

# Mapping of Milk Processing Units in Organized Sector: A Case Study for Haryana

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**Abstract**— *The State Haryana is known for its major crops like wheat and rice and stands at the second largest contributor of food grains in India. Just like that Haryana ranks second in milk production. Dairy farming is also a form of agriculture in which milk is extracted from cow, buffalo, goat etc. then it sell by vendors from different rural and suburb regions to informal sector agents or to cooperative agents. This milk distributed further in different ways. Milk production is no more subsistence in nature and organized sector is a best example to prove it because cooperatives is an independent association of persons those fulfill their economic needs and distribution of milk and milk products is all a business as we can see it in “Haryana Dairy Development Cooperative Federation Ltd.” This federation is famous by vita brand which was opened by the Haryana govt. on the pattern of Amul.*

**Keywords**— *Dairy, Federations, Informal sector, Milk Production, Organized sector.*

## I. INTRODUCTION

Dairy is an agricultural industry in which milk alone valued more than combined value of wheat and rice. It covers about 1/3<sup>rd</sup> of gross income of rural households. Haryana, in spite of being a small state with only 1.3 % of total geographical area has a prominent space in the livestock map of the country. Haryana contributes 98.09 lakh tones milk per year which is more than 5.6% of the nation’s total milk production. Before 1970s, the condition of dairy farming was not as appreciable as it is now because there is so much miscoordinance between rural milk producers and organized milk sectors. So this kind of poor connectivity creates problems like- poor rural milk producers didn’t know the real price of their milk and on the other side, organized milk plants were deprived of from the valuable milk of rural area. But as we can say nothing is impossible, so on 13<sup>th</sup> January 1970, the “*White Revolution*” was started by Indian government with the objective to push the limits of dairy farming and to make it more valuable and economically more productive. This idea of “*Operation Flood*” was come through the success of “*Green Revolution*” in India. This revolution made dairy farming, a single self – sustaining industry in India. Over the span of three decades, India has transformed from a country of acute milk shortage to the world’s leading milk producer. India is the largest producer of milk in the world since 1998. During 2016-17, the annual output was 165.40 million tons accounting for 20% of the world milk share. The per capita availability of milk during 2016-17 was 352 gm per day as against world average of 299 gm per day. After that, Haryana ranks second in country with availability of 877 grm. of milk per person today.

## II. OBJECTIVES OF THE STUDY

- 1) To understand the problem of organized sector in dairy farming according to their demand and prize in Haryana State.
- 2) To mapping the formal sectors of milk production in Haryana.
- 3) To generalize the changes in milk production after white revolution.

## III. DATA AND METHODOLOGY

The data has been collected for the study of organized sector of dairy farming and their problems in Haryana at local and state level. The required data was collected from secondary sources are- the websites looked into in order to gather the prior information and the related literature about the topic. This information is descriptive and analytical in nature.

## IV. ROLE OF THE WHITE REVOLUTION AND HOW IT BECOMES BENEFICIAL FOR HARYANA’S MILK PRODUCTION

The father of White Revolution is Verghese kurrin who firstly introduced this concept and suggests ideas in development in the production of milk on its top level in India.

Haryana stands on second rank in the country as per capita per day availability of milk. Haryana is known for his commendable development in dairy industry and called as a milk pail of India. As we can see in the table given below that from the year 1966 to 2016, the production is increased chronically. As we discussed in the introduction that during 1970 when the revolution came in India, the production is hiked up tremendously in Haryana from 10.89 lakh tonnes to 17.27 lakh tones.

**TABLE 1**  
**YEAR-WISE MILK PRODUCTION IN HARYANA STATE (LAC TONNES)**

Year	Milk Production
1966-67	10.89
1977-78	17.27
1981-82	22.75
1991-92	35.65
2000-01	48.49
2005-06	52.59
2006-07	53.67
2007-08	54.51
2008-09	57.45
2009-10	60.06
2010-11	62.67
2011-12	66.61
2012-13	70.40
2013-14	74.42
2014-15	79.01
2015-16	83.81

*Source –Animal and dairying dept. of Haryana*

There are 60.8 lakh buffaloes are in Haryana, in which “Murrah” buffalo is the most famous because of its buffer milk production. There are four types of cows in State like Exotic – (those are imported from foreign), Indigenous – (autochthonic, originating where it is found), Crossbreed – (Hybrid), Non- Descript – (ordinary) and two of buffalos (Indigenous and Non- Descript). Murrah is an autochthonic. In Table-2, trying to show the distribution of milk production through cows, buffalo and goats in different districts of Haryana with the help of survey which was done by Animal Husbandry and Dairying Department of Haryana in year 2017- 2018. Through this table I identified that Sirsa with 213.51('000' tonnes) cow's milk production, which is the highest from all other districts of the state. As given data of buffalo's milk production in which the state Bhiwani is leading with 668.36('000' tonnes) production and in goat's milk, Mahendragarh is the district which leads over other districts. But if talking about the total annual milk production in state then Bhiwani has won the race with 802.84 ('000' tonnes) production. The state's total milk production is about 9808.94('000' tonnes) which is second largest production after Uttar Pradesh in India. This is how it proved that how white revolution left a deep impression on state.

**TABLE 2**  
**DISTRICT WISE MILK PRODUCTION (IN '000' TONNES) IN HARYANA STATE 2017- 2018**

Sr. no.	Districts	Total Cow's Milk Production	Total Buffalo's Milk Production	Total Goat's Milk Production	Annual Milk Production
1	Ambala	83.66	306.76	1.15	391.57
2	Bhiwani	127.66	668.36	6.81	802.84
3	Faridabad	45.74	189.84	1.38	236.96
4	Fatehabad	71.13	403.85	1.72	476.69
5	Gurugram	72.00	239.07	1.55	312.69
6	Hisar	94.61	634.12	2.45	731.18
7	Jhajjar	53.12	349.45	1.22	403.78
8	Jind	65.33	575.92	1.24	642.49
9	Kaithal	73.64	575.72	1.00	650.37
10	Karnal	188.34	445.19	1.39	634.93
11	Kurukshetra	119.44	282.04	0.54	402.02
12	Mahendragarh	60.04	350.72	7.82	418.58
13	Nuh	38.38	300.09	4.61	343.08
14	Palwal	43.67	387.24	1.18	432.09
15	Panchkula	22.18	105.91	1.45	129.54
16	Panipat	61.80	307.21	0.65	369.65
17	Rewari	62.13	295.24	3.77	361.13
18	Rohtak	45.29	347.56	0.80	393.65
19	Sirsa	213.51	423.55	5.48	642.53
20	Sonepat	102.71	476.70	1.25	580.65
21	Yamunanagar	176.10	275.19	1.32	452.60
22	Charkhi Dadri	-	-	-	-
State Total		1820.46	7939.71	48.77	9808.94

*Source- Animal Husbandry and Dairying Department of Haryana (Sample Survey Report 2017 – 2018)*

#### V. WHY HARYANA'S DAIRY SECTOR HAS FOR LONG BEEN UNORGANIZED

With liberalization of dairy industry, all kind of sectors got the opportunity to participate in different fields of dairy products. Most of the private sectors dominantly established their presence in milk distribution. One of the main reasons of their dominance is increasing population on a vast scale. Mostly the population of Haryana is rural and believed in old traditions, so people still are in favour of unpacked and unprocessed milk through their believe ones or local milk distributors “dudiyā” because they believe it's good, fresh and more nutritious than packaged milk. More of the people who sell milk in rural areas would prefer to sell it in limited area of their periphery and those who want to sell it outside in urban areas too then they contact informal sector's agents who pander loose milk from dairy farmers and sell it in urban peripheries directly to consumers at their own fixed rates. It's a kind of procure with consumers and dairy farmers but this problem can't be solved unless the organized or formal sector didn't give their efforts to empower on informal sector and to standardized the equal rates everywhere.

**TABLE 3**  
**FLOW OF MILK THROUGH DIFFERENT CHANNELS**

Share of marketable surplus	% of production	Total production (million tonnes)	Use
	100%	100	
	45%	45	Home consumption
	55%	55	Marketable surplus sold in urban and rural markets( informal and formal)
34.5%	19%	19	Sold in urban markets as loose unpackaged milk
40%	22%	22	Sold as processed products through informal markets
14.5%	8%	8	Sold as packaged milk through formal markets.
12.7%	7%	7	Sold as packaged milk products through formal markets

*Source- India: Increasing demand challenges in the dairy sector by meena Punjabi*

## VI. THINGS THAT ORGANIZED SECTOR SHOULD PERFORM FOR BETTER RESULTS:

- 1) Quality or guarantee of freshness in products are the big issues in informal sector so if formal or organized sector wants to compete then they should take care of their quality of products for better results.
- 2) Organized milk producing agencies must enhance their interaction with small farmers and rural dairy vendors to earn their trust.
- 3) Area like Haryana where milk production is not even in all the districts so the formal sectors should engage their agents or managers to collect the ground reality data of dairy farms and to convey the milk sellers by giving them better packages more than the Informal's.
- 4) Raise packaged milk distribution in more areas.
- 5) Make policies that attract farmers to get a higher price for milk.
- 6) Make farmers more secure and give them strength in enhancing their production by animal insurances.
- 7) Prices should be same everywhere on the bases of amount of fat in milk.
- 8) Encourage commercial dairy farming and breed development.

## VII. MAPPING OF ORGANIZED SECTOR OF MILK DAIRIES IN HARYANA

The most famous breed of buffalo named "Murrah" in Haryana mainly kept for milk production and it treated as a backbone of the state in dairy farming. Dairy farming in Haryana is now no longer just for illiterates and unemployed humans, many educated and private companies shown their interest and adopted it with the modern technology to maximize profit. After the establishment of Amul in Gujarat, Haryana's govt. also started a concept of organized milk plant in state, so on 1<sup>st</sup> April, 1977 "Haryana Dairy Development Cooperative Federation Ltd." was established by Haryana govt. for optimistic results and to encourage economic interests in producing milk. The products of this cooperative federation are recognized by the brand "vita". There are six plants of vita in Haryana districts named as- Jind, Ambala, Rohtak, Ballabgarh, Sirsa, and Kurukshetra. All of these plants are worked in three tiers.

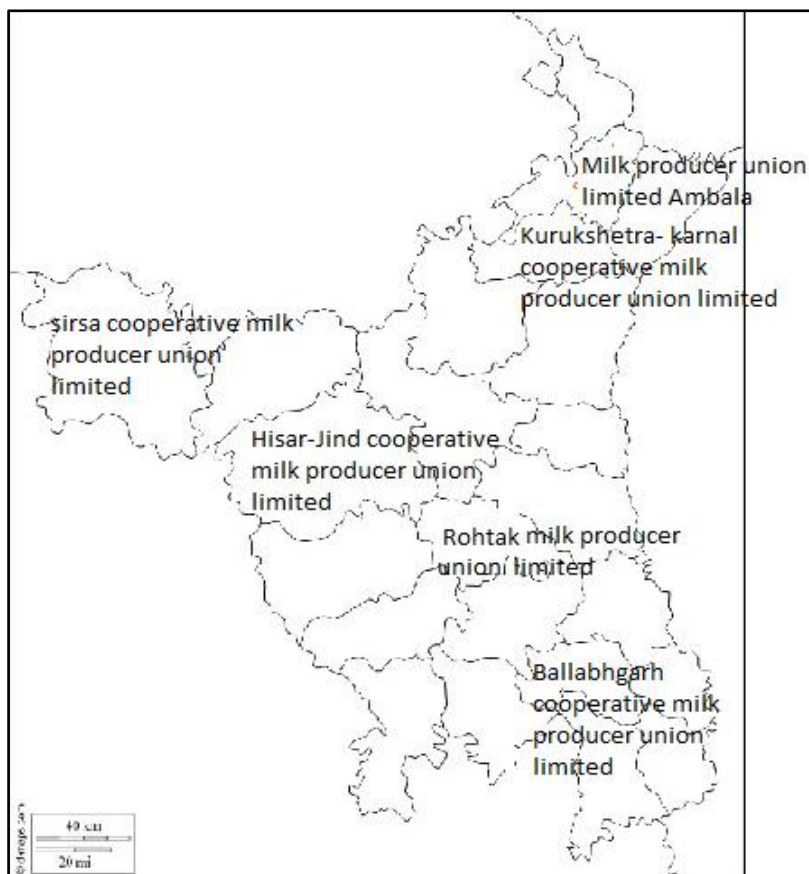
Tier 1	Tier 2	Tier 3
Village level societies of milk production	District level cooperative unions	Milk federation at the state level as apex body

	Districts :	Products :
	Jind	Liquid milk, ghee, paneer, mango drink etc.
Ambala	Liquid milk, paneer, dahi, lassi, milk cake etc.	
Vita milk plants	Rohtak	Liquid milk, ghee, butter, paneer etc.
	Ballabgarh	Dahi, paneer, liquid milk etc.
	Sirsa	Paneer, kaju pinni, dahi, liquid milk etc.
	Kurukshetra	Liquid milk

There are six unions on district basis those carried out five important functions in dairy farming sector are – procurance, advertise or marketing of milk products involves (local and sample milk sale, dispatch of milk to milk union, payment etc.), processing and providing technical inputs (standardization of testing equipment and chemicals), institutional strengthening of milk cooperatives, enhancing women involvement in dairy cooperatives.

**TABLE 4**  
**NAME OF UNIONS AND RESPECTIVE YEAR OF REGISTRATION**

Name of the unions	Year of registration
The Ambala district cooperative milk producer union limited Ambala	1973
The Rohtak district cooperative milk producer union limited Rohtak	2003
The Hisar – Jind district cooperative milk producer union limited Jind	1991
The Kurukshetra – Karnal district cooperative milk producer union limited Kurukshetra	1991
The Sirsa district cooperative milk producer union limited Sirsa	1978
The Ballabgarh district cooperative milk producer union limited Ballabgarh	2003



**FIG. 1 - Milk unions of Haryana**

### VIII. CONCLUSION

Milk is a complete staple food in our life and dairy farming is a class of agriculture for long term production of milk, which is processed and sale as a dairy product. So this paper represents the dairy farming as an agriculture form in which milk extracted from animals like – cows, buffalo, goat etc. and then this milk processed into various products like – ghee, butter, cheese, curd and many more. So these processing are done in many ways because it's depend on our demand that which method we prefer. There are two kinds of milk processing units- organized and unorganized, the basic difference is that organized sector is of cooperatives and unorganized or informal sector's agents collect loose milk from rural vendors and sell them with quick access, and this is the main reason that's why our 70% of the population in state takes milk from informal sectors. There are six unions of milk federation in Haryana those are working but not as a team, so there is a highlight through this paper for formal sectors that they should improve their working skills and make efforts to attract public from loose milk to packaged milk with guarantee of freshness and nutrients. Vita federation was leased out the plants to the milk unions in six districts of Haryana those are not enough because demand is likely to grow in future years and government must unlock some schemes for dairy farmers to attract their interest by giving them appropriate price of their product.

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