

Production Potentiality and Marketing of Cooperative Dairy Products: A Case Study at Gokul Sahakari Dudh Sangh, Maharashtra

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Abstract: India is the world leader in milk production, producing around 156 million MT of milk and growing at a CAGR of 4 per cent. Dairy Cooperatives are playing an important role for rapid development of economic standards of rural people of India. The societies of dairy cooperatives have been built with a great intention to support the members in different areas of economic, management and technology. The study reflected that Milk business was found popular in Maharashtra among all the states. In Maharashtra highest numbers of cooperatives were found contributing to the dairy processing units among all the states of India. Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd is a dairy cooperative organization that is radically known for its most prominent brand "Gokul". Annual milk procurement by Gokul dairy reflected that contribution of milk by buffalo was observed to be decreasing from 2009-10 to 2013-14 due to incorporation of high yielding milch cows in the village level milk production units with the facility of Artificial Insemination (AI). It brings tremendous increase of milk production by cows in the command areas. As fat content of buffalo milk is more than the cow milk, so preference of cow milk was found more than buffalo which leads to increase annual milk procurement of cow milk than buffalo. In case of selling of milk, loose sale of milk was observed to be decreasing day by day and it contributes only 0.90 per cent in the year 2013-14 while sale in poly bag contributed 99.10 per cent to the total sale in the same year. Average consumer pouch sold by the Gokul dairy increases from 693 litres/day to 855 litres/day during the period from 2010-11 to 2013-14. This might be due to the fact that with increase awareness among the people preference of hygiene milk is increasing day by day causing increase demand of poly bag milk than loose sale. Gokul is popular for its value added products of Ghee, Shrikhand, Desi Butter and Table Butter in their market areas as selling of these items are found more than their production level in various periods of time. Due to proper maintenance of quality, demand for the products found increasing day by day.

Key words: Growth, Milk Production, Procurement of milk, Different Products, Marketing of milk & milk products

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I. Introduction

The dairy sector in the India has shown remarkable development in the past decade and India has now become one of the largest producers of milk and value-added milk products in the world. India continued to be the largest milk producing nation with an anticipated milk production of 155.49 million tonnes during 2015-16. The dairy cooperatives collectively procured 15.58 million tonnes of milk registering a growth of around 12 per cent compared to last year. Liquid milk marketing by the cooperatives stood at 12.08 million tonnes with an increase of around 2.73 per cent over the previous year. The average price of skimmed milk powder declined from Rs 206 per kg in April 2015 to Rs 182 per kg in March 2016 in the domestic market. The decline in both domestic and international prices led to significant increase in milk procurement by the cooperatives and accumulation of stocks of conserved commodities.

The Indian dairy Cooperatives are organized on three-tier structure. The primary milk producers' cooperative societies work at the village level followed by District Milk Cooperative Union works at the district level.

Dairy cooperatives account for the major share of processed liquid milk marketed in India. According to National Dairy Development Board (NDDB), there were around 160,000 village dairy cooperative societies in the country in 2013-14 through which 12.5 million MT of milk was procured. The societies of dairy cooperatives have been built with a great intention to support the members in different areas of economic, management and technology (Pandhi, 2014). The Kaira District Cooperative Milk Producers Union at Anand (AMUL) was the first producer oriented union formed in 1946 and constituted an important landmark in the development of the dairy cooperative movement.

Maharashtra is one of the milk surplus states in India. Total production of milk in Maharashtra is around 10,153 ('000 tonnes) for the year 2015-16. In Maharashtra there are 14,921 nos of cooperative dairy societies and 85 dairy unions working in the state (Economic survey of Maharashtra, 2016-17).

The milk surplus states in India are Uttar Pradesh, Punjab, Haryana, Rajasthan, Gujarat, Maharashtra, Andhra Pradesh and Karnataka. Among all the states Maharashtra was selected for the study as the state was found contributing highest number of cooperatives performing milk business in the processing sector (Table 4). Kolhapur is a district called cooperative hub as most of the cooperatives were found successful by doing various businesses in that area. Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., a cooperative organization that is radically known for its most prominent brand 'Gokul'. The brand Gokul made its foray on 16th March 1963 through a small beginning with milk collection of 500 litres of 22 societies. Presently Gokul is associated with almost 3, 85,000 milk producers in and around Kolhapur districts. Milk is collected from 4977 dairy co-operative societies with 307 milk collection routes. Taking this into account the present paper is an attempt to put a lime light on production potentiality and marketing of Gokul dairy of Maharashtra.

1.1 Objectives of the Study

The objectives of the present study are to obtain a true insight into the production potentiality and marketing of cooperative dairy products by Gokul Sahakari Dudh Sangh Maharashtra.

It includes:

- To study the growth of milk production and contribution of cooperative sectors to milk business.
- To study the process of milk business and marketing of dairy products by Gokul dairy
- To analyze the problems encountered by dairy cooperatives and the policy for improvement.

II. Materials and Methods

2.1 Data collection:

The aim of the present study is to analyze the Production Potentiality and Marketing of Cooperative Dairy Products at Maharashtra. The study conducted in the Gokul Sahakari Dudh Sangh, Maharashtra. The primary data for the study was collected with the help of interview method adopted for concerned people including farmers, managers, members related to the organization. Secondary data collected from different published and unpublished sources of the organization.

2.1.1 Analysis of Data:

The data collected were rearranged, processed and analyzed according to the objectives of the study. The following tools were used for data processing in addition to conventional tabular and percentage analysis.

2.1.2 Estimation of Growth rates by exponential trend equation

Compound growth rates of production and per capita availability of milk was computed for the entire production periods by fitting the exponential function.

The exponential functional form is

$$y_t = ab^t$$

$$\text{Or } \log y_t = \log a + t \log b$$

The CGR was worked out as,

$$r = (\text{antilog 'b' } - 1) \times 100$$

where, y_t = Production of milk/ per capita consumption

a = Intercept

b = Regression co-efficient

t = Time period in year

III. Results and Discussion

Growth Of Milk Production And Contribution Of Cooperative Sectors To Milk Business In India:

3.1 Milk Production and Per Capita availability of milk in India from 1991-92 to 2015-16

Over the last few years, India has emerged as one of the largest producer of milk in the world. The rise in milk production in India comes coupled with two important facts. First, India has the world's largest concentration of bovine population in the world. Second, despite being the largest producer of milk in the world, India is also the largest consumer of milk. It was observed from the Table 1 that production and per capita availability of milk from the year 1991-92 to 2015-16 was observed to be increasing. India continued to be the largest milk producing nation with an anticipated milk production of 155.49 million tonnes during 2015-16. The per capita availability of milk was also found highest (337 gms/day) in the year 2015-16. The compound growth rate of milk production (3.56 percent) and per capita availability of milk (5.52 percent) was found increasing and significant. This was due to fact that India has world's largest dairy herd, comprised of water buffalo and

indigenous and crossbred cattle. Water buffalo and crossbred cattle accounts for all of the growth in the dairy herd and milk production in India (USDA report, March 2017). With increase in milk production per capita availability of milk was found increasing throughout the period.

Table 1: Milk Production and Per Capita availability of milk in India from 1991-92 to 2015-16

Year	Production (Million Tonnes)	Per Capita Availability (gms/day)
1991-92	55.6	178
1992-93	58.0	182
1993-94	60.6	187
1994-95	63.8	194
1995-96	66.2	197
1996-97	69.1	202
1997-98	72.1	207
1998-99	75.4	213
1999-2000	78.3	217
2000-01	80.6	220
2001-02	84.4	225
2002-03	86.2	230
2003-04	88.1	231
2004-05	92.5	233
2005-06	97.1	241
2006-07	102.6	251
2007-08	107.9	260
2008-09	112.2	266
2009-10	116.4	273
2010-11	121.8	281
2011-12	127.9	290
2012-13	132.4	299
2013-14	137.7	307
2014-15	146.3	322
2015-16	155.5	337
CGR	3.56	5.52

Source: Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, GoI

3.2 Per capita consumption of milk from the year 2001-02 to 2015-16

Table 2 reflected that per capita consumption of milk was observed to be stagnant from the year 2001-02 (172gms/day) to 2005-06 (178 gms/day). It was found slightly increasing from the year 2006-07 (181 gms/day) to 2015-16 (239 gms/day). Due to increase awareness of human health and nutritional benefit to the body by the common people per capita consumption found increasing. Increase per capita consumption was also due to the fact of increase processing of milk to different milk products which are very much demanding in the society in the present day situation.

Table 2 per capita consumption of milk from the year 2001-02 to 2015-16

Year	Per capita consumption (gms/day)
2001-02	172
2002-03	172
2003-04	172
2004-05	176
2005-06	178
2006-07	181
2007-08	184
2008-09	188
2009-10	190
2010-11	197
2011-12	206
2012-13	213
2013-14	219
2014-15	228
2015-16	239
CGR	4.07

Source: Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, GoI

3.3 Progress of Dairy Cooperatives Societies in Maharashtra from 1980-81 to 2015-16

Table 3 reveals a tremendous increase growth of milk business in the State. The number of registered cooperative in the state found increasing from 1980-81 (718) to 2015-16 (21,671). Increase producer members (87 to 1,814 '000), increase milk procurement (165 to 3,645 '000 kg/day) and increase Liquid milk marketing (18

to 2,686 '000 litres/day) throughout the period reflected a high growth tendency in the milk sector of Maharashtra. It was also observed from the study that percentage change of registration of cooperatives (531.61 per cent), registration of producers member (865.72 per cent), milk procurement (1034.54 per cent) and liquid milk marketing (1916.66 per cent) was found highest in the period from 1980-81 to 1990-91, after that it was found slightly decreasing. This was due to the impact of II and III phases of operation flood programme in the milk business. As the maximum change in the milk business was observed to be happened during the white revolution period, after 2000-01 the percentage change was decreasing as milk business already moves towards a right direction during the three Phases of operation flood.

3.4 Dairy processing units in cooperative, private and other sectors

Table 4 reflects the contribution of cooperative, private and other sectors in total milk processing units. The study reflected that cooperatives contributed highest percentage of milk to the milk processing units in the country. It was observed from the Table that states like Pondicherry, Goa, Jammu & Kashmir, Sikkim and Tripura were performing milk businesses through cooperative sectors only, no private and other sectors were observed contributing in those states. This reflected that milk businesses through cooperatives were found popular among the states. On the other hand, in Delhi contribution of milk to the processing units was observed to be highest by other sectors and private units rather than cooperatives. The study also reflected that Milk business was found popular in Maharashtra among all the states. In Maharashtra highest numbers of cooperatives were found contributed to the dairy processing units among all the states.

Table 3 Progress of Dairy Cooperatives Societies in Maharashtra (Number)

Year	No of Cooperatives	% change	No of producer members ('000)	% change	rural milk procurement ('000 kg/day)	% change	Liquid milk marketing ('000 litres/day)	% change
1980-81	718		87		165		18	
1990-91	4,535	531.61	840	865.72	1,872	1034.54	363	1916.66
2000-01	16,724	268.77	1,398	66.43	2,979	59.13	1,178	224.52
2014-15	21,082	26.56	1,770	26.61	3,243	8.86	2,574	118.50
2015-16	21,671	2.79	1,814	2.48	3,645	12.39	2,686	4.35

Source: NDDB annual report 2015-16

Table 4 Dairy processing units in cooperative, private and other sectors

State	Cooperative		Private		Others*		Total no	
	No.	Capacity '000 lts/day	No.	Capacity	No.	Capacity	No.	Capacity
Maharashtra	86 (21.77)	7865	276 (69.87)	15641	33 (8.35)	3086	395 (100)	26592
Uttar Pradesh	35 (13.94)	2476	216 (86.05)	22569	0 (0)	0	251 (100)	25045
Gujarat	16 (48.48)	13160	15 (45.45)	917	2 (6.06)	400	33 (100)	14477
Tamil Nadu	11 (29.73)	4030	26 (70.27)	5289	0	0	37 (100)	9319
Punjab	13 (16.88)	1820	64 (83.11)	6529	0	0	77 (100)	8349
Andhra Pradesh	9 (18.75)	2150	39 (81.25)	5693	0	0	48 (100)	7843
Rajasthan	18 (47.37)	2420	20 (52.63)	3361	0	0	38 (100)	5781
Madhya Pradesh	5 (12.5)	1000	35 (87.50)	4013	0	0	40 (100)	5013
Karnataka	16 (66.66)	4323	8 (33.33)	485	0	0	24 (100)	4808
Delhi	0	0	1 (50)	3500	1 (50)	500	2 (100)	4000
Haryana	5 (13.51)	470	31 (83.78)	2417	1 (2.70)	60	37 (100)	2947
West Bengal	3 (20)	816	12 (80)	1145	0	0	15 (100)	1961
Kerala	15 (60)	1223	10 (40)	373	0	0	25 (100)	1596
Bihar	10 (83.33)	700	2 (16.66)	400	0	0	12 (100)	1100

other	21 (67.74)	798	10 (32.26)	920	0	0	31 (100)	1718
TOTAL	263 (24.69)	43,251	765 (6.10)	73252	37 (3.47)	4046	1065 (100)	120548

Source: USDA, Economic Research Service. Government of India, Ministry of Agriculture, Department of Animal Husbandry, Dairying, and Fisheries. Basic Animal Husbandry and Fisheries Statistics (various issues).

IV. Process Of Milk Business And Marketing Of Dairy Products By Gokul Dairy

4.1 Annual Milk Procurement during the period from 2009-10 to 2013-14

Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd is a dairy cooperative organization that is radically known for its most prominent brand “Gokul”. At present Gokul has modern 7 Lakh litres/day capacity dairy plant with four owned & one hired chilling centres, having 4.25 Lakh litres/day milk handling capacity and modern packing unit at Navi Mumbai. For enhancement of milk production they have presently 41 mobile clinics, 430 cluster and 17 static A.I centres and Cattle Feed Plant of 200-300 MT/day production capacity are available. Gokul is associated with almost 3, 85,000 milk producers in and around Kolhapur district. Milk is collected from 4977 dairy cooperative societies with 307 milk collection routes. At present average milk procurement per day is 7.58 lakh litres. The ratio of Buffalo and cow milk was 59:41 per cent respectively. During the peak season procurement of milk per day was 9.11 lakh litres and during the lean period procurement per day was observed to be 5.81 lakh litre respectively (Annual report 2015). Table 5 reflected the annual milk procurement by Gokul dairy from the year 2009-10 to 2013-14. It was observed from the study that during the whole period contribution of buffalo milk to the total milk procurement was more than the cow milk. On the other hand it was also reflected that contribution of buffalo milk was decreasing over the years. In the year 2009-10 contribution of buffalo milk was 66.65 per cent which was reduced to 59.11 per cent in during the year 2013-14. Likewise contribution of cow milk was increased from 33.35 per cent in the year 2009-10 to 40.89 per cent in the year 2013-14. This was due to incorporation of high yielding milch cows in the village level milk production units with the facility of Artificial Insemination (AI). It brings tremendous increase of milk production by cows in the command areas. Cow milk in India has fat content of about 3 to 4 per cent and milk-solid-not-fat (MSNF) content is about 8.5 to 9 per cent. Buffalo milk has similar MSNF content, but the fat content is about 5-6 per cent (Annual report, Gokul Dairy). As fat content of buffalo milk is more than the cow milk, so preference of cow milk was found more than buffalo which leads to increase annual milk procurement of cow milk than buffalo.

Table 5 Annual Milk Procurement during the period from 2009-10 to 2013-14
(lakh liters)

Items	2009-10	2010-11	2011-12	2012-13	2013-14
Cow Milk	668 (33.35)	701 (34.23)	838 (36.72)	1057 (40.39)	1131 (40.89)
Buffalo Milk	1335 (66.65)	1347 (65.77)	1444 (63.28)	1560 (59.61)	1635 (59.11)
Total	2003 (100)	2048 (100)	2282 (100)	2617 (100)	2766 (100)

4.2 Annual Milk Sales during the period from 2009-10 to 2013-14

Table 6 clearly reflected the annual milk sale during the period from 2009-10 to 2013-14. It was observed from the Table that sale in poly bag has highest contribution in total sale of milk during the whole period. It was also observed from the Table that loose sale of milk decreasing day by day and it contributes only 0.93 per cent in the year 2013-14 while sale in poly bag contributed 99.07 per cent to the total sale in the same year. This might be due to the fact that with increase awareness among the people preference of hygiene milk is increasing day by day causing increase demand of poly bag milk than loose sale.

Table 6 Annual Milk Sales during the period from 2009-10 to 2013-14
(lakh liters)

Items	2009-10	2010-11	2011-12	2012-13	2013-14
Loose sale	67 (2.80)	69 (2.73)	70 (2.54)	43 (1.49)	28 (0.90)
Pouch packed milk	2323 (97.20)	2461 (97.27)	2684 (97.46)	2839 (98.51)	3091 (99.10)
Total Sale	2390 (100)	2530 (100)	2754 (100)	2882 (100)	3119 (100)

4.3 Production and Sale of Milk products during the period from 2009-10 to 2013-14

Table 7 reflected production and sale of milk products during the period from 2009-10 to 2013-14. It was observed from the Table that Gokul is producing Ghee, Shrikhand, Milk Powder, Desi Butter and Table Butter continuously from 2009-10 to 2014-14. From the study it was reflected that selling of ghee was found more than their production in all the years except 2012-13. Similarly, production and sale of Shrikhand, Desi Butter and Table Butter was also found increasing throughout the period. On the other hand, there was a huge difference of production and sale of Milk Powder was observed by the organization during the whole period. This was due to the fact that organization is producing large quantity of milk powder as inventory to continue production in the same level even in the crisis time of non availability of liquid milk. So selling of milk powder was found to be less than the other products.

Presently Gokul is started to producing few new value added items from milk, which includes- Gokul Paneer, Gokul Dahi, Gokul Lassi etc.

4.4 Average Milk Sold in Consumer Pouch from 2010-11 to 2013-14

Table 8 shows the average milk sold in consumer pouch during the period from 2010-11 to 2013-14. It was observed from the Table that average consumer pouch sold by the Gokul dairy increases from 693 litres/day to 855 litres/day during the period from 2010-11 to 2013-14. The Table also reflected that Mumbai market was the main market to sale maximum consumer pouch of Gokul dairy in a year. With increase sold of consumer pouch, sold of pouch in Mumbai market also increases simultaneously. Gokul has five target market areas and among them highest market share was coming from Mumbai and lowest was from Goa.

Table 7 Production and Sale of Milk products during the period from 2009-10 to 2013-14 (M.T)

Items		2009-10	2010-11	2011-12	2012-13	2013-14
Ghee	Production	299	177	203	228	238
	Sale	319	182	220	217	255
Shrikhand	Production	109	145	131	131	161
	Sale	106	142	131	128	157
Milk Powder	Production	2286	1473	3820	2626	2063
	Sale	1541	896	2001	514	1048
Desi Butter	Production	2404	1869	3569	2808	2378
	Sale	487	1277	1436	2351	1271
Table Butter	Production	276	214	199	188	194
	Sale	275	211	198	176	199

Table 8 Average Milk Sold in Consumer Pouch from 2010-11 to 2013-14 Litres/day

Market	2010-11	2011-12	2012-13	2013-14
Mumbai	479 (69.12)	510 (67.82)	530 (67.17)	579 (67.72)
Local Market	119 (17.17)	127 (16.89)	134 (16.98)	137 (16.02)
Pune	69 (9.95)	84 (11.17)	105 (13.31)	124 (14.50)
Goa	7 (1.01)	12 (1.59)	8 (1.01)	7 (0.82)
Mahanand Dairy	19 (2.74)	19 (2.52)	12 (1.52)	8 (0.93)
Total	693 (100)	752 (100)	789 (100)	855 (100)

The Gokul Dairy union had found provided its members with a range of services required for dairy development activity:

- Organizing thrift and credit cooperative society to facilitate the financial assistance for buying milch cattle;
- Organizing AI services
- Making cross-breed or graded animals for farmers to purchase;
- Providing inputs such as concentrate feed, fodder seed, fodder slips and mineral mixtures at subsidized rates to members;
- Supplying breeding bulls to societies;
- Providing veterinary health facility, de-worming and vaccination to the animals of members;
- Compensating members in the event of the death of an animal with either a grant or loan;
- Providing insurance coverage to members.

V. Problems Encountered By Dairy Cooperatives And The Policy For Improvement.

5.1 Problems of dairy cooperatives

In spite of the unprecedented rise in milk production in the last two decades in India, the modern dairy industry has not really taken-off the way it was thought it would. Despite successes like the Operation Flood and the Cooperatives Movement and establishment of institutions like the National Dairy Development Board (NDDB), much of the dairy sector still remains in the hands of small, informal, unorganized players. This puts considerable constraints on promotion of high-value added dairy products, technological innovation and up gradation, and most importantly quality management.

It emerges from various studies that the government had a bias in favour of small and cottage scale units in dairy processing due to the presumed contributions of such units in providing livelihoods to small and marginal farmers in the rural country-side.

5.2 Issues and Challenges at the Co-operative Level

- Less number of member farmers: The cooperative model though successful has not been able to include all the farmers into the fold. There are still many potential farmers who use the informal channel of milk sale and delivery.
- Lower participation in the decision making process: There is huge government interference in many of the cooperative federation activities, which leads to lesser say of the farmers in many crucial issues.
- Losses: Poor management of the some of the village cooperatives have led to huge losses in the trade due to which farmers have lost faith in these entities.
- Low prices of milk: The co-operatives declare low prices for procuring milk from the farmers, which benchmarks the prices and forces other players to sell milk at the same prices.
- Inefficient services: The cooperatives have also failed in many parts of the country in providing the basic inputs in terms of quality feed, exotic germplasm and veterinary services.
- Insufficient Infrastructure: Some of the co-operatives are lacking the cooling and milk testing facility at the village level collection centers

5.3 Issues and challenges for Marketing

- Majority of the Market is still unorganized: The milk market in India still faces the challenge of getting organized. The unorganized market makes it competes with the organized market in relation to prices.
- Acceptability of the Consumer base: A large fraction of the consumer base in India is yet to accept the clean and supple milk from organized dairies due higher costs. The mindset of buying fresh whole milk from the milkman is still prevalent in the Indian consumers.
- Less penetration to the rural Market: Most of the milk produced by the dairy co-operatives goes to the urban market. The rural consumers are still dependent on the informal and unorganized market channels.
- Lack of transparent milk pricing System: There is no specific minimum support price of the milk in the system, which makes it unremunerated for the farmers.

5.4 Problems identified in Gokul Dairy:

- Advertised their product only at local level. Local newspapers, local TV/radio channels, point of purchase advertisement were the advertisement media selected. A few had their own outlets at various places of Maharashtra. Majority of them did not have a wide distribution network
- One production unit covering Kolhapur, Pune, Mumbai etc. market areas
- Problem of price hike, as increase price reduces customers for milk and milk products due to availability of substitute brand. On the other hand without price hike it was found difficult for the organization to give a good remuneration to the producer members of the society.
- Govt. interference in the formation of managing body.
- Maharashtra has been struggling with droughts and water shortage for the last few years and this has resulted in shortage of both green and dry fodder with deficit of almost 5 million MT per annum of feed nutrient (expressed in dry matter form). Large scale commercial dairy farms with cross bred cows have been adversely affected in wake of increasing feed and fodder cost on account of these issues.

VI. Conclusion and policy implication:

The dairy Cooperatives play an important role for rapid development of rural people. This goes a long way in eradication of poverty and establishment of real democratic system of governance. Dairy is a major sub-sector allied to agriculture. The societies of dairy cooperatives have been built with a great intention to support the members in different areas of economic, management and technology. The annual milk production and per capita availability of milk in India during the period from 1991-92 to 2015-16 clearly reflected that during the

entire period the compound growth rate of milk production (3.56 per cent) and per capita availability of milk (5.52 per cent) was found positive and significant. It was observed from the figure that milk production and per capita availability of milk was found increasing over the years. It is due to the fact that with increase modernization people of India are now very much aware about their food habit and healthy diet. For such reasons demand for milk and milk products are increasing in India. To meet the increase demand of milk, production and per capita availability of milk is increasing over the years.

Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd is a dairy cooperative organization that is radically known for its most prominent brand “Gokul”. Annual milk procurement by Gokul dairy from the year 2009-10 to 2013-14 reflected that contribution of cow milk was increased from 33.35 per cent in the year 2009-10 to 40.90 per cent in the year 2013-14. This was due to incorporation of high yielding milch cows in the village level milk production units with the facility of Artificial Insemination (AI). It brings tremendous increases of milk production by cows in the command areas. It was also observed from the study that loose sale of milk by Gokul Dairy decreasing day by day and it contributes only 0.93 per cent in the year 2013-14 while sale in poly bag contributed 99.07 per cent to the total sale in the same year. This might be due to the fact that with increase awareness among the people preference of hygiene milk is increasing day by day causing increase demand of poly bag milk than loose sale. Average milk sold in consumer pouch during the period reflected that average consumer pouch sold by the Gokul dairy increases from 693 litres/day to 855 litres/day during the period from 2010-11 to 2013-14. The Table also reflected that Mumbai market was the main market to sale maximum consumer pouch of Gokul dairy in a year. The study reflected that the dairy business sector is a growing sector in India. The dairy Cooperatives play an important role for rapid development of rural people. The societies of dairy cooperatives have been built with a great intention to support the members in different areas of economic, management and technology. With special reference to Gokul dairy the study reflected that this cooperative milk union covering a very less area in the country as compared to other successful milk cooperatives of India e.g Amul, . The reason behind that they had only one production unit and target markets were very less. To increase the milk business following strategies need to adopt by the union.

Policy implication

- Encouragement of dairy farmers to join the milk business is important to increase the cooperative dairy business in more proliferate way.
- Modification of extension activities in the village level for development of awareness among the farmers.
- Establishment of more production plans is important to cover more areas under Gokul dairy.
- Strategies need to develop for production of more consumer preference milk products to develop popularity among the customers.
- Improve packaging and standardization of products is important for development of image building among the consumers for increasing demand of the products.
- Govt support towards irrigation and water supply for fodder production to the milch animals is found very essential to cope with the droughts and water shortage problems of the Maharashtra state.
- Production of more value added products is important to increase profit level of the dairy business. As price hike is possible only in processed products.

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