



State in Livelihood Promotion

Case Study of Nainital District Milk Union

Manab Chakraborty
Somnath Ghosh

Indian Institute of Management Kashipur
Working Paper No 1/2014
November 2014

State in Livelihood Promotion

Case Study of Nainital District Milk Union

Manab Chakraborty¹ and Somnath Ghosh²

Abstract	3
The Problem.....	4
Research approach	4
Uniqueness of the Case.....	6
Dairy Industry in India.....	6
Organized Milk Cooperatives in Uttarakhand	8
Nainital District Milk Union.....	10
Management Structure of DUSS	11
Operational Performance	12
Financial Highlights.....	13
Marketing Strategies	13
Extension Services	16
Bureaucratic Control.....	16
Political Interference.....	17
Conclusions.....	18
Reference	19
Annexure 1 Persons Met or Interviewed	21

¹ Senior Fellow, Indian Institute of Management Kashipur, Uttarakhand, India. Email: manab.chakraborty@iimkashipur.ac.in

² Professor & Dean (Academics), Indian Institute of Management, Kashipur, Uttarakhand, India.

Abstract

Milk cooperatives organized under State patronage has contributed to radical transformation in Gujarat, and some other pockets in India. Uttarakhand State imbibed on Gujarat model in Nainital district. However, the success of Nainital District Milk Union in terms of generating decent profit for the member producers has met limited success. Many factors constrain the work of District Milk Union: notable among them is bureaucratic and political interference which works cross purpose to the interest of enterprise and member producers.

The Problem

With the advent of economic liberalization, there is fresh debate on the role and function of the cooperatives. Though Amul is a successful example of vertically integrated dairy company, its' replication by various State governments has met mixed success. Concerns have been expressed about growing State interventions in the management and control of dairy cooperatives, the poor returns on capital invested, and inability to compete with the private organized dairies. This case study on Nainital Milk Union (official name in Hindi Nainital Dugdh Utpadak Sahakari Sangh Ltd or NDUSS in short), which is six decade old dairy unit in Uttarakhand, we examine the factors affecting the performance of the Milk Union.

Research approach

Milk cooperatives are an attempt to integrate the supply chain in agribusiness (Porter 1990; Gereffi & Korzeniewicz, 1994) by fostering collective action at the level of producers (Ostrom, 1990; Wade, 1987) aided by the State (Candler and Kumar 1998). It was thought that cooperative form of organisation would create a competitive advantage, and necessary linkages for milk processing and value addition.

The role of the State is considered in organising large number of producers so that they can aggregate and bargain better prices for their produce (Singh and Singh 1988). The rationale for extensive State intervention lies in the belief that only a benevolent bureaucracy can energise the rural poor and introduce new technology and management. The objective of the Indian State was straddled both welfare concerns and also a desire to stimulate economic prosperity in rural hinterland. Intermediary process related to trust and social capital formation, information sharing and building-up of bargaining power was central to broadening stakeholder involvement in management, organisation and finance.

Launched in 1970 by National Dairy Development Board, Operation Flood (1970-1996) catalysed dairy farmers direct their own development, placing control of the resources they create in their own hands. Operation Flood encouraged capital accumulation within the milk-food sector but also called for structural coordination of the sector. The integration of the value chain started at the farm level, downstream industries which are involved in processing, marketing and retailing, and policy circles which regulated the licensing of milk plants, formation of cooperatives, and channelling of government subsidies and concessional loans to the cooperative sector.

Sixty years on, we examine how well vertical integration of dairy business has worked and succeeded in improving aggregate value and options for modifying the distribution of

rents amongst stakeholders. We examine how village cooperatives interact in national production process underpinned by Operation Flood and Amul pattern of milk subsector development, the governance structure that operates along milk chains and how power is exercised by Aanchal bureaucracy in tandem with State authorities – not just in terms of barriers to entry, but also in terms of organisational control of subsidiary units and supply chain management.

The research approach is based on a detailed study of the interactions between various levels of cooperative structure, supply chain integration and the pattern of governance. The village cooperatives, being an assembly of small and marginal farmers, appreciate most access to organised marketing, availability of credit, inputs and extension services. If the internal governance of village and district milk union adheres to transparency, accountability, and purposeful communication, members respond positively. Milk cooperatives, enjoying protection of the State, virtually stopped formation of rival milk cooperatives, and also to a limited extent delayed the entry of private players through licencing and permit regimes. However, with the entry of large number of private players and cross state marketing of milk products, district milk unions no longer enjoy monopolistic position in the market.

Key Success Factors of Cooperatives



Primary data for the study were collected through personal interviews of the dairy farmers, cooperative employees, and other stakeholders about the status of dairy farmers' milk production, consumption pattern, problems and opportunities with UCDFL association, milk procurement pattern by other commercial dairies, frequency of procurement and price, etc. Secondary data on milk cooperatives for studying the procurement and marketing pattern were culled from magazines, Internet and from official records of the veterinary department and Dairy Research Development Authority to get estimates of livestock population.

Uniqueness of the Case

Cooperative led dairy development has been the corner stone of India's rural development action. NDUSS, founded in 1949, is one of the oldest of its' kind. Within the UCDFL network, NDUSS accounts for 14% of number of VDCs, 18% of total membership, 41% of milk procurement, and 24% of installed processing capacity in the State. It is one of the few UCDFL units, which can boast of profit over two decades. Yet as our study reveals, NDUSS is beset with problems of low profitability, rising costs, and loss of member participation in governance.

Dairy Industry in India

India's emergence as the largest producer of milk in the world is no mean achievement when we consider that dairy is dominated by small and marginal land-holding farmers and also by landless laborers who in aggregate own 70% of the national milch animal herd. Usually one or two milch animals enable the farmers to generate sufficient income to break the vicious subsistence agricultural-debt cycle. The farmers keep dairy animals in proportion to their free crop and available family labor with little or no purchased inputs and a minimum of marketed outputs.

India's milk customers are primarily urban. Their demand is primarily for good quality milk and indigenous milk products such as ghee, butter, and curd.

Table 1: Dairy Product Mix

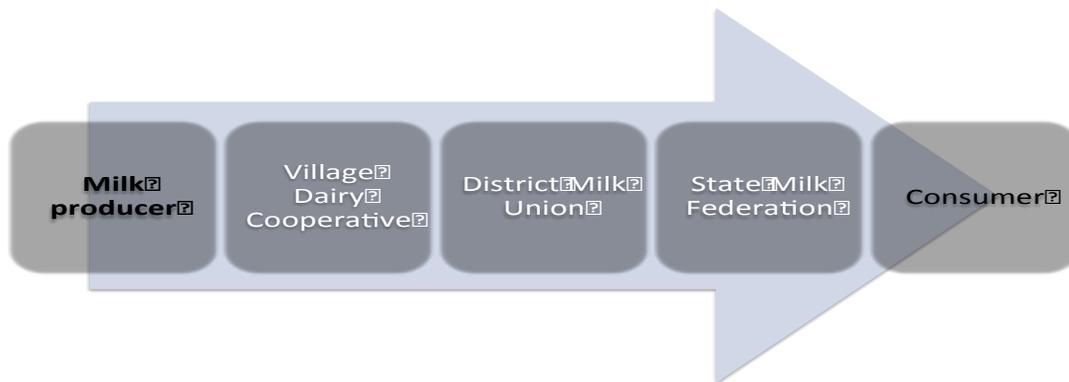
Products	%
Fluid Milk	46.0%
Ghee	27.5%
Butter	6.5%
Curd	7.0%
Ricotta Cheese Khoa (Partially dehydrated condensed milk)	6.5%
Milk Powders, including infant milk formula (IMF)	3.5%
Paneer and chena (Cottage cheese)	2.5%
Others including cream ice cream	1.0%

Source:

The dairy cooperative movement has been central to the development of dairying in India. The inspiration for this movement was the success of the Khaira District Cooperative Milk Producers' Union -- better known as *Amul*. Founded in 1946 in response to the exploitation of district's dairy farmers,

The Amul experience informed and shaped Operation Flood (1970-1996) steered by the National Dairy Development Board (NDDB). Operation Flood turned dairy farming into a significant self-sustainable rural employment generator. Operation Flood has created a national milk grid stringing millions of atomized milk producers throughout India with consumers in over 700 towns and cities, reducing seasonal and regional price variations while ensuring that the producer gets a major share of the price consumers pay, by cutting out malpractices of middlemen. By reducing exploitation, it has helped dairy farmers direct their own development, placing control of the resources they create in their own hands.

Dairy Coop Structure



The Indian dairy movement has adopted a three-tiered cooperative structure. The structure called “Amul Model” or “Anand Patter” of dairy cooperatives was evolved at Amul in Gujarat and thereafter replicated all over the country under the Operation Flood programme. This structure consists of a dairy cooperative society at the village level affiliated to a milk union at the district level which in turn is federated into a milk federation at the state level.

The main functions of the VDCs are:

- Collection of surplus milk from the producers of the village and payment based on quality and quantity,
- Providing support services to the members like veterinary first aid, artificial insemination services, cattle-feed sales, mineral mixture sales, fodder and fodder seed sales, conducting training on animal husbandry and dairying,
- Selling liquid milk for local consumers of the village,
- Supplying milk to the District Milk Union.

The district milk unions are responsible for transport, chilling, and processing of milk and milk products and sell to the consumers. The District Union also organizes for artificial

insemination of animals, mass vaccination and preventive care of animals, and liaison with banks for loans to farmers for purchase of milch animals. The district milk unions are federated at the State level. The Federations facilitate the production, distribution and marketing of milk and milk products under a common brand. Whenever needed, the Federation also deputs its officers to manage district milk unions.

All the three structures share a common vision to increase milk production, augment rural incomes for the members and offer a choice to consumers of a range of milk products at fair prices.



Organized Milk Cooperatives in Uttarakhand

Uttarakhand has a total area of 53,484 km², of which 93% is mountainous and 65% is covered by forest. Subsistence agriculture is the main stay of the population, but yields very little marketable surplus. Hence, livestock development remains an attractive proposition to diversify rural incomes and employment. Practically, every rural household own more than one cattle head, so milk is available throughout the year by rotation.

Table 1. Share of Household Income (%) by Source

Household	Dairying	Crop Husbandry	Others	No. Of milch animals per household
Landless	53.08%	0.0%	46.92%	0.11
Marginal	30.14	46.55	23.30	0.68
Small	29.67	53.75	16.58	1.14
Semi-medium	26.25	58.98	14.76	1.36
Medium	25.33	62.77	11.91	1.68
Large	19.02	71.48	9.50	2.39
All	27.28	55.36	17.36	7.36

Source: Sharma et al 2007

Milk cooperatives are registered under the Uttarakhand Cooperative Societies Act, 2003. Uttarakhand Co-operative Dairy Federation Ltd (UCDF Ltd.) is a apex level state federation of district milk Co-operative unions in the state of Uttarakhand. The UCFDL Ltd is registered under the Uttarakhand state cooperative act in the year 2001. UCFDL markets products of district milk unions under the brand name of “Aanchal” and implements various State sponsored dairy development programmes in the State. Small scale private dairies are its main competitor both at the point of procurement and sale of milk. UCFDL also supervises and supports eleven district milk unions -5 in Kumaon division and 6 in Garhwal division.³ Aanchal runs a cattle feed factory at Rudrapur, US Nagar.

Box 1: Uttarakhand Cooperative Societies Act, 2003

The Act, passed on 21 May 2003 by the Uttarakhand Legislature on 21 May 2003, replaced Uttar Pradesh Cooperative Act 1965. Under the act, societies which aim “. the promotion of the economic interest or their general welfare in accordance with the Cooperative principles” is eligible to be registered. These

Cooperative principles are:

- “(1) Voluntary & open membership;
- (2) Democratic member control;
- (3) Member Economic participation;
- (4) Autonomy & Independence;
- (5) Education, Training & Information;
- (6) Co-operation amongst co-operatives;
- (7) Concern for community.”

The management of every cooperative is vested in Management Committee duly elected by members for a term of five years. The Chief Executive (various referred as Secretary/GM/Managing Director) exercise day-to-day management. Each Society is required to hold Annual General Meeting to present financial accounts for the past year, and budget and work plan for the next year.

³ There are 13 districts in Uttarakhand grouped into two divisions, Kumaon and Garhwal. Kumaon comprise of Almora, Bageswar, Champawat, Nainital, Pithoragar, and US Nagar. The Garhwal division has Dehradun, Haridwar, Tehri Garhwal, Uttarkashi, Chamoli, Pauri Garhal (popular referred as Garhwal) and Rudraprayag. Except for newly created Rudraprayag and Bageswar, Aanchal operates district milk union in all other districts.

Box 2: Assistance Provided to VDCs by Aanchal

Aanchal provides administrative support and guidance to register under Uttarakhand Cooperative Societies Rules 2003.

1. Grant of Rs. 36,700, 12K, and 5300 – total 54,000 on the first three years to assist formation of VDCs
2. Free first aid, vaccination, and deworming of animals owned by members
3. Free training of VDC members in fodder development, hygienic ways of mulching and storing milk, and animal husbandry
4. Supply of balanced cattle feed on fair prices
5. Under Mini Dairy Scheme, arrange bank loan of Rs. 30,000, margin money of Rs. 1500 and grant of Rs. 8580.
6. Provide matching grant of Rs. 10k to women only dairy self help groups

Uttarakhand cooperative sector has only 241,000 liters of milk handling capacity, 40% of which are in Nainital and US Nagar districts of Kumaon division.

Table 2: District Milk Unions in Uttarakhand

Sl	Districts	Processing Capacity lpd	No. of Society Formed	No. Active Societies	No. of Blocks	Year Established
1	Nainital	50,000	512	472	8	1949
2	US Nagar	50,000	565	422	7	1997
3	Pithoragarh	5000	275	185	5	1970
4	Almora	20000	484	205	11	1954
5	Champawat	20000	484	285	11	1998
6	Dehradun	20000	293	249	6	1956
7	Haridwar	30000	287	179	8	2006
8	Pauri Garhwal	30000	296	137	15	1976
9	Tehri Garhwal	10000	200	65	9	1989
10	Uttarkashi	1000	196	65	6	1989
11	Chamoli	5000	283	134	9	1989
	Total	2,41,000	3,875	2,398	95	

Source: UCDF <http://ucdfaanchal.org/index.php?mod=content&page=58>

Nainital District Milk Union

NDUSS is the oldest of all the district milk unions in the State. The Union operates only in Nainital district located in the Kumaon division, and is bounded on the north by the Almora District and on the south by the Udham Singh Nagar District. Haldwani is the largest town in the district. According to the 2011 census, the district has a population of 955,128. The district has a population density of 225 inhabitants per square kilometer. The district enjoys sub-tropical to sub-humid climate. The maximum temperature in the

plain areas range from 42°C to 46°C and the minimum between 1°C and 9°C. The annual normal rainfall in the district varies from 1200 mm to 2647 mm. The average annual rainfall is 1246 mm. The intensity of rainfall generally increases from north to South.

Nainital DUSS commenced operation on 28th October 1948. Initially 7 VDCs contributed 611 liters per day. The initiative for forming the cooperative came from a senior government official Mr. Bhavan Singh Bisht, Superintendent Terai Bhawar in 1948. The NDUSS subsequently formed the VDCs. It may be safely concluded that NDUSS VDCs are creation of a top-down, State directed effort and not through a ground swell of bottom-up cooperative movement of village people.

NDUSS has been in profit since 1992-93. The stated mission of DUSS is “through dairy development continuously improve the economic and social conditions of weaker sections, farmers, laborers, and women. Also, provide high quality milk and milk products to consumers.” (NDUSS Annual Report 2014). In 2013-14 through 475 VDCs on 25 milk routes, NDUSS procured 60,390 kilos of milk, handled 89,500 kilos per day and sold 68,426 liters of milk per day. DUSS also provides high quality cattle feed, AI, emergency medical care for animals and organizes periodic veterinary camps. DUSS has provided to the VDCs, 24 automatic milk collection units, 230 milk testers, 32 milk analyzers and built 118 sheds for handling milk. DUSS also provides interest free loans to farmers, and also facilitates access to subsidized bank loans for the farmers. DUSS is the first milk union to be certified by Indian Standards Bureau for Quality Management System (ISO 9001:2008) and Safety Management System (ISO 22000:2005).

Milk production is affected by seasonal changes. With the onset of monsoon, there is flush of milk in June-September. The dry seasons Jan-March is fraught with problems of reduced fodder and lower milk yield due to summer heat. April-May and October – December are considered normal months for milk availability.

DUSS offers a fixed price to producers throughout the year. Producers therefore prefer to give as much milk possible duly flush season (June-September) and less in lean months (Jan-March).

Management Structure of NDUSS

As per NDUSS byelaws, VDCs are constituent members of District Milk Unions. Their Presidents represent the VDCs. A management committee manages day-to-day business of NDUSS. The 12 members of the management committee are elected/coopted in the following manner:

- 7 members elected by the General Meeting of NDUSS,
- 1 member nominated by the State Government
- 3 members nominated by DUSS in consultation with Aanchal

- Chief executive of DUSS is an ex-officio member of NDUSS

The management committee is elected for a five-year term. The office bearers of management committee are President, Vice President, Secretary and Treasurer. Since 4 of the 12 members of the management committee are unelected, it would seem that democratic functioning of the members are somewhat restricted by the interference of the State and Aanchal bureaucracy.

Operational Performance

Over the last nine years period, number of VDCs and their membership has barely grown over 2% annually indicating that a saturation level has reached. Average milk procurement per VDC has recorded less than 1% increase over the last nine years – collection has remained static around 128 kg/day; on an average a member provided only 2.34 kgs of milk per day, roughly equivalent to Rs. 66 sale per member/day. The NDUSS collects 60k litres/day from members; by reconstituting the milk, it is able to handle 89k kg/day. This shows significant improvement in efficiency in milk handling over the years. Animal feed sales have recorded decline in the next two years, and animal vaccination has stagnated. Farmers are turning to alternate private channels to meet their cattle feed and animal vaccination needs. In 2013, NDUSS had recorded gross sales of Rs. Rs. 103 crores up from Rs. 56 crores in 2009 and Rs. 95 crores in 2012. 76% of revenue was from milk and 18% from milk products –both primarily marketed in urban areas.

Table 3 : Operation Highlights of Nainital DUSS

Operation	2009-10	2011-12	2012-13	2013-14
Cum. No. of VDCs	472	509	511	514
No. of active VDCs	428	453	470	475
Attrition rate	9%	11%	8%	8%
Membership	23550	24275	25595	26005
Membership growth rate %	2%	1%	5%	2%
Milk handling (kg/day)	72157	83862	85942	89400
Milk procurement from VDCs (kg/day)	46208	55453	60443	60930
Avg. milk procurement per VDCs (kg/day)	107.96	122.41	128.6	128.27
Animal feed sale (metric ton)	4267	4833	4783	4352
# Animals Vaccinated	32873	34500	28570	29224

Financial Highlights

NDUSS is not financially viable. Its gross profit margin is 6% and operating profit margin is negative. NDUSS does not make any provision for depreciation for building, plant and machineries, and other fixed assets. The financial losses would significantly increase if depreciation is included in the audited statements. NDUSS survives on government grants. The paid-up capital of members have remained static around Rs. 120 million for the last three years. The members are not inclined to contribute further into DUSS. The return on equity is misleading, as much of NDUSS economic activity is fuelled by donated equity.

Table 4: Key Financial Ratios

	2008-09	2009-10	2010-11	2011-12	2012-13
Liquidity Measurement Ratios					
Current Ratio	100%	99%	98%	98%	101%
Quick Ratio	166%	166%	161%	162%	161%
Profitability Indicator Ratios					
Gross Profit Margin Analysis	5%	6%	6%	6%	6%
Operating Profit Margin	-0.8%	-0.5%	-0.4%	-0.5%	-0.2%
Return On Assets	1.2%	1.3%	1.2%	1.1%	1.2%
Return On Equity	14%	14%	14%	14%	14%

Marketing Strategies

It has been found that existing players use four channels linking producers with consumers in operation in Nainital. Table 5 enumerates the points for comparing the strategies of different players. The different points taken for comparison were both back-end and front-end related. The points were procurement, transportation, timings of procurement, middlemen involved, margin of agents, point of sale, target customers, mode of payment to producers, etc. The first is trader (*Dudhia*) who collects milk from household and sells them to urban consumers or small dairies, milk product makers, restaurants and tea shops. The *Dudhias* most sell unpasteurised raw milk. The small dairies sell raw, unpasteurised milk, and also curd, paneer, and khoa (Channel II). The third and fourth channels are dairies which has integrated backward and forward integration. The organised dairies operate across the value chain which includes collection of milk, pasteurisation, conversion into value added milk products, distribution, and retailing through privately run retail outlets. These include Nainital milk union of Aanchal in the cooperative sector (Aanchal) and Gopaljee, a private sector player which collects milk from Nainital milkshed, processes in its plant in Bulandsahar and retails milk and milk products in Nainital and other places.

Table 5: Comparison of Marketing Strategies of Organized and Unorganized Players

Activity	Organized		Unorganized	
	Aanchal	Private large dairies	Dudhia	Pvt. dairies
Procurement	Penetration in villages thru VDC	Penetration thru private collectors	Collection from households	Collection from Dudhias and few households
Transportation	Contractor Vans	Vans	Bikes	Bikes
Processing time	Early Morning	Early Morning	Morning/ Evening	Morning
Sales channel	Agents	Agents	Direct	Direct
Margin for agents	Low	High	NA	NA
Point of sale	Outlets	Outlets	Doorstep	Shop
Customers	Low and Middle class, institutions, restaurants	Urban quality conscious consumers	Salaried classes, tea stalls	Working classes
Payment terms	Cash	Cash	Monthly	Cash/Monthly
Packaging	Minimalist	Colored and attractive	Loose	Loose
Positioning	Pasteurization, Year round of availability, Govt. certification	Pasteurization, Price, taste, quality	Convenience	“Neighborhood, trusted shop”

In a study of 50 farmers in Almora and Nainital, Sharma et al (2007) found that farmers prefer to supply milk to a single channel. Aanchal more than one channel for deriving more benefits. Aanchal is the preferred network for most as farmers could realize higher price for their milk and were also deriving the benefits from different backend services of Aanchal by supplying milk to the Aanchal network. 46% of the farmers exclusively sold to Aanchal, 30% to middlemen, and 14% to local dairy, 6% directly to consumers, and 2% 4% partly to Aanchal, middlemen, and local dairy.

Aanchal scores well on customer trust and price for pasteurized packet milk. This is because of its' association with the government and a general belief that good hygienic standards is maintained by Aanchal. Among organized players, Aanchal has 70% of market share in pasteurized milk; Gopaljee, and Amul corner the rest. Gopaljee's standard milk (4.2% Fat, 8.2 SNF) marketed in 450-liter packet poses serious competition to Aanchal.

Table 6. Price spread in standard milk through different milk marketing channels

Main channels	Producers	Consumers	Spread %
Unorganised channel: Producers→ <i>Dudhia</i> →Consumers (Channel I)	Rs. 28	Rs. 35	25%
Semi-organised channel: Producers→ <i>Dudhia</i> →Small dairy shop Producers→ Consumers (Channel II)	Rs. 29	Rs. 35	20%
Organised cooperative Channel: Village Milk Cooperative → milk union plant → shops → consumer (Channel-III)	Rs. 28.85	Rs. 38	32%
Organised private dairies: Producer → Transporter/collector→ Milk plant → shops → consumer (Channel-IV)	Rs. 32	Rs. 40	25%

DUSS produces and markets milk and milk products and Aanchal brand. DUSS current product mix comprises of:

- Milk: Full cream, Toned milk⁴, Double toned milk, Standard milk, Flavored milk
- Milk Products: Ghee, butter, Paneer, yoghurt, butter milk
- Sweets: Curdle milk fudge (Chena khir)

In the value added category such as ghee, butter, and butter milk that Aanchal is struggling hard to retain its position. Aanchal butter and ghee is priced at par with Amul, but higher than Gopaljee. In other words, Aanchal has no price or quality advantage over its peers Amul or Gopaljee in Uttarakhand market. Aanchal commission for ghee and butter is in the range of 5 ~7%, which is lower than that of competitors and new entrants in the market.

Table 7: Max Retail Price of Selected National Brands of Milk Products

	Pack Size	2011	2014
Butter		Rs	Rs
Amul	500 gms	147	177
Gopaljee	500 gms	150	160
Mother Dairy	500 gms	152	182
Vita	500 gms	134.5	164.5
Aaanchal	500 gms	130	175
Ghee			

⁴ Toned milk is type of reconstituted milk obtained by treating buffalo milk by adding skim milk, powdered skim milk and water to buffalo milk. This process decreases the fat content, increases the quantity of available milk, and 'tones up' the nonfat solids level to the original amount. In India, as per PFA Rules (1976), the single toned milk should contain a minimum of 3% fat and 8.5% SNF and double toned milk should contain a minimum of 1.5% fat and 9.0% SNF.

Brand	Pack Size	Rs	Rs.
Amul	1 ltr	310	390
Gopaljee	1 ltr	320	380
Mother Dairy	962 gm	330	415
Aanchal	1 ltr	320	390

Source: *Indian Dairyman*, December 2011 Issue, Vol 63, No. 12 and May-June 2014 Issue, Vol 66, No. 5 & 6. Aanchal price from National Cooperative Dairy Federation <http://www.indiadairy.coop/prices.html>

Extension Services

The Livestock Extension services include transfer of technology and strengthening of various infrastructure and support services that build capacities and skills of farmers to empower them to adopt good practices in production for improving production while reducing the risk. DUSS extension service rightly aim at assisting farmers through educational process to improve livestock farming methods and techniques, increase production efficiency and income, and enable them to improve their quality of life. The Extension service can enable farmers to identify and analyze their production problems and increase their awareness on the scope for improvement. Unfortunately, neither DUSS nor Uttarakhand Animal Department is primarily involved in treatment and breeding, while extension is limited to delivery of cattle feed and artificial insemination. DUSS uses its procurement staff to nurture cooperatives, which given their orientation towards obtaining higher supply does not address the needs of the farmers. Due to lack of extension skills among DUSS workers and poor credibility of their services, farmers are not receptive.

An important proxy for efficacy of extension service has been artificial insemination of cattle with semen of exotic breeds. According to a report of the Uttarakhand Livestock Development (ULDB 2011, pp 17) in Nainital district as elsewhere in the State, the role of the cooperative sector is less significant. Of the 183 AI Centers, the Department of Animal Husbandry and private sector operated 91 and 69 centers respectively. DUSS only operated 8 AI centers.

Bureaucratic Control

The government as the promoter and protector of milk cooperatives exercise a number of control over the member producers that undermines competitiveness of private sector and also the interest of the farmers:

- a) The Registrar of Cooperatives does not permit more than one milk cooperative registered in a village, thus virtually ruling out competition from new start-ups.
- b) The Milk Commissioner who is also the Managing Director of Aanchal has the power not to grant fresh licenses to milk plants over 5000-liters/day

capacities.

- c) The Registrar of Cooperatives is responsible for convening and organizing elections of all cooperatives, which deprives cooperatives of self-control.
- d) Because of enormous difference in power between Aanchal and VDCs the nature of relationship between the two assumes that of patron and client. Some examples:
 - Aanchal fixes the procurement price of milk and sale price of milk and milk products without any input of VDCs.
 - Aanchal appoints the CEO of District milk unions; this is often a cause of friction between Aanchal and the elected representatives of DUSS.
 - Aanchal and the State Government provide significant amounts of grants to meet fixed and working capital requirements of the district milk unions.
 - VDC members receive cash grants, bank credits, and highly subsidized inputs thanks to Aanchal. Both DUSS and VDCs are utterly dependent on largesse provided by Aanchal, which affects their own autonomy, motivation to innovate, and sense of ownership.

Political Interference

Politicians in Nainital are attracted to cooperatives for three reasons: first to further their agenda of doing public good; second, access a ready network to reach out to voters at times of need; and third, milk the cash cow by dispensing favors to contractors, employees, and their supporter. The election to district milk union, particular that of President, is a matter of great political interest and sees major battles to woo the village dairy cooperatives. A common ploy used by politicians is to align themselves with the Secretary and President of VDCs, who maintains live contact with farmers. These office bearers of VDCs are known to support their patrons at times of State and national election. Another ploy is to champion populist causes particularly that involves grant of more subsidies and grants for the member producers, and waiver of bank loans. Across party lines, politicians love to fight any price rise on milk, which negatively affect the consumers. Another popular ploy is to interfere in the due process to advance the interest of favored in appointment, transfer to lucrative posts, and tendering process for procurement of goods and services from external sources. The sum total effect of political interference is rationale business decision-making becomes difficult. The staff and member producers feel helpless in exercising democratic control and stopping wrong doings that reduces the net worth of their investment. Afraid of high risk, VDCs do not wish to augment their share capital in DUSS. Banks do not lend to dairy farmers afraid that they may not get their money back from farmers who are promised loan waivers by politicians. Most member producers consider dairy cooperative not as their own, but

handiwork of milk bureaucracy and local politicians. At rare times, when President and Chief Executive have worked in tandem, DUSS has excelled in improving internal efficiency, and profits. However, such good spells have not lasted long.

Table 8: SWOT Analysis of NDUSS

<p>Strengths</p> <ul style="list-style-type: none"> ● Government patronage and protection ● High demand for milk in pilgrim towns of Uttarakhand ● Major government investment in animal husbandry ● Goodwill for cooperatives 	<p>Weakness</p> <ul style="list-style-type: none"> ● Extensive interference by Government bureaucracy and local politicians ● Lack of speed in decision making ● Old machinery and low processing capacity (50k lpd)
<p>Threats</p> <ul style="list-style-type: none"> ● Rising prices of coal, electricity, vehicle fuel and packing material ● Decline in demand for ghee ● Industrialization and urbanization is negatively affecting livestock keeping ● Competition from large private dairies 	<p>Opportunities</p> <ul style="list-style-type: none"> ● Growing consciousness about health value of milk and milk products ● Growing demand for sweets made of condensed milk (e.g. bal mithai, peda), and sweet curds ● Renewed interest in animal husbandry as a secondary occupation

Conclusions

NDUSS was not able to ensure higher returns for members as it could not expand in helping producers add more value to their products. Situations of lost opportunities has risen due to a combination of failure to coordinate for larger joint gains and limited producer control of a vertically integrated food system. New research agenda will need to be oriented to developing new institutional arrangements that can lead to optimize welfare of member producers. Research will have an bearing by focusing on the development of marketing and organizational innovations and by promoting more integrative bargaining solutions to the conflicting interests that plague the future milk economy in Uttarakhand.

No doubt NDUSS had significant role in establishing organized dairy in Nainital. It had a dominating share in milk market in Nainital district, but increasing competition undermines this position. Sadly, DUSS dominant market position was ever translated into robust growth in revenue, which is growing around 6% for the last 5 years. Since risk free government securities yield 8% or above, there is little justification to invest in NDUSS from a financial perspective. DUSS is barely able to remain profitable, has low earnings and less opportunities to grow. In the growth share matrix below, it belongs to “Dog” box. With fast rising prices, and aging plant and equipment’s, it is likely see falling profit margins. By all indications, DUSS is operating an "unattractive" industry where profitability is being squeezed for all firms. Without major innovation or inflow of new grants, DUSS would struggle to survive in the future.

Box 3: Growth Share Matrix

Annual rate of market growth (%)	High	Question Mark Earnings: low, unstable, growing Cash flow: negative Strategy: Prioritize	Star Earnings: high stable growing Cash flow: neutral Strategy: Divest
	Low	Dog Earnings: low, unstable Cash flow: neutral or negative Strategy: Kill or move to Star box	Cash Cow Earnings: high stable Cash flow: high stable Strategy: Invest
		Low	High
		Relative Market Share	

The State Government, Aanchal and DUSS management committee may consider bringing about radical changes in management, control and ownership of DUSS. Options for resurrection include:

- Restoring autonomy and independence to DUSS professional management free of bureaucratic control and political interference.
- Sell off NDUSS assets to NDDB, Amul or such other non profit dairy players.
- Seek private dairies to set up large processing plants in Nainital to off take milk from VDCs created by NDUSS.

We suggest that Aanchal and State Government seek expert opinion on restructuring NDUSS.

Reference

Aanchal, 2014. Progress Report, 2014. Uttarakhand Cooperative Dairy Federation Ltd., Haldwani

Pranab Bardhan, 1990. Symposium on the State and Economic Development, Journal of Economic Perspectives, Vol. 4, No. 3 (Summer, 1990) pp 3-7, American Economic Association

W. Candler and N. Kumar, 1998. India: The Dairy Revolution: Impact of Dairy Development in India and the World Bank’s Contribution, The World Bank Operation Evaluation Department (OED), Washington, D.C.: The World Bank.

Gary Gereffi & Miguel Korzeniewicz (Edited), 1994. Commodity Chains and Global Capitalism, ABC-CLIO, USA

M.E. Porter, 1990. The Competitive Advantage of Nations, *Harvard Business Review*, March/April, pp. 73 – 93

Richard J. Sexton, Brooks M. Wilson, and Joyce J. Wann, 1989. “Some Tests of the Economic Theory of Cooperatives: Methodology and Application to Cotton Ginning”. *Western Journal of Agricultural Economics*, Volume 14 (1989), July Issue

M.L. Sharma, Raka Saxena, Tirthankar Mahato and Dipan Das, 2007.

Potential and Prospects of Dairy Business in Uttarakhand: A Case Study of Uttaranchal Cooperative Dairy Federation Limited, Agricultural Economics Research Review, Vol. 20 (Conference Issue) 2007 pp 489-502

Nainital Dugdh Utpadak Sahakari Sangh (NDUSS):

- 2011. Report of 61st Annual General Meeting, Lalkuan, 30th April 2011
- Audited Balance Sheet, Profit and Loss Account of 2008-2013
- Progress Report Year 2014-15, May 2014

Kartar Singh and Virendra P. Singh, 1988. Dairy Development in India : Retrospect and Prospect, Research Paper No. 15, Institute of Rural Management, Nov. 1988

ULDB, 2011. Annual Report, Uttarakhand Livestock Development Board Dehradun

Annexure 1 Persons Met or Interviewed

1. Mr. C.D. Tyagi, GM, Nainital DUSS
2. Mr. Ajay Kweera, Senior Finance Manager, Nainital DUSS, Lalkuan
3. Mr. P.S. Khatri, In-Charge MIS, Nainital DUSS, Lalkuan
4. Mr. Subhash Babu, Procurement Manager, Nainital DUSS, Lalkuan
5. Mr. Sanjay Kirola, President, Nainital DUSS
6. Mr. Khimanand Pandey, Gebuda Dugdh Utpadak Samiti, Dt. Nainital
7. Mr. Keshav Dutt Joshi, Secretary, Mahadevpur Dugdh Utpadak Samiti, Village Kanakpura, Nainital District
8. Mr. Yogendra Pal, In Charge Procurement and Input, Aanchal, Haldwani
9. Mr. Dinesh Ch. Paudyal, MIS, Aanchal, Haldwani
10. Mr. Vijendra Chauhan, Pradan, Banskhera Kala Village, US Nagar
11. Dr. Kamal Singh, Add. Managing Director, UCDFL, Dehradun
12. Mr. P.C. Sharma, Administration, Marketing, Operation, UCDF, Lalkuan