

Entrepreneurial Development: A Case Study on “DEVBHOG” Chhattisgarh Sahakari Dugdh Utpadak Sangh Ltd Dairy Plant, Bilaspur

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ABSTRACT

India is endowed with a largest livestock population in the world having a total bovine population of 304 million compared to the world's total bovine population of 1400 million. It accounts for 57.3% of the world's buffalo population and 14.7% of the cattle population. As per 18th Livestock Census, 2007 the country has 33.06 million cross bred cattle, 199.07 million indigenous cattle and 105.34 million buffaloes. The cross bred cattle are predominant in Tamil Nadu, Maharashtra, West Bengal, Karnataka, Andhra Pradesh, Uttar Pradesh and Bihar, While buffaloes are very common in Uttar Pradesh, Rajasthan, Andhra Pradesh, Madhya Pradesh, Gujarat, Punjab, Haryana and Bihar. Development & expansion of such other allied activities as may be conducive for the promotion of the dairy industry, improvement in protection of animals and socio-economic betterment of those engaged in milk production. This also includes Organizing and providing technical inputs, Erection of Dairy, chilling plant, cattle feed plants for unions, Study of problems of mutual interest of the Federation and milk unions, Imparting training and orientation to dairy co-operative members, Advising, assisting and guiding milk unions, Undertaking audit and accounts supervision and also Encouraging fodder production etc.

Key words: Devbhog, milk products, CG,

I INTRODUCTION

India is endowed with a largest livestock population in the world having a total bovine population of 304 million compared to the world's total bovine population of 1400 million. It accounts for 57.3% of the world's buffalo population and 14.7% of the cattle population. As per 18th Livestock Census, 2007 the country has 33.06 million cross bred cattle, 199.07 million indigenous cattle and 105.34 million buffaloes. The cross bred cattle are predominant in Tamil Nadu, Maharashtra, West Bengal, Karnataka, Andhra Pradesh, Uttar Pradesh and Bihar, While buffaloes are very common in Uttar Pradesh, Rajasthan, Andhra Pradesh, Madhya Pradesh, Gujarat, Punjab, Haryana and Bihar. There has been a major improvement in milk production, which increased from 17 million tonnes in 1951 to 127.9 million tonnes during 2011-12. Uttar Pradesh, Punjab, Madhya Pradesh, Rajasthan, Maharashtra, Gujarat, Andhra Pradesh, Haryana, Tamil Nadu and Bihar contributed to the extent of 80 percent of the total milk production in the country. The per capita availability of the milk has reached a level of 290 grams per day during the year 2011-12, which is more than the world average of 284 grams per day. Most of the milk in the country is produced by small, marginal farmers and landless laborers. Recognizing the importance of the sector, several key initiatives were taken by the Govt. in the past ranging from Operation Flood (OF) programme, Intensive Dairy Development Programme (IDDP), Strengthening infrastructure for Clean Milk Production, Assistance to Cooperatives, Venture

Capital Fund (VCF) for Dairy, Dairy Entrepreneurship Development Scheme etc. In order to meet the rapidly growing demand for milk with a focus to improve milch animal productivity and increase milk production, the Government has approved National Dairy Plan Phase-I (NDP-I) in February, 2012 with a total investment of about Rs.2242 crore to be implemented from 2011-12 to 2016-17. NDP-I will help to meet the projected national demand of 150 million tons of milk by 2016-17 from domestic production through productivity enhancement, strengthening and expanding village level infrastructure for milk procurement and provide producers with greater access to markets. NDP-I would focus on NABARD 14 major milk producing States - Uttar Pradesh, Punjab, Haryana, Gujarat, Rajasthan, Madhya Pradesh, Bihar, West Bengal, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Orissa and Kerala which account for over 90% of the country's milk production. Coverage of NDP- I will however be across the country in terms of benefits accruing from the scheme. Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India is also implementing “National Programme on Bovine Breeding & Dairy Development (NPBBDD) from 2013-14 to 2016-17 through the State Implementing Agencies / End Implementing Agencies / Participating Agencies (Source: <http://dahd.in>)

II OBJECTIVES & METHODOLOGY

(a) Objectives of Study

- (i) To productive pattern of CSCDF
- (ii) To manufacture various milk products as per market demand
- (iii) To provide quality products at affordable prices to the consumers.

(b) Research Methodology

Primary as well as secondary data has been taken in to consideration for this research work

III “DEVBHOG”, CHHATTISGARH SAHAKARI DUGDH UTPADAK SANGH LTD, DAIRY PLANT, BILASPUR C.G.

(a) Productive pattern of CSCDF

Chhattisgarh State Cooperative Dairy Federation is one of the largest Cooperative Dairy Federation in Chhattisgarh, owned and managed by milk producers of Chhattisgarh State. The State Dairy Federation was formed in the year 2013 which was previously known as Raipur Dugdh Sangh (a part of MPCDF of undivided Madhya Pradesh). There after its business was taken over by Federation to set up TWO TIER SYSTEM and soon planning for THREE TIRE SYSTEM based on Anand Pattern.

Chhattisgarh is one of the most progressive states of Republic of India. In the domain of dairy development it is well known for its productive milch cattle. The economy of the state is predominantly based on agriculture. People rear and breed cattle as a subsidiary occupation. CGCDF has over 82000 lts per day milk producers in over 665 Dairy Cooperative Societies at village level, functioning under 27 District Cooperative Milk Unions in Chhattisgarh State.

The mission of the Federation is to usher rural prosperity through dairy development. During the last four decades of Cooperative Dairy Development by CGCDF, the dairy industry in Chhattisgarh State has progressed from a situation of milk-scarcity to that of milk-surplus. Our Motto is to provide the quality milk and milk products, thereby DEVBHOG - the upfront brand achieved an unmatched in quality and made available to consumers at most competitive prices.

(i) Goal

- Development & expansion of such other allied activities as may be conducive for the promotion of the dairy industry, improvement in protection of animals and socio-economic betterment of those engaged in milk production.

- Organize and provide technical inputs.
- Erection of Dairy, chilling plant, cattle feed plants for unions.
- Study of problems of mutual interest of the Federation and milk unions.
- Impart training and orientation to dairy cooperative members.
- Advice, assist and guide milk unions.
- Undertake audit and accounts supervision.
- Encourage fodder production etc.
- To channelize marketable surplus milk from the rural areas to urban deficit areas and maximize the returns to producer and provide quality milk and milk products to the consumers.
- To carryout activities for promoting Production, Procurement, Processing and Marketing of milk and milk products for economic development of the farming community.
- To provide stable and reliable market and secure price to the dairy farmers for their produce.

(ii) Vision and Mission

- Bring growth and rejuvenation to dairy industry
- Bring revenue to villages of the state under cooperative fold
- Increase the dairy productivity and rural employment
- Increase socio-economic scale in the rural part of the state
- Bring a new revolution in dairy industry with innovation
- Ensure the prosperity of milk producer and preserving their interest
- Promote the milk and milk products to society
- Bring sustainability in dairy industry
- Create adequate marketing infrastructure for providing quality milk and milk products to urban consumers

IV DEOBHOG MILK CHHATTISGARH MILK FACTORY, KONI, BILASPUR

During the pre – independence, public and private agencies dominated the dairy industry. The government of India took some key steps to improve the quality of milch animals and their productivity through the key village scheme launched as part of the First Five Year Plan (1951 – 56) and the Intensive Cattle Development Plan launched under the Third Five Year Plan. During 1960s various state government tried different strategies to develop dairy, including establishing dairies run by their own departments. According to

census of India 2001, approximately 80 percent population of Chhattisgarh State's resides in rural parts and mainly dependent on agriculture and allied activities for livelihood. The state thus accords high priority to agriculture and rural progress. Since, state has good number of cattle population dairying could emerge as an important source of income and employment for the rural area. In this background, for strengthening dairy development programmes through enhanced collaboration with milk co - operatives

“Chhattisgarh State Cooperative Dairy Federation” (CSCDF) was established with main task of compiling milk, milk plant operation and marketing of dairy products. CSCDF conducts district – wise cooperative societies which are engaged in proper processing of collected milk like Chilling and Pasteurization and processing for preparation of various products like standard milk, toned milk, double toned milk, ghee, butter, shreekhand, sweet curd, buttermilk, sweet milk etc. CSCDF sales these milk products with brand name of ‘Devbhog’.

The below chart depicts the three level district-wise distribution of milk collection and processing in the state.

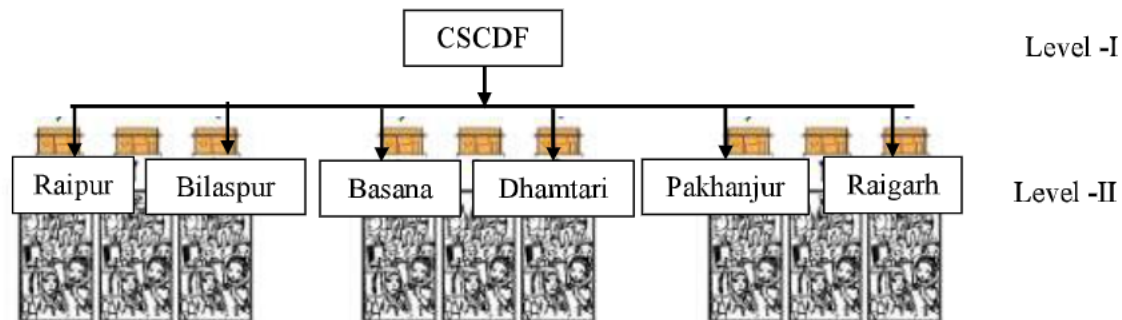


Fig. 1 CSCDF Structure

The processing sub system Milk cooperative Societies are engaged in proper processing of collected milk like Chilling and pasteurization and processing for preparation of various products like standard milk, toned milk, double toned milk, ghee,

etc. The few private dairies are also doing processing of the milk. However, the work efficiency of the existing milk plants of cooperative is not satisfactory. The below table depicts the working efficiency of the milk plants in the state.

Table 1
Working efficiency of existing milk plant in Chhattisgarh

District	Installed Capacity	Working Efficiency
Raipur	1 Lakh L/Day	50%
Bilaspur	10000/ Day	70%
Basna	2000/day	60%
Dhamtari	2000/day	50%
Rajnandgaon	1000/day	30%

(Source: Discussion with Raipur milk co-operative society)
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The demand is more for fresh milk than of the processed milk in the state. Hence, the traditional milk supply is predominantly seen in the state. The fresh milk collected by the milk traders (Dhoodiya) are being supplied to hotels and households in urban area without any processing. Demands of dairy products are increasing day by day hence there is urgent need for increasing collection of milk and running all the existing plants with their full efficiency. The major observation on this front are,

- (a) Very low processing
- (b) Liquid fresh milk is consumer preference

- (c) Traditional processing in sweets and milk beverages preferred
- (d) Small volume makes processing economically unviable

The objective was to meet the demand for milk and milk products in big cities through improvement in milk collection, processing and distribution. In this regard Bilaspur Devbhog milk federation situated in Koni collect fresh milk by the milk traders thereafter it is properly processed like chilling and pasteurization and dealing out for preparation of various products and distributed to Bilaspur region.

V REGIONAL MILK FEDERATION

This regional milk federation is conducted with following objectives:

- (a) Formation and revitalization of milk cooperatives and supervision work.
- (b) Installation of electronic equipments in the milk cooperatives.
- (c) Collection of fresh milk from milk traders.
- (d) Chilling and Pasteurization of collected milk.
- (e) Production of milk products at reasonable prices.
- (f) Maintain food safety standards with quality assurance.
- (g) Spread Devbhog milk and milk products in various parts of the state through distributors to retail chains.
- (h) Exploring new areas and new markets.
- (i) Efforts for exporting Devbhog products.
- (j) Implementation of state and central government schemes.

Devbhog Milk Centre Koni, Bilaspur is a milk collection centre. It was established in 1985. The total number of employees are 100 of these 15 are permanent workers and the rest are daily wages. Milk is collected from Masturi, Ratanpur, Mungeli and other villages. Milk Cooperative Societies are engaged in proper processing of collected milk like chilling and pasteurization and processing for preparation of various products. Once the milk is produced by the producers it reaches to the consumers through the cooperative dairy unions. The primary milk producers at the village are its members who sell their milk to the committee.

Milk is produced at villages by individual farmers and sold to village dairy committee. The milk collected at various village dairy committees is then transported to the Devbhog Milk Centre Koni, Bilaspur. The milk so collected is processed and other value added milk products are prepared, packed and marketed. These milk and milk products are marketed through wholesalers and retailers who have their own margins.

The number of working Samities in Bilaspur district is 13 and member 641 of the Samities. Milk is first received in a dump tank from the road milk tankers. It is then heated at 72.5 °C for 16 seconds and then immediately chilled in a chilling unit to 4 °C. Chilled milk is then pasteurized in a milk pasteurizer and cream is separated from milk by the milk separator to get skimmed milk. Milk is standardized depending on the requirement of toned milk, double toned milk, skimmed milk or full cream milk. The separated milk is further processed to manufacture ghee and butter. The pasteurized skimmed milk, toned milk or double

toned milk is sent for packing in pouches in the packing machine for various capacities like ½ kg, 1 kg pouches. The centre works for 24 hours.

The milk products which are manufactured in Bilaspur Milk Centre Koni are – Milk, Meetha Dahi, Lassi, Butter milk, ghee, sweet milk, shreekhand and paneer. According to Diet specialists, this milk is good for children, old age people and also for persons suffering from heart problem. Devbhog milk is available at various places in the city.

VI PRODUCTS OF DEVBHOG

(a) Devbhog Milk

Product Details are as follows-

- (i) Pasteurized Standard milk
- (ii) Contains 4.5% Fat and 8.5% Solid Not Fat (SNF).
- (iii) It has high nutritive value with body building proteins, bone forming minerals and vitamins.
- (iv) Energy Value - 72 kcal / 100 Gram

(b) Devbhog Peda

- (i) It is to be obtained from fresh milk by desiccating.
- (ii) It holds high nutritive values and contains low added sugar.
- (iii) Most palatable Fat - 20.0%. SNF - 42.0%, Protein - 14, Carbohydrates inclusive of Sugar – 45 Energy Value - 416 kcal / 100 Gram
- (iv) Shelf life is 7 days when stored under refrigeration

(c) Shri Khand

- (i) It is Semi-soft, sweetish-sour, whole milk product prepared by traditional method from lactic fermented curd
- (ii) The chukka is mixed with required amount of sugar and natural cardamom
- (iii) Shelf life is 3 days when stored under refrigeration

(d) Flavoured Milk

- (i) It is Double toned, homogenized, bacteria free, sterilized flavored milk
- (ii) Free from micro organism harmful to consumer health. Under packed conditions does not need refrigeration.
- (iii) No formation of cream layer due to homogenization.
- (iv) Permitted fruit flavoures / essences together with permitted (matching) colors and sugar are used
- (v) Fat - 1.6%, SNF - 9% & Sugar 8%
- (vi) Calorific Value - 75 KCal / 100 Gram
- (vii) Available in 200 ml glass bottles
- (viii) It is treated to be best before 90 days

(e) Curd**Following are the important features**

- (i) Obtained from pasteurized, homogenized milk by souring harmless starter culture.
- (ii) As a part of food, it increases nutritive values and contains no added sugar
- (iii) Most palatable, easily digestible.
- (iv) Therapeutic value in the stomach and during intestinal disorder.
- (v) Fat - 3.0%, SNF - 8.5%, Total Solid - 11.5%
- (vi) Energy Value - 68 kcal / 100 Gram
- (vii) Shelf life is 2 days when stored under refrigeration

(f) Ghee**Following are the important features**

- (i) Richest source of milk fat, prepared from direct heating of milk cream usually obtained by normal separation of milk.
- (ii) It has fine Grains, and good keeping qualities.
- (iii) Good source of Vitamins A,D,E & K
- (iv) FAT - 99.7%
- (v) Energy Value - 897 kcal / 100 Gram
- (vi) Best before 180 days in refill pack and 180 days in Bulk pack available in 5 Lts /15 Kgs.

(g) Paneer

- (i) It is Obtained by acid coagulation of high quality fresh milk.
- (ii) Marble white in appearance having slightly spongy body
- (iii) Used for making varieties of meal.
- (iv) Fat - 20% (Min.), Total Solid - 40% (Min.)
- (v) Calorific Value - 331 Kcal / 100 Gram.
- (vi) Shelf life is 7 days when stored under refrigeration

(h) Lassi

- (i) A delicious dairy product prepared from fresh whole milk contains sugar and permitted flavoures.
- (ii) It contains appreciable amount of milk protein and an excellent beverage for quenching thirst.
- (iii) Fat - 3.5%, Total Solids - 30%, Sugar - 23.5%
- (iv) Calorific Value - 146 Kcal / 100 Gram
- (v) It is available in 200 ml plastic glasses
- (vi) Shelf life is 3 days when stored under refrigeration

VII FINDINGS & SUGGESTIONS**(a) Marketing strategy for consumer satisfaction**

The Marketing activities at the Milk Unions/CGCDF and suggestions can be summarized as follows:-

- (i) Marketing of different types of milk in different pack sizes (Standard Milk, Toned Milk, Double Toned Milk etc.) under the brand name "Devbhog".
- (ii) Marketing of Indigenous fresh milk products (Shreekhand, Sweet Curd, Lassi, Peda, Chakka, Mawa, Paneer etc.) under the brand name "Devbhog" within the state.
- (iii) Sales, Promotion and advertising
- (iv) Sale of surplus milk to the other cooperative Milk Unions and to other Cooperative Organizations / Milk Unions outside the state
- (v) Marketing of Ghee under the brand name "Devbhog" by CGCDF
- (vi) Consumer Awareness about Pasteurization of milk, "Quality" and "Hygiene" aspects of "Devbhog" milk and milk products.
- (vii) Distribution System for liquid milk and milk products in the towns
- (viii) Tapping new areas and townships for sales coverage
- (ix) Organising campaigns against adulterated milk

(b) Plant Operation

The plant operation activities start with receiving of milk at the Chilling Centre / Dairy Dock and concluded with dispatch of milk & milk products for distribution. The fundamental activities of plant operations include:

- (i) Reception of milk at Chilling Centre / Dairy Dock
- (ii) Milk Testing
- (iii) Milk Pasteurization
- (iv) Milk Chilling
- (v) Milk Packing
- (vi) Manufacturing & packing of main products like Ghee, White Butter & Table Butter.
- (vii) Manufacturing & packing of indigenous products like Shrikhand, Peda, Salted & Spice Butter Milk, Flavoured Milk etc.
- (viii) Storage of products

(c) Field Operation

The Field Operation activities commence with societies located in rural areas to milk delivery to the dairy docks/chilling centre. The fundamental activities of Field Operation and suggestions include:

- (i) Organization of Dairy Co-operative Societies.
- (ii) Organizing capacity building and training programme for milk producer farmers in formation of co-operatives create awareness to co-operative principles & milk production enhancement techniques etc.
- (iii) Procurement and transportation of milk.

- (iv) Deliver technical input services to the milk producer farmers and enhance the production by Animal Health Care (First Aid & Emergency), Artificial Insemination, Balanced cattle feed and improved fodder seed etc.
- (v) Preference to economically weaker sections, small & marginal farmers, scheduled caste / tribe categories in various activities.

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