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Dairy Business in Haryana: Problems and Challenges

Sushma¹

Ph.D. Student,
Department of Business Management,
College of Agriculture, CCS-HAU,
Hisar, Haryana, India.

Sunita Mehla²

Professor,
Department of Business Management,
College of Agriculture, CCS-HAU,
Hisar, Haryana, India.

Abstract: *After its formation on November 1, 1966, the state of Haryana has shown remarkable progress in dairy-farming business. The recent data indicates that along with the Anand Pattern, the state of Haryana has established a total of 6249 Dairy Cooperative Societies (DCSs) at the village level and 6 milk unions at the district level. These structures serve as the foundation for dairy-related activities in the region. Oversight of marketing functions at the state level has been entrusted to the Haryana Dairy Development Cooperative Federation (HDDCF), which was founded back in 1977. Now it is to say that the Per Capita availability of milk has increased 112 gms in 1968-69 to 407 gms in 2019-20 in the whole country. In the case of Haryana the estimated milk production in 1979-80 was 19.50 lakh tonnes, which increased to 117 lakh tonnes for the year 2019-20. The primary aim of this current analysis is to pinpoint areas of vulnerability within HDDCF's operations and recommend strategies for improvement, given the formidable competition it faces from other players in the market. Moreover, a declining number of active cooperative societies and a relatively lower average milk procurement rate add to the list of worries. Additionally, the dip in real milk prices and the comparatively lower milk prices signal a relatively modest market share for cooperatives in Haryana when compared to their counterparts in other states. The present study relies on secondary data, meticulously gathered from a variety of sources, and employs analytical techniques such as tabular analysis and functional analysis. The findings from this study bring to light several noteworthy concerns.*

Keywords: *milk products, co-operatives, dairy business, dairy cooperative societies, HDDCF.*

Introduction:

Most of the research studies related to dairy farming point out that over the past four to five decades, the Indian economy has undergone steady growth, resulting in significant positive impacts on crucial sectors such as agriculture, manufacturing, and services. In the initial decades following independence, the primary goal was to ensure food security for the country's expanding population, given India's dependence on food aid from various developed nations, including the United States, until the late 1960s. The late 1960s and early 1970s saw the inception of the Green Revolution, which successfully secured India's food supply, and the White Revolution, which achieved self-sufficiency in milk production. Notably, India now stands self-reliant in milk production, while many other developing countries continue to rely on milk product imports even in contemporary times.

It is a well-known fact that during the 1950s and 1960s, milk production in India remained stagnant, with occasional negative annual growth rates. In the first decade after gaining independence, the annual compound growth rate for milk production was 1.64%, but it declined to 1.15% during the 1960s. In 1950-51, per capita milk consumption in India was a mere 124 grams per day. By 1970, this figure had dropped to 107 grams per day, falling significantly below recommended nutritional standards. Despite having the world's largest cattle population, the dairy industry struggled to produce more than 21 million tonnes of milk annually. To compensate for this shortfall, India heavily relied on dairy imports, which made up 50 to 60% of the industry's total requirements during the 1950s and 1960s. The pivotal moment occurred with Prime Minister Lal Bahadur

Shastri's visit to Gujarat's Anand district in 1964. In 1965, the National Dairy Development Board (NDDB) was established with the mission of promoting the 'Anand pattern' of dairy cooperatives throughout India through the phased Operation Flood (OF) program. Under the leadership of Verghese Kurien, the first chairman of NDDB, the team initiated a project to organise these cooperatives in various milk-producing regions, enabling the transportation of liquid milk from these cooperatives to urban centres. In Europe during the late 1960s, there was an oversupply of milk, resulting in a surplus of dried skim milk and butter oil.

Here it is noteworthy to say that the European Economic Community (EEC) struggled to sell its surplus milk products but failed; that is why it was decided to offer it as a charitable donation to India through the World Food Programme (WFP). NDDB proposed reconstituting the 'donated skim milk powder' into milk and selling it in major Indian cities at prices comparable to domestic rates, thereby creating a market for quality milk in these urban areas. This marked a pioneering instance in the history of economic development where food aid was utilised as a buffer stock to stabilise market fluctuations and stimulate markets that would eventually be supplied by the domestic market, all with the overarching goal of eliminating the need for aid. Actually Operation Flood Program was meticulously designed with this objective in mind. Before the commencement of Operation Flood in 1968-69, India's milk production stood at a mere 21.2 million tonnes (MT). However, this initiative led to a substantial increase, with production reaching 30.4 MT by 1979-80, 51.4 MT by 1989-90, and 84.6 MT by 2001-02. This transformative effort turned India from a milk-deficient nation into the world's largest milk producer, surpassing the USA in 1997-98. Over three decades (1980s, 1990s, and 2000s), daily milk consumption in the country surged from a low of 107 grams per person in 1970 to over 226 grams per person in 2002.

Dairy Business in Haryana:

Haryana, often hailed as the "Milk Pail" of India, boasts a remarkable reputation for its substantial milk production. In the 2017-18 period, the state contributed a noteworthy 9.81 million metric tonnes of milk, representing 5.56% of the nation's total milk output. It's quite remarkable that Haryana, despite occupying only 1.4% of India's land area, plays such a pivotal role in the country's milk production. In 2017-18, the per capita milk availability in the state reached 1005g, coming in a close second to Punjab. The state's economic landscape predominantly revolves around agriculture, with livestock accounting for a significant 39.81% of the agricultural gross domestic product(GDP). In the domain of dairy development, Haryana is celebrated for its highly productive milch animals, notably the Murrah buffaloes and Haryana cows. The state leads the nation in buffalo productivity and ranks second in the productivity of indigenous cattle breeds, including Haryana, Sahiwal, Tharparkar, and others.

The cooperative framework in Haryana adheres to the Anand pattern, featuring a three-tier structure. This system encompasses dairy cooperative societies at the village level, milk producers' cooperative unions at the district level, and the apex body for the entire state, the HDDCF. The journey of the dairy cooperative movement in Haryana predates the state's formation, with DCSs established in select villages. In 1970, the Haryana Dairy Corporation was founded, eventually succeeded by the HDDCF in 1977. The federation serves as the highest governing authority for dairy cooperatives at the state level, with its headquarters situated in Panchkula. Presently, there exist six Milk Unions, comprising 6249 DCSs, boasting a collective farmer membership exceeding 3 lakhs, albeit with women's representation at only 28.53%. In total, the cooperative sector in the state operates six dairy plants with a combined processing capacity of 9.4 lakh LPD. The federation's diverse product range encompasses Liquid Milk, Ghee, Paneer, Skimmed Milk Powder, Curd, Baby Food, and more, all marketed under the brand name "Vita." Dairy cooperatives play a pivotal role in the organised dairy processing sector in Haryana and serve as significant suppliers of milk and dairy products to the National Capital Region (NCR). However, in recent times, the entry of other firms such as Amul and Reliance has intensified competition, making it imperative to conduct a comprehensive analysis of dairy cooperatives in Haryana.

Milk Cooperatives in Haryana:

The data given in the table on the next page offers insights into the dynamics of dairy cooperatives in Haryana. Over time, there has been a notable surge in the establishment of these cooperatives. However, in recent years, particularly after 2008-09, this growth has slowed considerably, largely due to the fact that most revenue villages are now covered by these cooperatives. A similar pattern emerges in the number of farmer members, which experienced robust growth until the late 2000s but has since shown only modest increases. Owned funds mirrored this growth pattern in the cooperatives, reaching their zenith in 2007-08 and failing to return to those levels afterward. Over the span of a decade from 2007-08 to 2016-17, the real value of owned funds demonstrated a concerning, statistically non-significant Compound Annual Growth Rate (CAGR) of -8.04%. This decline in owned funds raises alarms because it implies that these cooperatives increasingly rely on external sources for financing and asset acquisition, resulting in a greater burden of liabilities in the form of interest payments.

However a parallel trend regarding the cooperatives unfolds in the real value of working capital for these cooperatives. It increased until 2007-08 and then experienced a sharp, statistically significant decline, with a CAGR of -24.01% from 2007-08 to 2016-17. A decrease in working capital may indicate a reduction in current assets, an increase in current liabilities, or a combination of both. The real value of milk and milk products procured and sold by these cooperatives, after a period of substantial growth until 2000-01, also displayed statistically significant decreases, with CAGRs of -3.83% and -4.19%, respectively, during the period from 2007-08 to 2016-17. This decline likely had adverse effects on the profitability of these cooperatives, a notion reinforced by a CAGR of -3.14% for profitability. The percentage of cooperatives reporting profits followed a similar trajectory, with nearly 100% of them being profitable in the mid-2000s. Meanwhile, in the year 2016-17, only about half of the cooperatives have shown profits. This dip in profitability corresponds with the decreasing levels of working capital and underscores concerns about these cooperatives' ability to repay loans, their solvency, and their growing challenges in meeting short-term commitments.

Table: Performance of Dairy Business in Haryana

Years	Societies (In Nos.)	Members (In '000)	Owned Fund(Rs. in Lakh)	Working Capital (Rs. in Lakh)	Milk and Milk Products Procured (Rs. in Lakh)	Milk and Milk Products Sold(Rs. in Lakh)	Societies in Profit (In Nos.)	Profit (Rs. in Lakh)
2000-01	2764	173	810.12	1556.37	18058.02	19708.74	1997	650.75
2005-06	4127	249	2236.30	10844.69	50670.97	51883.10	4127	133.67
2007-08	5979	273	3730.73	9506.67	26437.42	26976.78	5904	176.40
2008-09	6169	286	3548.55	8896.28	20092.93	24551.00	4006	189.41
2009-10	5396	250	691.63	1174.92	26243.10	31097.34	3627	275.30
2010-11	5500	290	405.81	596.07	29811.13	35593.35	3865	198.65
2011-12	5544	302	1095.88	1387.49	28196.83	28164.83	3208	523.31
2012-13	5969	306	979.83	630.61	23921.08	25549.13	3302	152.47
2013-14	5925	314	1173.18	670.29	26905.80	29090.21	3214	171.24
2014-15	6090	322	1030.23	633.66	18761.57	21562.50	3090	199.94
2015-16	6080	325	1106.47	673.19	16869.37	20878.40	3212	158.53
2016-17	6249	332	1131.75	678.51	18784.90	18500.64	3327	162.41

Recent Trends in Dairy Business:

There has been a steady increase in the milk production of Haryana during the years 2017-18 & 2018-19. This in turn can be attributed to various factors, one of which is the change in milch bovine population in the state between the 19th and 20th livestock census. Now in the perspective of milk production in Haryana it is to say that the total production of the milk in the year 1979-80 was 19.50 lakhs tonnes which increased to 117 lakhs tonnes in 2019-20. Meanwhile, the overall annual growth rate of milk production in the state of Haryana is 9.3 % which ranks at 3rd number. Actually it contributes 5.7% of the total milk production in India. While the number of milch buffaloes was much more than the crossbred and the indigenous milch. According to the latest data there has been a significant decline in the number of milch buffaloes whereas the corresponding number of crossbred and the indigenous milch has increased significantly. This has resulted in a steady increase in the per capita milk availability in the state, which has been steadily increasing since the 6th five year plan.

Problems & Challenges of Dairy Business:

The demand for milk and its derivatives is swiftly rising in India due to several factors, including urbanisation, evolving consumer preferences for convenience, and a transition from loose to packaged dairy products. Currently, the dairy sector is experiencing an annual growth rate of roughly 10-12%. Looking ahead, given projected population growth and increasing urbanisation over the next four decades, it is estimated that India will require approximately 600 million tonnes of milk annually to meet the burgeoning demand for dairy products. This necessitates an annual growth rate in India's milk production of around 3.2% for the next 40 years.

A working paper from NITI Aayog on demand and supply projections up to 2033 highlights that the positive growth in the bovine population has significantly contributed to the increase in milk production in the country. Nevertheless, the livestock sector confronts several challenges as under:

- Low productivity.
- Chronic shortages of feed and fodder.
- Substantial population of unproductive cattle.
- The absence of an effective extension system.
- Inadequate healthcare, immunisation, and hygiene programs.
- Inadequate cold chain logistics.
- An unorganised marketing system.

Another significant concern in dairy development pertains to the disparity between the availability of dry fodder and feed, which has witnessed substantial growth in recent years, and the almost negligible expansion of green forages. Currently, there is a deficit of around 10% in dry fodder, 33% in concentrates, and 35% in green fodder. These deficits are anticipated to widen to 11%, 35%, and 45%, respectively, by the year 2020-21. This situation is likely to occur as a result of the shift from cultivating cereals to commercial crops, which has a direct impact on the availability of crop residues.

The most critical concern here is the stagnant supply of green fodder, primarily due to inadequate production of fodder seeds, weak market connections, and an alarmingly low seed replacement rate. Another pressing issue is the absence of comprehensive data regarding the production and availability of different types of green fodder. Unlike food crops, the agriculture ministry does not gather information on fodder crops, creating a significant obstacle to improving productivity. According to the Indian Grassland and Fodder Research Institute (IGFRI) in its 2030 vision document, there is currently no entity responsible for providing accurate data on fodder crop production, productivity, the adoption of improved varieties, and the utilisation of technology for effective policy development and research planning.

The Department of Animal Husbandry, in a recent advisory to states, acknowledged the rapid growth of the livestock population alongside the gradual reduction of grazing lands, caused by land pressures from both agricultural and non-agricultural activities. The advisory noted that many grazing lands have either degraded or been encroached upon, severely limiting their availability. Fodder cultivation occupies a mere 4% of the total cropping area, a figure that has remained unchanged for the past four decades. The primary concern lies in effectively managing the major feeding sources for livestock, including pasture lands, crop residues, edible weeds, grasses, cultivated fodder, tree leaves, and agro-industrial by-products. Fodder crops are cultivated on just 4.9% of the country's gross cropped area, a statistic that has remained static for a quarter-century. Consequently, the government must develop a contingency plan to boost fodder production and ensure sustained growth in milk production in the coming decades.

Furthermore, there have been reports of shortages in concentrate feeds. The feed industry typically relies on maize, soybean, wheat, rice bran, and similar commodities. Niti Aayog has recommended procuring non-premium quality food grains from states with weak procurement infrastructure. Additionally, it was suggested that implementing a "Price Deficiency Payment" program for farmers cultivating maize, soybean, etc., could enhance the availability of raw materials for the feed industry. This measure has the potential to meet the requirements of concentrate feeds for cattle, poultry, pigs, and inland fisheries, possibly attracting feed manufacturing units to regions traditionally marked by weak procurement. The central objective should revolve around closing the gap between the demand for and the supply of green, dry, and livestock feed. This can be accomplished by:

- Increasing livestock productivity.
- Stimulating the commercial cultivation of fodder.
- Development of dairy infrastructure in rural areas.
- Structural transformation of the Cooperative societies.
- Incentives to progressive farmers.
- Training for dairy farming business.
- Awareness programs for the milk producers.
- Forming a proper milk policy.

Conclusion:

Thus, the challenge of increasing procurement, it is essential to reinvigorate non-operational DCSs and expand women's participation. Blaming established market players like Amul won't provide a solution. The plateauing of the overall number of societies and the steady decline in functional ones are worrisome trends. On the contrary, the top priority is to breathe new life into non-functional DCSs. This can be achieved by optimising input delivery (such as feeding, breeding, and fodder development), ensuring timely payments to producers, offering training to new staff, and keeping political influence at bay. These measures will not only boost procurement from areas served by non-functional DCSs but also promote women's involvement, leading to social and economic progress. The dwindling real value of owned funds, working capital, and the quantity of milk and dairy products procured and sold over time have eroded the profitability of these societies. To strengthen profitability, it is crucial to establish consistent payment practices and thoroughly investigate the factors contributing to financial stress in these societies. Today it is an urgent need to implement awareness programs and special training arrangements for the farmers who have progressive approach to increase milk production. It is hoped that these efforts would bring a drastic change in the dairy farming business.

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