

## OPERATIONAL PERFORMANCE OF MILK COOPERATIVES- A COMPARATIVE STUDY OF MILKFED AND HDDCF

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### ABSTRACT

*A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. The dairy cooperatives are one of the largest and most important of food industries. Modern dairy industry plays a vital role in maintaining and promoting the health of the people. The main purpose of dairy industry is to provide milk and milk products at reasonable cost that satisfy the consumer's needs and fulfills consumer's nutritional requirements. MILKFED and HDDCF were set up in their respective states in 1973 and 1997. These institutions have been working as Dairy cooperative Federations for more than 40 years. They operate various milk unions and milk plants and manufacture, process and sale the variety of milk products. The purpose of this paper is to study the operational performance and marketing strategies of MILKFED and HDDCF and compare the operational performance of MILKFED and HDDCF. The operational performance of the MILKFED and HDDCF are on the basis of various physical indicators like number of functional societies, number of unions, number of members, plants, chilling centers, Average daily milk procurement, peak procurement of milk etc. The secondary data has also been used and collected from the web sites of the selected federations and visited various offices of MILKFED and HDDCF. The annual growth rates and the compound growth rates have also been calculated. The period of study is 2005-06 to 2009-10. The study found that the MILKFED is performing much better than HDDCF.*

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## INTRODUCTION

A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. A cooperative is based on certain values and principles of its own, which distinguish it from other forms of organizations. Cooperation has three dimensions, that is, economic, social and moral, which are equally crucial for its success. The very motto of cooperation, 'each for all and all for each', signifies loyalty, trust, faith and fellowship. A cooperative is a perfect democratic institution of the members, for the members, and by the members, and is based on the 'one member, one vote' system of decision making.

**The Punjab State Cooperative Milk Producers' Federation Limited** popularly known as MILKFED Punjab, came into existence in 1973 with a twin objective of providing remunerative milk market to the Milk Producers in the State by value addition and marketing of produce on one hand and to provide technical inputs to the milk producers for enhancement of milk production on the other hand. MILKFED is operating 11 milk unions and 10 milk plants where all milk products and milk is manufactured, processed and packed at milk plants. The products of MILKFED are sold in the market under the brand name Verka.

**Haryana Dairy Development Cooperative Federation Ltd** was established on April 1st, 1977. It is registered under the Haryana Co-operative Societies Act. Haryana Dairy Development Cooperative Federation Ltd. produces a wide range of products such as ghee, flavored milk, paneer, milk cake and table butter. The HDDCF is operating 5 milk unions and 6 milk plants where all milk products and milk is manufactured, processed and packed at milk plants. The products of Haryana Dairy Development Cooperative Federation Ltd. are sold in the market under the brand name Vita.

MILKFED and HDDCF were set up in their respective states in 1973 and 1997. These institutions have been working as Dairy cooperative Federations for more than 40 years. They operate various milk unions and milk plants and manufacture, process and sale the variety of milk products. The number of Functional Societies of MILKFED was 6474 and in HDDCF were 5194 as on March 2010. The number of member of MILKFED and HDDCF were 365000 and 146000 respectively as on March 2010. The annual turnover was Rs. 13722 lac in MIKFED and Rs. 99 lac in HDDCF as on March 2010. These institutions have been

undertaking trade of Dairy products. Financial analysis is mainly done in order to judge the profitability and financial soundness of the firm by diagnosing the information contained in the financial statements. Therefore, it becomes important to review the financial performance of these cooperative federations. It is with this view that the present paper titled, "Financial performance of dairy cooperatives- A comparative study of MILKFED AND HDDCF." has been plan.

### **NEED OF THE STUDY**

The dairy industry plays an important role in the socio-economic development of India. The dairy industry in India is instrumental in providing cheap nutritional dairy products to its vast population and also generates huge employment opportunities for people in rural areas. Thus, the dairy cooperatives form an integral part of dairy industry in India. The state dairy cooperative federations play an important role in procurement and selling of milk and milk products. The Punjab State Cooperative Milk Producers' Federation Limited and the Haryana Dairy Development Cooperative Federation Limited are playing important role in the development of dairy industry in the states of Punjab and Haryana respectively. These federations have been set up and work under almost similar objectives, functions and structure. Their product portfolio has also similarities. Moreover, the Punjab and Haryana are two adjoining states. Keeping in mind these things, the presents study titled 'Operational performance of Milk Cooperatives- A comparative study of MILKFED and HDDCF' has been undertaken. The present study is an attempt to analyze and compare their performance from different aspects.

### **OBJECTIVES OF THE PAPER**

- To undertake the operational performance of MILKFED and HDDCF.
- To compare the operational performance of MILKFED and HDDCF.
- To study the marketing activities of MILKFED and HDDCF

### **RESEARCH METHODOLOGY**

In this paper an attempt has been made to study and compare the operational analysis of Milkfed and Haryana Dairy Development Cooperative Federation. The operational performance of the selected federations has been studied on the basis of various indicators. The operational performance of the MILKFED and HDDCF are on the basis of various physical indicators like number of functional societies, number of unions, number of members, plants, chilling centers, Average daily milk procurement, peak procurement of milk

etc. The secondary data has also been collected from the web sites of the selected federations. I also visited various offices of MILKFED and HDDCF and consulted many employees and members of the federations. My personal observations and their views were also used in reaching some conclusions. The data collected has been tabulated and analysed by using ratio analysis. The annual growth rates and the compound growth rates have also been calculated. The period of study is 2005-06 to 2009-10.

### **LIMITATIONS OF THE STUDY**

- The study is limited in scope due to restraint of time and resources.
- The study is based on secondary data and the limitations of using secondary data may affect the results.
- Certain suggestions of the study have been made on the basis of the researcher's observations and the discussions with the staff members of the selected federations.

However, no systematic attempt was made to study this aspect in detail.

### **MARKETING MIX OF MILKFED AND HDDCF**

The Product, Price, Place and Promotion are the core components of marketing objective. So it is essential to have complete knowledge of these aspects of an organization. So we discuss these 4 points of Verka's & Vita's Marketing mix in detail.

#### **Product Mix**

There are 15 products of Verka Brand which are being manufactured at different Verka Plants. Milk, Ghee, Curd, Paneer, Kheer and Dry milk are being produced at Gurdaspur Milk Plant other milk products like table butter, Processed Cheese, SFM, Lassi, Mango Raseela, Ice Cream, etc. are being produced at sister concern plants of Mohali, Patiala and Jalandhar and the various kinds of products produced by Haryana Dairy Development Cooperative Federation Ltd are ghee, milk cake, paneer, table butter, dahi, flavored milk, and lassi.

#### **Price Mix**

**Pricing Policy** The decision about the liquid milk pricing is taken by a Committee of the following persons:-

Chairman of the Milk Union, One Board of Director, General Manager (Final Approval Authority), Manager (Finance & Accents) and In-charge Sales & Marketing.

The main criteria for pricing are the price charged by neighboring milk union & profitability of the concern. Price payable by market is also taken into consideration while fixing price is set in consonance.

**Place Mix**

Distribution channel: The Verka and Vita's inspector and field sales representatives visit different routes everyday and collect demand of the dealers. These inspector and field sales representative distribute the products directly to the dealer's and collection of payment for same are also their responsibility. They are increasing its private dealership and sale through its own milk bar by providing good commission and competing with private dairies and other competitors and by motivating its field staff.

Transportations: Milk plants use private transporters as well as union's vehicle for supplying milk products to dealers to the city. They float a notice for hiring transportation. The tender which has least cost of transposition is accepted. Dealers generally use their own transportation for supplying the products to different retailers through Auto Rickshaw, Mini trucks etc.

**Promotion**

Being Government sector organization advertising is usually given a limited budget, thus leading to low promotional activities. Some grant is given by National Dairy Development Board (NDDB) also vita dealers are provided with banners, sign boards and Retail shops are painted as Vita Milk Products to advertise Vita Products and Verka Milk Products to advertise Verka's products

**MARKETING SECTION**

The market is of two types ie. Urban Market and Rural Market. The urban market is operated by a separate Marketing Department that is headed by Incharge Marketing under the overall Guidance of General Manager. He is assisted by Sales Supervisors, MilkBar Manager, Managers, MilkBar Attendants and Dairy Helper-cum-Cleaners. The Marketing starts with the product planning and ends with consumer's satisfaction. For this purpose, the Sales Supervisor regularly visits the Market to study market needs & supervise the sale under the different Market conditions.

But in case of Rural Marketing, products are sold through societies. There is no any separate department for this purpose and the Rural Marketing is secondary function of milk procurement department which is headed by Manager Milk Procurement and works under the overall guidance of Managing Director. He is assisted by Deputy Manager Procurement, Officer, Milk Procurement, Supervisors and Milk Procurement Assistants.

**OPERATIONAL PERFORMANCE OF MILKFED AND HDDCF**

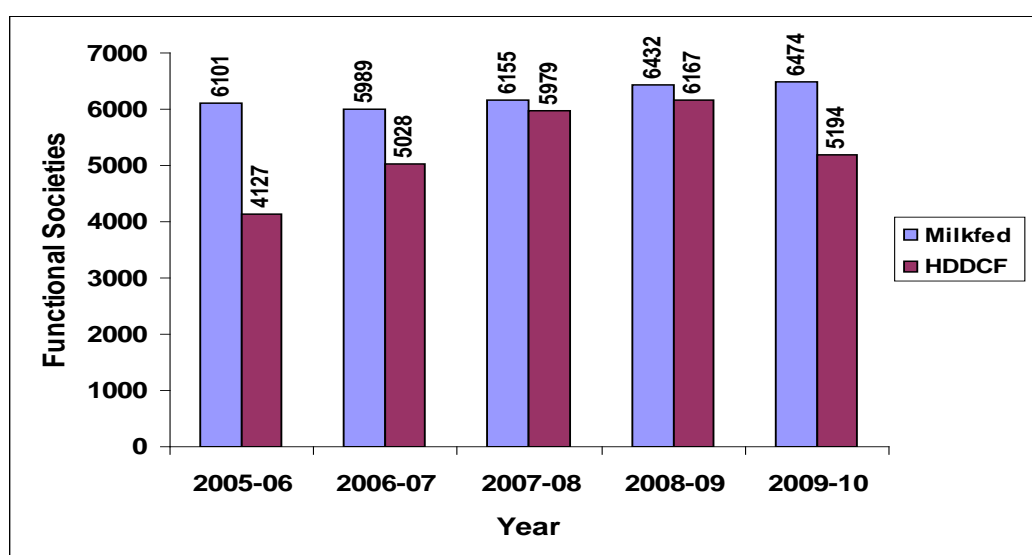
This section presents the operational performance of the MILKFED and HDDCF on the basis of various physical indicators like number of functional societies, number of unions, number of members, plants, chilling centers, Average daily milk procurement, peak procurement of milk etc.

### Functional Societies

In the dairy co-operative structure, there are milk producers' cooperative societies popularly known functional societies at the village level. The functional societies procure fresh milk from the milk producers twice a day directly without the assistance of any middleman. The number of functional societies of MILKFED and HDDCF during the period 2005-06 to 2009-10 is shown in table 1.1.

**Table 1.1 : Growth of Functional Societies of MILKFED and HDDCF**

YEAR	MILKFED	Percentage change	HDDCF	Percentage change
2005-06	6101	---	4127	—
2006-07	5989	- 1.8	5028	21.8
2007-08	6155	2.7	5979	18.9
2008-09	6432	4.5	6167	3.1
2009-10	6474	0.65	5194	- 15.7
<b>MEAN</b>	<b>6230</b>		<b>5299</b>	
<b>CGR</b>	<b>1.19</b>		<b>4.71</b>	



**Fig. 1.1: Functional Societies of MILKFED and HDDCF**

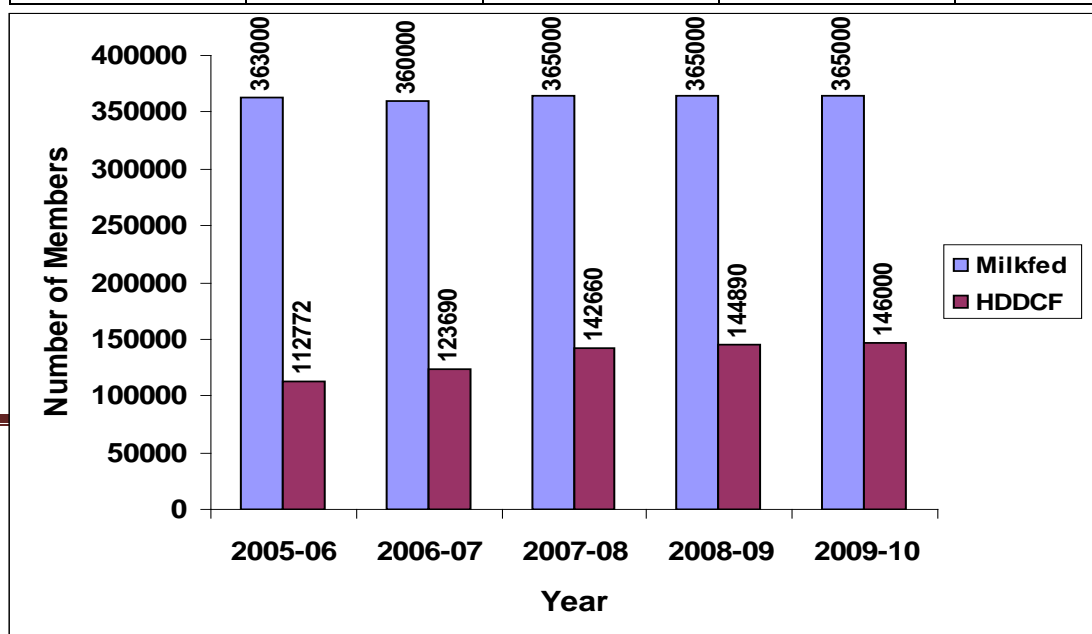
The table 1.1 shows that the mean value of functional societies is higher in MILKFED (6230) as compared to that in HDDDCF (5299) during the study period. The table 1.1 shows that the number of functional societies in MILKFED was 6101 in 2005-06 and decreased to 5989 in 2006-07 due to poor quality of milk found in some societies. The number of societies increased from 6155 in 2007-08 to 6474 in 2009-10 and registered a growth rate of 1.19 per cent during the period of study. The annual growth rate was negative (-1.8%) in 2006-07 and was the highest (4.5 per cent) in the year 2008-09. In HDDDCF, the number of functional societies increased from 4127 in 2005-06 to 6167 in 2008-09, but declined to 5194 in 2009-10 due entry of private players and poor quality of milk provided by some societies. The number of societies increased at a higher rate in HDDDCF (4.71%) than that in MILKFED (1.19%) during the period of study.

### Number of Members

The members are attached to the dairy cooperatives for the procurement of milk at village level. The functional societies procure milk from the members. The number of members in MILKFED and HDDDCF during the period 2005-06 to 2009-10 is shown in table 1.2.

**Table 1.2: Number of Members in MILKFED and HDDDCF**

YEAR	MILKFED	Percentage change	HDDDCF	Percentage change
2005-06	363000	—	112772	—
2006-07	360000	-0.83	123690	9.68
2007-08	365000	1.39	142660	15.33
2008-09	365000	0	144890	1.56
2009-10	365000	0	146000	0.76
<b>MEAN</b>	<b>363600</b>		<b>134002</b>	
<b>CGR</b>	<b>0.11</b>		<b>5.30</b>	



**Fig 1.2 Members in MILKFED and HDDCF**

The table 1.2 shows that the mean value of the number of members was higher in MILKFED (363600) as compared to that in HDDCF (134002) during the period of study. The number of members in MILKFED decreased from 363600 in 2005-06 to 360000 in 2006-07 due to reduction in functional societies in that year, the number increased to 365000 in 2007-08 and remained stable in the following years. In HDDCF, the number of members increased from 112772 in 2005-06 to 146000 in 2009-10 and registered a growth of 5.30 during the period. The annual growth rate was the highest (15.33%) in 2007-08 and was least in the year 2009-10 (0.76%).

**Milk Unions**

The milk unions are organized at district level and may cover one or more districts. These Unions either process milk at their own level or pass the same to the milk plants of other milk unions for processing. They also organize new Primary Milk Societies at the village level. Thus, the unions help the federations in establishing a milk network throughout the state. The number of milk unions of MILKFED remained stable at 11 during the period 2005-06 to 2009-10. However, there were five milk unions in HDDCF in 2005-06 and the number went up to six unions in 2006-07. Thereafter, the number of unions was stable till 2009-10. Thus, the MILKFED (11) had higher number of unions as compared to that in HDDCF (6).

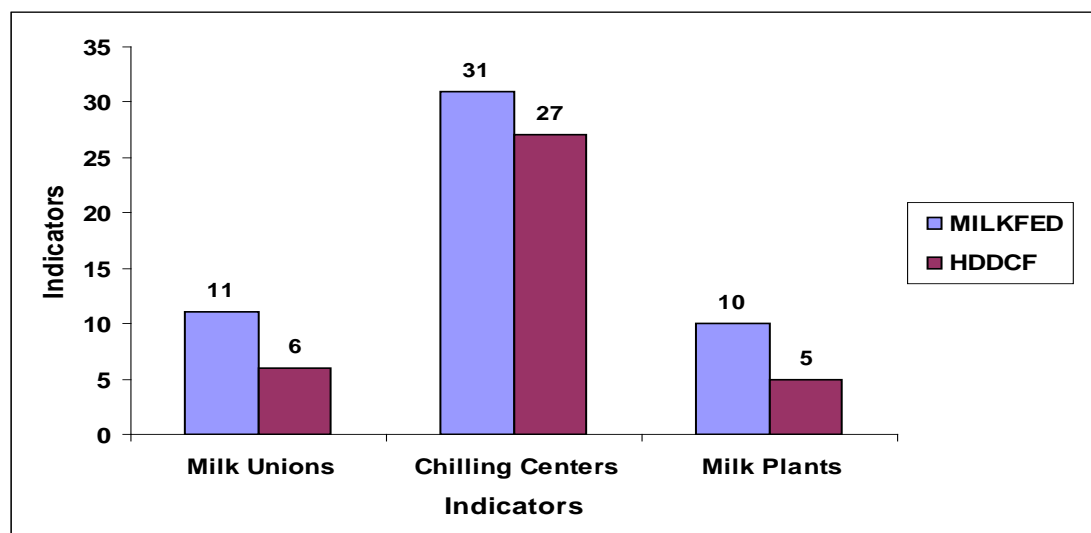
**Milk Plants and Chilling Centers**

The raw milk is supplied by dairies at chilling plants or centers which provide the services of chilling and storage of milk. All milk products and milk are manufactured, processed and packed at milk plants. There were 31 chilling centers and 10 milk plants in MILKFED during the period 2005-6 to 2009-10. In HDDCF, the number of chilling centers and milk plants were 27 and 5 respectively. The table 4.3 shows the number of milk unions, chilling centers and milk plants of MILKFED and HDDCF as on March 2010.

**Table 1.3: Unions, Chilling Centers, Plants  
in MILKFED and HDDCF as on March 2010**



INDICATOR	MILKFED	HDDCF
Milk Unions	11	6
Chilling Centers	31	27
Milk Plants	10	5



**Fig 1.3: Unions, Chilling Centers, Plants**

The table and fig. 1.3 shows that the number of milk unions, chilling centers and milk plants was higher in MILKFED as compared to those in HDDCF.

#### **Average Daily Milk Procurement**

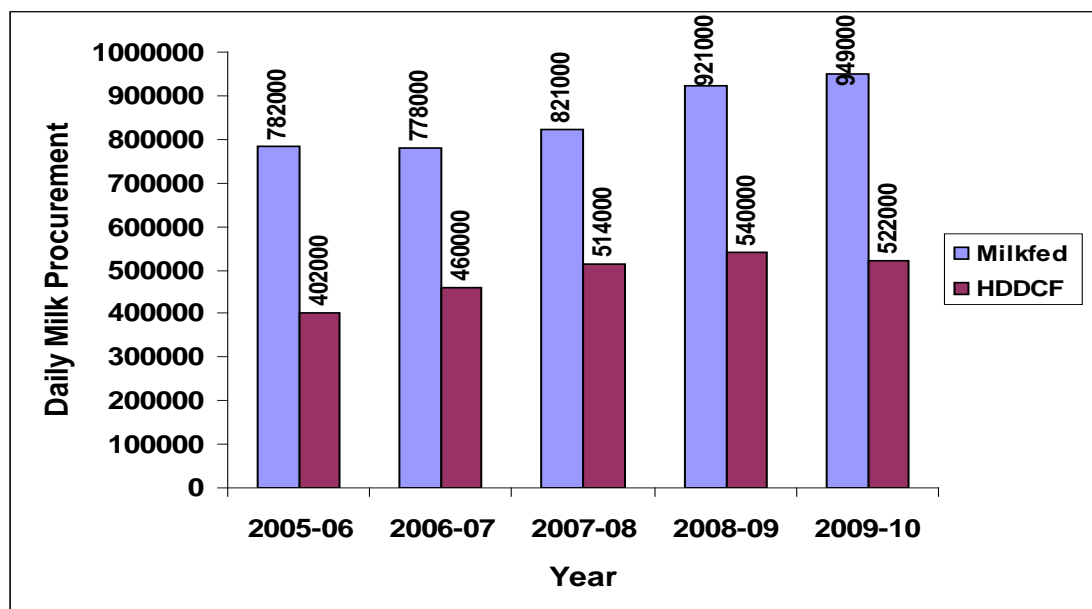
The average milk procurement represents the total milk procured in lac litres per day (llpd). The higher value of average milk procurement shows higher operational performance of the federation. The table 1.4 shows the average milk procurement by MILKFED and HDDCF during the period 2005-06 to 2009-10.

**Table 1.4: Average daily milk procurement in MILKFED and HDDCF**

(in llpd)

YEAR	MILKFED	Percentage change	HDDCF	Percentage change
2005-06	782000	---	402000	---
2006-07	778000	-0.51	460000	14.42
2007-08	821000	5.23	514000	11.73
2008-09	921000	10.85	540000	5.08
2009-10	949000	2.95	522000	-3.33

MEAN	850200		487600	
CGR	3.95		5.36	



**Fig 1.4: Average daily milk procurement in MILKFED and HDDCF**

The table 1.4 shows that the mean value of average daily procurement of milk was higher in MILKFED (850200 llpd) as compared to that in HDDCF (487600 llpd). The average daily procurement of milk in MILKFED increased from 782000 llpd in 2005-06 to 949000 llpd in 2009-10 and registered a growth rate of 3.95 per cent during the period. The annual growth rate was negative (.51) per cent in the year 2005-06 may be due to decrease in number of societies in that year. In HDDCF, the average daily procurement of milk increased from 402000 llpd in 2005-06 to 522000 in 2009-10 and recorded a growth rate of 5.36 per cent during the study period. The annual growth rate was negative (-3.33%) in the year 2009-10 may be due to low sale of ghee and butter, low procurement of milk in that year.

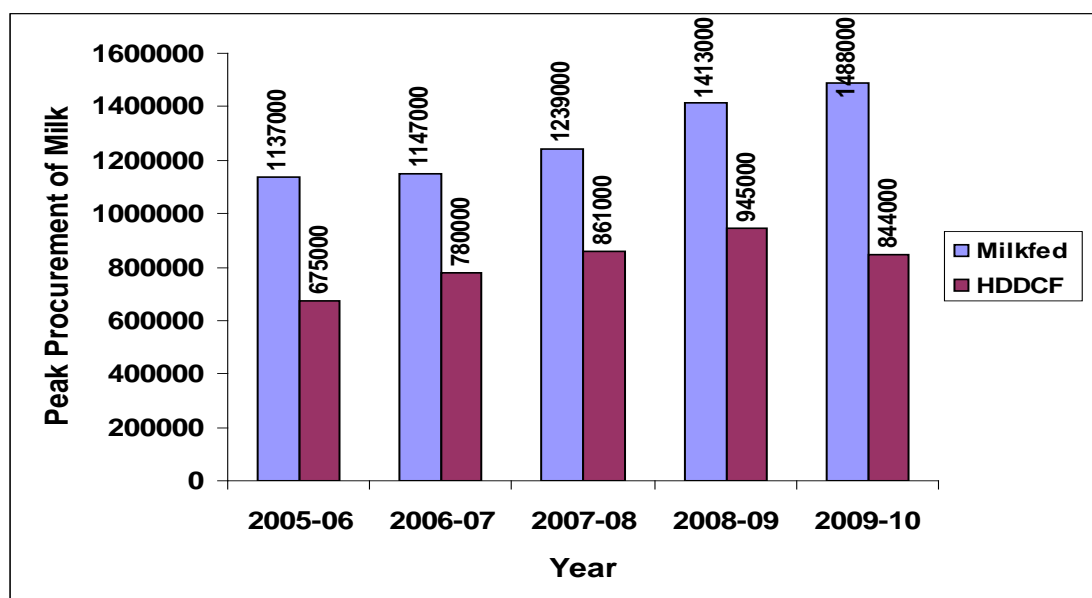
### Peak Procurement of Milk

The peak milk procurement represents the total milk procured in lac litres per day (llpd) during the peak season i.e. the monsoon season. The higher value of peak milk procurement shows higher level of operational performance. The peak milk procurement by MILKFED and HDDCF during the period 2005-06 to 2009-10 is shown in table 1.5

**Table 1.5: Peak Procurement of Milk in MILKFED and HDDCF**

(in lpd)

YEAR	MILKFED	Percentage change	HDDCF	Percentage change
2005-06	1137000	---	675000	---
2006-07	1147000	.88	780000	15.55
2007-08	1239000	8.02	861000	13.55
2008-09	1413000	14	945000	6.66
2009-10	1488000	5.33	844000	-10
<b>MEAN</b>	<b>1284800</b>		<b>821000</b>	
<b>CGR</b>	<b>5.53</b>		<b>4.57</b>	

**Fig 1.5: Peak Procurement of Milk in MILKFED and HDDCF**

The table 1.5 reveals that the mean value of peak procurement of milk was higher in MILKFED (1284800 lpd) as compared to that in HDDCF (821000 lpd). Further, the growth rate regarding the same was also higher in MILKFED (5.53%) than that in HDDCF (4.57%) during the period of study.

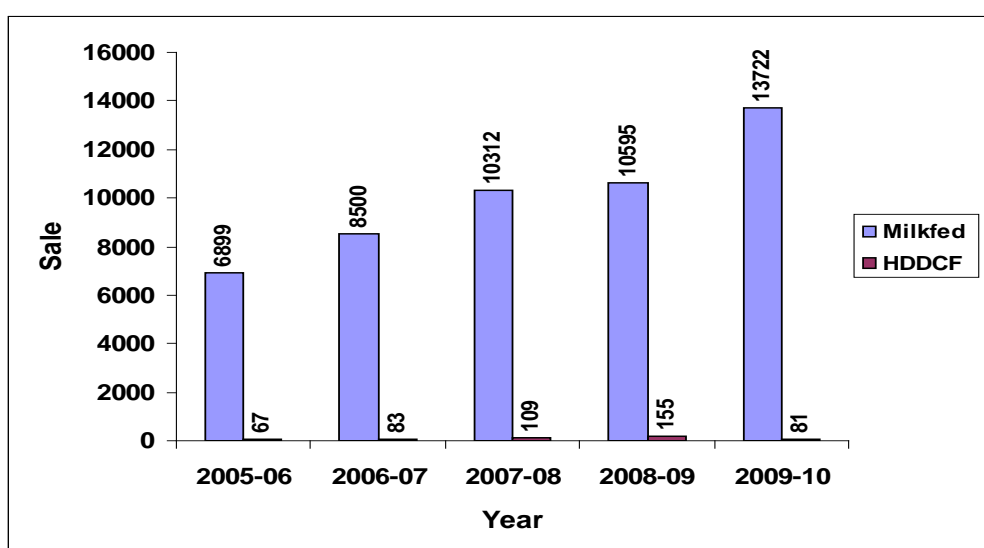
## SALES

The Sales represents the total value of sales in rupees. The higher value of sales indicates higher level of operational performance. Table 1.6 shows the value of sales in MILKFED and HDDCF during the period 2005-06 to 2009-10.

**TABLE 1.6: Growth of Sales in MILKFED and HDDCF**

(Rs. in lac)

YEAR	MILKFED	Percentage change	HDDCF	Percentage change
2005-06	6899	--	67	
2006-07	8500	23.20	83	23.88
2007-08	10312	21.13	109	31.32
2008-09	10595	2.74	155	42.20
2009-10	13722	29.55	81	-47.74
<b>MEAN</b>	<b>10005</b>		<b>99</b>	
<b>CGR</b>	<b>14.74</b>		<b>3.87</b>	



**Fig 1.6: Sales in MILKFED and HDDCF**

The table 1.6 reveals that the mean value of sales was higher in MILKFED (Rs. 10005 lac) as compared to that in HDDCF (Rs. 99 lac). Fig 1.6 shows that in MILKFED, the sales increased from Rs. 6899 lac in 2005-06 to Rs. 13722 lac in 2009-10 and registered a growth rate of 14.74 per cent during the period. Fig 1.6 shows that in HDDCF, the sales increased from Rs.67 lac in 2005-06 to Rs.155 lac in 2008-09 and then declined to Rs.81 lac in 2009-10 due to low sale of ghee and butter, low procurement of milk and registered a growth rate of 3.87 per cent during the period of study. Further, the annual growth rate in HDDCF was highest (42.20%) in the year 2008-09 and the same was negative (-47.74%) in 2009-10.

## **FINDINGS OF THE STUDY-**

### **OPERATIONAL ANALYSIS OF MILKFED AND HDDCF**

The operational performance of the MILKFED and HDDCF has been analyzed on the basis of various physical indicators like number of functional societies, number of unions, number of members, plants, chilling centers, Average daily milk procurement, peak procurement of milk, sales etc.

- In the dairy co-operative structure, there are milk producers' cooperative societies popularly known functional societies at the village level. The functional societies procure fresh milk from the milk producers twice a day directly without the assistance of any middleman. The mean value of functional societies was higher in MILKFED (6230) as compared to that in HDDCF (5299) during the study period. The study found that the number of functional societies in MILKFED was 6101 in 2005-06 and decreased to 5989 in 2006-07 may be due to poor quality of milk found in some societies. The number of societies increased from 6155 in 2007-08 to 6474 in 2009-10 and registered a growth rate of 1.19 per cent during the period of study. The annual growth rate was negative (-1.8%) in 2006-07 and was the highest (4.5 per cent) in the year 2008-09. In HDDCF, the number of functional societies increased from 4127 in 2005-06 to 6167 in 2008-09, but declined to 5194 in 2009-10 may be due entry of private players and poor quality of milk provided by some societies. The number of societies increased at a higher rate in HDDCF (4.71%) than that in MILKFED (1.19%) during the period of study.
- The members are attached to the dairy cooperatives for the procurement of milk at village level. The functional societies procure milk from the members. The mean value of the number of members was higher in MILKFED (363600) as compared to that in HDDCF

(134002) during the period of study. The number of members in MILKFED decreased from 363600 in 2005-06 to 360000 in 2006-07 due to reduction in functional societies in that year, the number increased to 365000 in 2007-08 and remained stable in the following years. In HDDCF, the number of members increased from 112772 in 2005-06 to 146000 in 2009-10 and registered a growth of 5.30 during the period. The annual growth rate was the highest (15.33%) in 2007-08 and was least in the year 2009-10 (0.76%).

- The milk unions are organized at district level and cover one or more districts. These Unions either process milk at their own level or pass the same to the milk plants of other milk unions for processing. They also organize new Primary Milk Societies at the village level. Thus, the unions help the federations in establishing a milk network throughout the state. The number of milk unions of MILKFED remained stable at 11 during the period 2005-06 to 2009-10. However, there were five milk unions in HDDCF in 2005-06 and the number went up to six unions in 2006-07. Thereafter, the number of unions was stable till 2009-10. Thus, the MILKFED (11) had higher number of unions as compared to that in HDDCF (6).
- The raw milk is supplied by dairies at chilling plants or centers which provide the services of chilling and storage of milk. All milk products and milk are manufactured, processed and packed at milk plants. There were 31 chilling centers and 10 milk plants in MILKFED during the period 2005-6 to 2009-10. In HDDCF, the number of chilling centers and milk plants were 27 and 5 respectively. Thus, the number of milk unions, chilling centers and milk plants was higher in MILKFED as compared to those in HDDCF.
- The average milk procurement represents the total milk procured in lac litres per day (llpd). The higher value of average milk procurement shows higher operational performance of the federation. The mean value of average daily procurement of milk was higher in MILKFED (850200 llpd) as compared to that in HDDCF (487600 llpd). The average daily procurement of milk in MILKFED increased from 782000 llpd in 2005-06 to 949000 llpd in 2009-10 and registered a growth rate of 3.95 per cent during the period. The annual growth rate was negative (.51) per cent in the year 2005-06 may be due to decrease in number of societies in that year. In HDDCF, the average daily procurement of milk increased from 402000 llpd in 2005-06 to 522000 in 2009-10 and recorded a growth

rate of 5.36 per cent during the study period. The annual growth rate was negative (-3.33%) in the year 2009-10 may be due to low sale of ghee and butter, low procurement of milk in that year.

- The mean value of peak procurement of milk was higher in MILKFED (1284800 lpd) as compared to that in HDDCF (821000 lpd) during the study period. Further, the growth rate regarding the same was also higher in MILKFED (5.53%) than that in HDDCF (4.57%) during the same period.
- The average value of sales was higher in MILKFED (Rs. 10005 lac) as compared to that in HDDCF (Rs. 99 lac). Fig 4.6 shows that in MILKFED, the sales increased from Rs. 6899 lac in 2005-06 to Rs. 13722 lac in 2009-10 and registered a growth rate of 14.74 per cent during the period. In HDDCF, the sales increased from Rs. 67 lac in 2005-06 to Rs.155 lac in 2008-09 and then declined to Rs.81 lac in 2009-10 due to low sale of ghee and butter, low procurement of milk and registered a growth rate of 3.87 per cent during the period of study.

## **SUGGESTIONS OF THE STUDY**

Following are some suggestions to improve the performance of the milk cooperatives under study.

- It has been observed that the MILKFED and HDDCF have set up their milk booths in urban and semi-urban areas but they have no milk booth in the rural areas. Both the cooperatives should set up Milk Booths/milk bars in rural areas to increase their business. The reason being that some of the products manufactured by them like sweets, ice cream and drinking delights may get high sale in rural areas.
- It was found during the study that both the cooperatives procured less amount of milk during peak season so both the Cooperatives should make efforts for procurement of milk during peak season.
- The study found that MILKFED procured less amount of average daily milk per plant, per union and per member. So, the MILKFED should take steps to increase the average daily procurement of milk plant wise, union wise and members wise to increase the sale of milk and milk products.
- It was found that societies of HDDCF were reduced in the year 2009-10. So, the HDDCF should set up more societies at village level for expansion of dairy business in rural areas.

- The HDDCF need to improve the overall growth of its business by establishing more unions, plants and societies for the expansion and development of dairy business in Haryana.
- The HDDCF should make the products available in small quantities also so as to reach the greater number of consumers.

The above suggestions are based on findings of the study which also has limitations in its scope. The conclusions drawn suggest the areas in which the selected milk cooperatives need to focus. The findings of the study can also be taken as tentative hypothesis for conducting further studies in this area. The further research can be done by extending the period of study, and covering the primary survey of the customers and the members of these institutions.

## CONCLUSION

MILKFED and HDDCF were set up in their respective states in 1973 and 1997. These institutions have been working as Dairy cooperative Federations for more than 40 years. They operate various milk unions and milk plants and manufacture, process and sale the variety of milk products. The main objectives of these federations are to provide remunerative milk market to the Milk Producers in the States by value addition and marketing of produce on one hand and to provide technical inputs to the milk producers for enhancement of milk production. The proportion of interest income to total income of HDDCF is higher as compare to MILKFED but Milkfed is earning more from other sources as compared to HDDCF. It has been found that the HDDCF spent larger proportion of total expenses on its employees as compare to MILKFED but Milkfed had utilized its resources more efficiently than HDDCF. HDDCF earned high rate of return on its investments as compare to MILKFED. To conclude that the financial performance of HDDCF and MILKFED has been improved during the period of study but financial performance of HDDCF is better than MILKFED.

## BIBLIOGRAPHY

### Books

1. Goel B.B., "Reinventing co-operatives" Deep & Deep Publications Pvt. Ltd., New Delhi, 2001 pp- 32

### Thesis



1. Benjamin, Thomas P Ratnam, N V (1983), Management of dairy development factors for increasing milk production under co-operative: A study in Karnataka” sources Ph.D thesis submitted to Indian Institute of Management, Bangalore pp1.
2. Kaushik, Amit Kumar (2005), Management of Human Resources: A Study of Punjab State Cooperative Supply and Marketing Federation Limited (MARKFED) Sources Ph.D thesis submitted to Panjab University Chandigarh, pp-263
3. Kalyani, Arvind kumar, V Koli, U R (1978), A study of the emerging problems about marketing of farm and dairy products in the city of Bombay (with special reference to rice, wheat, gram, tur milk and ghee) source Ph.D thesis submitted to University of Bombay pp1
4. Singh, Raghbir (1984), A Study of Consumer Behavior and Demand for milk products in Chandigarh, Sources Ph.D thesis submitted to Punjab University Chandigarh, pp12 to pp20.

### Reports

1. Annual Reports of MILKFED and HDDCF.
2. Statistical Abstract of Punjab and Haryana.

### JOURNALS

Andri, Kuntoro Boga (2006), “ Analysis on characteristics of three dairy cooperatives sampled in East jawa.” Journal of applied sciences 6(4): 757-761, 2006 ISSN 1812-5664 Asian network for scientific information.

### ABBREVIATIONS

Btls	Bottles
CMP	Clean Milk Production
CGR	Compound Growth Rate
DCCBs	District Central Co-operative Banks
DCS	Dairy Cooperative Society
EVI	Extra-value index
F.S.C.S	Farmers Service Cooperative Societies
FSSAI	Food Safety and Standard Authority of India
GBMS	Greater Bombay Milk Scheme
GDP	Gross Domestic Product
HDDCF	Haryana Dairy Development Cooperative Federation
IDDP	Intensive Dairy Development Programme

IOFs	Investor-owned firms.
IBDC	Integrated Buffalo Development Centre
IIM	Indian Institute of Management
Kgs	Kilograms
LLPD	Lac litre per day
Ltd	Limited
MILKFED	Punjab State Cooperative Milk Producers' Federation Limited
MT	Metric Ton
MMPO	Milk and Milk Product Order
M.Sc	Mastes of Science
MTPD	Metric Tons Per Day
NDRI	National Dairy Research Institute
NDDB	National Dairy Development Board
NABARD	National Bank for Agriculture and Rural Development
PMS	Primary Milk Societies
PRA	Participatory Rural Appraisal
Pkts.	Packets
RKVY	Rashtriya Krishi Vikas Yojana
Rs.	Rupees
STEP	Support to Training & Employment Programme
SNF	Solid not fat
SFM	Sweet Flavoured Milk
SMP	Skimmed Milk Powder
UT	Union Territory
UHT	Ultra-High Temperature
U.S	United States of America