- iii) To provide dairy instruments to the member co-operative societies.
- iv) To provide practical guidance to the members on dairying, in general and other related issues etc.

Though the jurisdiction of this federation is limited to Baramati taluka, all milk co-operative societies from this taluka are not members of this federation. Some co-operative societies are members, some are not; still they supply milk to this federation. There are some individuals who are members of this federation. The work done by this federation is shown in the table No. 2.11.

The federation has made satisfactory progress in a short period (Table 2.11). This federation has undertaken following programmes for the dairy development in the taluka.

i) Collection and Supply of Milk

The milk is collected from the Primary Milk Co-operatives and supplied to Government Milk Scheme. The federation has made ample progress in the collection of milk. In 1981-82, the daily collection of milk was only 7000 litres, but it increased to 53,000 litres perday in 1984-85. Payments are made to the co-operatives every fifteen days after the receipt of milk.



Table 2.11

## Progress of Baramati Taluka Milk Co-operative Federation

Sr. No.	Particulers	:1981-82:	1982-83:	1983-84 :	1984-85
		:	:	:	:
1. No. of societies supplying milk to the Federation		--	--	57	67
2. No. of member Milk Co-operative societies		28	28	42	39
3. Individual Members		15	15	18	18
4. Share Capital (Rs.)		3000	83000	163750	N.A.
5. Collection of Milk (litres)		1020954	5239117	8879185	N.A.
6. Net Profit (Rs.)		124367	318321	85989	N.A.
7. Federation receives average rate from Govt. (Rs.)		2.00	2.60	3.07	N.A.
8. Federation paid to members Co-operative Societies (Rs.)		N.A.	2.56	7.05	N.A.
9. Value of supplied cattle feed (Rs.)		17188	429148	596434	1204107
10. Transport charges paid (Rs.)		N.A.	502675	884025	1603653
11. Value of supplied Ice (Rs.)		19392	135378	229518	577728

Source :- Audit Report of Baramati Taluka  
Milk Co-operation Federation -  
(1981-82 to 1984-85)

(ii) Improvement of the quality of milk :-

In order to improve the quality of milk the federation has taken a lot of efforts. It carries out unexpected visits to the societies for checking their milk. For the preservation of milk, the federation provides ice and dairy instruments to the co-operative societies on credit. The federation makes payments for milk to the co-operative societies according to their daily milk quality but receives payment from government according to its bulk quality. The rates (payment) received by the federation from the government and paid to the society indicate that the federation has been successful in maintaining the quality of its milk.

(iii) Supply of Cattle Feed -

To increase the production of milk, there should be proper supply of cattle feed. The federation supplies different types of cattle feed to its member co-operative societies on credit. Some of these cattle feed include Godrej, Mahalakshmi, Sugrass, oil-cake and husks. It purchases these from various companies and then provides these to the societies on credit. The amount due to the federation from the societies under this head is deducted from the payments to be made to the societies for the milk supply.

However, there is no compulsion on the member co-operative societies to purchase their requirement of cattle feed from the federation nor is there any compulsion on the milk producers to purchase such feed from the co-operative society. Their

requirements can be purchased from the market too. The value of cattle feed supplied by the federation has increased continuously between 1981-82 and 1984-85 from about rupees seventeen thousand to rupees twelve lakh. This indicates the large and growing patronage received by the federation from the member societies. Such activities tend, in a big way, to reinforce the co-operative spirit.

(iv) Veterinary Services :-

The federation has appointed one veterinary doctor to provide services to the members. But no accommodation for office and residence is provided. For the benefit of the milk-farmers, the federation has opened a shop to supply essential medicines for the animals.

(v) Transport :-

Transport facility is the paramount need for dairy development. The federation provides transport to the co-operative societies on contract basis. It gives contracts to some co-operative societies or some private vehicle owners from the same area. The cost of transport facility provided by the federation has increased from over rupees five lakh in 1982-83 to about rupees sixteen lakh in 1984-85 (Table 2.11). The federation has its own truck, but it is not used for transport of milk.

(vi) Advances :-

The federation gives advances to the member co-operative societies to fulfil the needs of their members, such as fodder,

medicines and treatment of cattle ailments. It also provides securities to the banks against loan applications of member societies.

(vii) Production of milk products :-

Milk can get spoiled in several ways and once spoilt it cannot be accepted at the chilling centre. Such milk then is normally, thrown away, resulting in loss to the society as well as the members. But given the facility, some products like ghee, cheese can be made from such milk. Recently, the federation has started production of such products. It purchases spoilt or poor quality (adulterated) milk at fifty paise per litre and produces cheese, ghee, butter, shrikhand and 'kesin' etc. The general price of these product is also minimum. The members of the society also benefit from this.

Lately, the federation has started, a milk distribution scheme in Baramati city. The facility of home-delivery and credit is also provided.

From the above discussion, it is clear that the federation has made rapid progress in a short period.

(B) Pune District Milk Co-operative Federation :

This is another co-operative federation working in the same taluka. Details relating to the working of this federation have been mentioned earlier. In 1984-85, 57 milk co-operative societies from this taluka were members of the Pune District Milk Co-operative Federation. This federation also provides the facilities of advances, transport, as well as

dairy equipment, to the societies. Its headquarters is at Katraj, near Pune city. At Baramati there is a one-room office with four clerks to maintain daily recordings of in-coming milk.

Services Received From Federation And Rendered To The Members :

The services rendered by the federation to the co-operative societies have been dealt with earlier. The services rendered by co-operative societies to their members are detailed here. The co-operative milk societies provide the following facilities to their members.

(i) Payments

The co-operative societies receive milk from their members on daily basis. The payments are made after every fifteenth day after receipt of milk according to the quality of milk received. For the maintenance of quality, these societies conduct milk tests every day.

(ii) Advances :-

The milk co-operative societies make advances to their members for the purpose of purchasing fodder, medicines or for the treatments of their cattle etc. Some societies also provide advances for the purchase of milch animals or to build cowpens.

(iii) Cattle feed -

The co-operative societies are supplying cattle feed to their members. It is difficult for the farmers to purchase it elsewhere and carry it individually to their homes. These

societies provide cattle feed on credit to ensure regular supply of cattle-feed.

(iv) Guidance -

Some co-operative societies provide guidance to their members with regard to milk production, care of animals, method of preserving milk etc. Some societies organize visits of members to the Aarey Milk Colony (Bombay), Anand (Gujarat) and to places in Panjab etc., to educate them in the working of the schemes with advanced technology.

(v) Securities for loans and Repayments :

Co-operative societies are providing securities to cover the loans taken by their members, from banks. These co-operative societies also repay instalments to the banks by effecting cuts from their payments for milk received. So it is not necessary to the members to go to the banks and pay the instalment personally.