ISSN: 2278-4632
Vol-12 Issue-09 No.02 September 2022

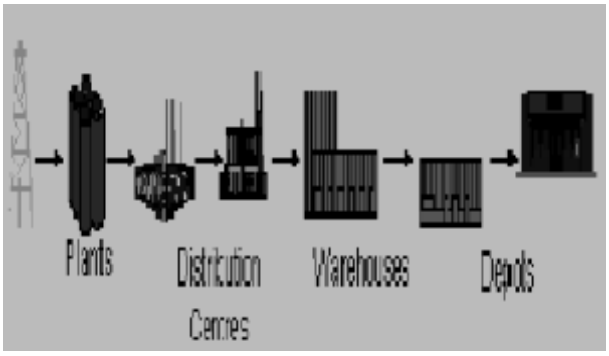
ANALYTICAL STUDY OF SUPPLY CHAIN MANAGENT PRACTIES

[1]R.Mallishwari, Assistant professor, DEPT OF MBA, Samskruti College of Engineering and Technology
[2]V.KIshore, Assistant professor, DEPT OF MBA, Samskruti College of Engineering and Technology
[3]A.Srikanth, Assistant professor, DEPT OF MBA, Samskruti College of Engineering and Technology

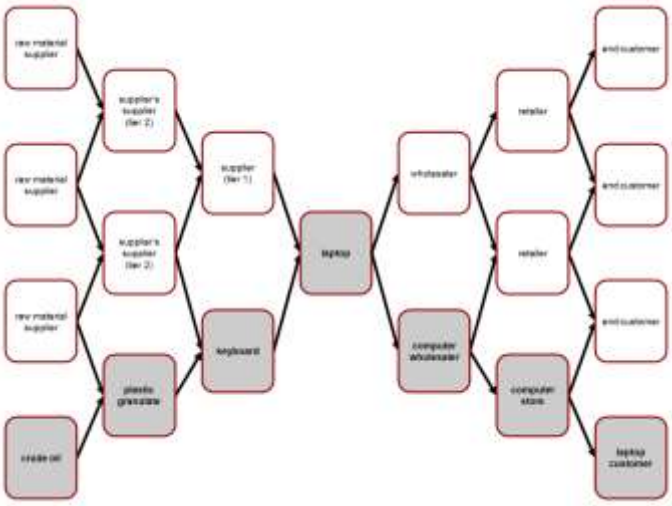
---

INTRODUCTION

A supply chain is a network of facilities and distribution options that performs the functions of procurement of materials, transformation of these materials into intermediate and finished products, and the distribution of these finished products to customers. Supply chains exist in both service and manufacturing organizations, although the complexity of the chain may vary greatly from industry to industry and firm to firm.



Basic Supply Chain Management in Laptop



Supply chain management is typically viewed to lie between fully vertically integrated firms, where the entire material flow is owned by a single firm and those where each channel member operates independently. Therefore coordination between the various players in the chain is key in its effective management. Cooper and Ell ram [1993] compare supply chain management to a well-balanced and well-practiced relay team. Such a team is more competitive when each player knows how to be positioned for the hand-off. The relationships are the strongest between players who directly pass the baton (stick), but the entire team needs to make a coordinated effort to win the race. Below is an example of a very simple supply chain for a single product, where raw material is procured from vendors, transformed into finished goods in a single step, and then transported to distribution centers, and ultimately, customers. Realistic supply chains have multiple end products with shared components, facilities and capacities. The flow of materials is not always along an arbores cent network, various modes of transportation may be considered, and the bill of materials for the end items may be both deep and large.

ISSN: 2278-4632
Vol-12 Issue-09 No.02 September 2022

Basic Supply Chain Management in Production

OBJECTIVES OF THE STUDY

- To study supply chain management at Sangam dairy foods ltd.
- To study milk procurement process at Sangam dairy foods ltd.
- To study production process at Sangam dairy foods ltd.
- To study distribution network of Sangam dairy foods ltd.
- To focus on product distribution process.
- To study transport management system.

NEED FOR THE STUDY

Traditionally, marketing, distribution, planning, manufacturing, and the purchasing organizations along the supply chain operated independently. These organizations have their own objectives and these are often conflicting.

Many manufacturing operations are designed to maximize throughput and lower costs with little consideration for the impact on inventory levels and distribution capabilities. Purchasing contracts are often negotiated with very little information beyond historical buying patterns.

The result of these factors is that there is not a single, integrated plan for the organization---there were as many plans as businesses. Clearly, there is a need for a mechanism through which these different functions can be integrated together. Supply chain management is a strategy through which such integration can be achieved.

SCOPE OF THE STUDY

Monitoring and controlling the activities right from supplier's supplier to customer's customer. The purpose of supply chain management is to improve trust and collaboration among supply chain partners, thus improving inventory visibility and improving inventory velocity.

METHODOLOGY

SAMPLING METHOD

Convenience sampling was used by the researcher because it is easy and cheap to collect data. Moreover the population size was very large to cover so it was best to use convenience sampling.

DATA COLLECTION

Both Primary as well as Secondary Research Method has been included for preparing this final report.

PRIMARY SOURCE

•Observation

ISSN: 2278-4632
Vol-12 Issue-09 No.02 September 2022

•Personal Interviews

OBSERVATIONS - It is the methods of nothing and recording information without asking specific question from the respondents. The advantage of this method is that it is highly effective to provide information asked for.

PERSONAL INTERVIEWS - In this method I asks the question from the perform in the order questions are listed and record the replies.

SECONDARY SOURCE

•Google search engine.

•Other web links.

MILK PRODUCTION IN INDIA

Background:

India with 134mn cows and 125mn buffaloes has the largest population of cattle in the world. Total cattle population in the country as on October' stood at 313mn. More than fifty percent of the buffaloes and twenty percent of the cattle in the world are found in India and most of these are milk cows and milk buffaloes.

Indian dairy sector contributes the large share in agricultural gross domestic products.

Presently there are around 70,000 village dairy cooperatives across the country. The Co-operative societies are federated into 170 district milk producers unions, which is turn has 22-state cooperative dairy federation. Milk production gives employment to more than 72mn dairy farmers. In terms of total production, India is the leading producer of milk in the world followed by USA. The milk production in 1999-00 is estimated at 78mn MT as compared to 74.5mn MT in the previous year this production is expected to increase to 81mn MT by 2000-01. Of this total produce of78mn cows' milk constitute 36mn MT while rest is from other cattle.

While world milk production declined by 2 per cent in the last three years, according to F AO estimates, Indian production has increased by 4 per cent. The milk production in India accounts for

more than 13% of the total world output and 57% of total Asia's production. The top five milk producing nations in the world are India , USA, Russia, Germany and France.

Although milk production has grown at a fast pace during the last three decades (courtesy:

Operation Flood), milk yield per animal is very low. The main reasons for the low yield are

- Lack of use of scientific practices in mulching.
- Inadequate availability of fodder in all seasons.
- Unavailability of veterinary health services.

Indian (traditional) Milk Products:

There are a large variety of traditional Indian milk products such as Makkhan - unsalted butter.

Ghee - butter oil prepared by heat clarification, for longer shelf life. Kheer - a sweet mix of boiled milk, sugar and rice.

Basundi - milk and sugar boiled down till it thickens.

Rabri - sweetened cream.

Dahi - a type of curd.

Lassi - curd mixed with water and sugar/ salt

Channa/Paneer - milk mixed with lactic acid to coagulate.

Regulatory Framework

The dairy industry was de-licensed in 1991 with a view to encourage private investment and flow of capital and new technology in the segment. Although de-licensing attracted a large number of players, concerns on issues like excess capacity, sale of contaminated! Substandard quality of milk etc induced the Government to promulgate the MMPO (Milk and Milk Products Order) in 1992. Milk and Milk Products Order (MMPO)

ISSN: 2278-4632
Vol-12 Issue-09 No.02 September 2022

regulates milk and milk products production in the country. The order requires no permission for units handling less than 10,000 liters of liquid milk per day or milk solids up to 500 tpa. MMPO prescribes State registration to plants producing between 10,000 to 75,000 litres of milk per day or manufacturing milk products containing between 500 to 3,750 tonnes of milk solids per year. Plants producing over 75,000 litres per day or more than 3,750 tonnes per year of milk solids have to be registered with the Central Government. The stringent regulations, government controls and licensing requirements for new capacities have restricted large Indian and MNC players from making significant investments in this product category. Most of the private sector players have restricted themselves to manufacture of value added milk products like baby food, dairy whiteners, condensed milk etc.

All the milk products except malted foods are covered in the category of industries for which foreign equity participation up to 51 % is automatically allowed. Ice cream, which was earlier reserved for manufacturing in the small-scale sector, has now been de-reserved. As such, no license is required for setting up of large-scale production facilities for manufacture of ice cream.

Subsequent to de-canalization, exports of some milk based products are freely allowed provided these units comply with the compulsory inspection requirements of concerned agencies like: National Dairy Development Board, Export Inspection Council etc. Bureau of Indian standards has prescribed the necessary standards for almost all milk-based products, which are to be adhered to by the industry.

An Overview:

Gujarat Cooperative Milk Marketing Federation (GCMMF) is India's largest food products marketing organization. It is a state level apex body of milk cooperatives in Gujarat which aims to provide remunerative returns to the farmers and also serve the interest of consumers by providing quality products which are good value for money.

Future Prospects:

India is the world's highest milk producer and all set to become the world's largest food factory. In celebration, Indian Dairy sector is now ready to invite NRIs and Foreign investors to fmd this country a place for the mammoth investment projects. Be it investors, researchers, entrepreneurs, or the merely curious - Indian Dairy sector has something for everyone.

Milk production is relatively efficient way of converting vegetable material into animal food. Dairy cows buffaloes goats and sheep can eat fodder and crop by products which are not eaten by humans. Yet the loss of nutrients energy and equipment required in milk handling inevitably make milk comparatively expensive food. Also if dairying is to play its part in rural development policies, the price to milk producers has to be remunerative.

In a situation of increased international prices, low availabilities of food aid and foreign exchange constraints, large scale subsidization of milk conception will be difficult in the majority of developing countries.

Hence in the foreseeable future, in most of developing countries milk and milk products will not play the same roll in nutrition as in the affluent societies of developed countries. Effective demand will come mainly from middle and high income consumers in urban areas. As an attributive, the word dairy refers to Milk-based products, derivatives and processes, and the

animals and workers involved in their production: for example dairy cattle, dairy goat. A dairy farm produces milk and a dairy factory processes it into a variety of dairy products. These establishments constitute the dairy industry, a component of the food industry.

ISSN: 2278-4632
Vol-12 Issue-09 No.02 September 2022

Structure of the Industry:

While most countries produce their own milk products, the structure of the dairy industry varies in different parts of the world, In less developed countries the producer generally sells directly to the public, whereas in major milk-producing countries most milk is distributed through 1. Wholesale markets. In Ireland and Australia, for example, farmers' co-operatives own many of the large-scale processors, while in the United States many farmers and processors do business through individual contracts. In the United States, the country's 196 farmers' cooperatives sold 86% of milk in the U.S. in 2002, with five cooperatives accounting for half that. This was down from 2,300 cooperatives in the 1940s.

As in many other branches of the food industry, dairy processing in the major dairy producing countries has become increasingly concentrated, with fewer but larger and more efficient plants

operated by fewer workers. This is notably the case in the United States, Europe, Australia and New Zealand. In 2009, charges of anti-trust violations have been made against major dairy industry players in the United States. As processing plants grow fewer and larger, they tend to acquire bigger, more automated and more efficient equipment. While this technological tendency keeps manufacturing costs lower, the need for long-distance transportation often increases the

environmental impact, Milk production is irregular, depending on cow biology. Producers must adjust the mix of milk which is sold in liquid form vs. processed foods (such as butter and cheese) depending on changing supply and demand.

Operation of the Dairy Farm:

See dairy farming and dairy cattle for more information. When it became necessary to milk larger numbers of cows, the cows would be brought to a shed or barn that was set up with bails (stalls) where the cows could be confined while they were milked. One person could milk more cows this way, as many as 20 for a skilled worker. But having cows standing about in the yard and shed waiting to be milked is not good for the cow, as she needs as much time in the paddock going as is possible. It is usual to restrict the twice-daily milking to a maximum of an hour and a half each time. It makes no difference whether one milks 10 or 1000 cows, the milking time should not exceed a total of about three hours each day for any cow.

As herd sizes increased there was more need to have efficient milking machines, sheds, milk-storage facilities (vats), bulk-milk transport and shed cleaning capabilities and the means of getting cows from paddock to shed and back. Fanners found that cows would abandon their grazing area and walk towards the milking area when the time

came for milking. This is not surprising as, in the flush of the milking season, cows presumably get very uncomfortable with udders engorged with milk, and the place of relief for them is the milking shed.

Most dairy farmers milk their cows with absolute regularity at a minimum of twice a day, with some high-producing herds milking up to four times a day to lessen the weight of large volumes of milk in the udder of the cow. This daily milking routine goes on for about 300 to 320 days per year that the cow stays in milk. Some small herds are milked once a day for about the last 20 days of the production cycle but this is not usual for large herds. If a cow is left unmarked just once she is likely to reduce milk-production almost immediately and the rest of the season may see her *dried off(giving* no milk) and still consuming feed for no production. However, once-a-day milking is now being practiced more widely in New Zealand for profit and lifestyle reasons.

ISSN: 2278-4632
Vol-12 Issue-09 No.02 September 2022

This is effective because the fall in milk yield is at least partially offset by labour and cost savings from milking once per day. This compares to some intensive farm systems in the united States that milk three or more times per day due to higher milk yields per cow and lower marginal labor costs.

Farmers who are contracted to supply liquid milk for human consumption (as opposed to milk for processing into butter, cheese, and so on-see milk) often have to manage their herd so that the contracted number of cows are in milk the year round, or the required minimum milk output is maintained. This is done by mating cows outside their natural mating time so that the period when each cow in the herd is giving maximum production is in rotation throughout the year.

Northern hemisphere farmers who keep cows in barns almost all the year usually manage their herds to give continuous production of milk so that they get paid all year round. In the southern hemisphere the cooperative dairying systems allow for two months on no productivity because their systems are designed to take advantage of maximum grass and milk production in the spring and because the milk processing plants pay bonuses in the dry (winter) season to carry the farmers through the mid-winter break from milking. It also means that cows have a rest from milk production when they are most heavily pregnant. Some year-round milk farms are penalized financially for over-production at any time in the year by being unable to sell their overproduction at current prices.

Transport of Milk:

Historically, the milking and the processing took place in the same place: on a dairy farm. Later, cream was separated from the milk by machine, on the farm, and the cream was transported to a factory for butter making. The skim milk was fed to~. This allowed for the high cost of transport (taking the smallest volume high-value product), primitive trucks and the poor quality of roads. Only farms close to factories could afford to take whole milk, which was essential for cheese making in industrial quantities, to them. The development of refrigeration and better road transport, in the late 1950s, has meant that most farmers milk their cows and only temporarily store the milk in large refrigerated bulk tanks, whence it is later transported by truck to central processing facilities.

COMPANY PROFILE

SANGAM DAIRY FOODS

The SANGAM DAIRY FOODS, It is established on 1976 march at Vadlamudi at Guntur. It is a milk manufacturing or milk product company. This company major role is to supply or producing the mile product to the customer with good quality and quantity of products. It produces the milk till establishing the factory without any remark. It functions with good brand and efficient work.The

machinery technology is bought or bring from Gujarath and Maharasthra. The worth of the machinery is Rs: 60, 00,000/-(sixty lakhs). The company occupying the space within five acres. The value of the asset is (land) is 1.40 crors. It bring the loan from the banks at Rs; 40, 00,000/-(forty lakhs).

SOCIAL RESPONSIBILITY OF SANGAM DAIRY TOWARDS THE VARIOUS INTEREST GROUPS:

- Scholarships are given to the children of the members in Janasri Scheme through LIC.
- Sangam Dairy is supplying cattle feed, fertilizers and seeds to the milk producers at reasonable

ISSN: 2278-4632
Vol-12 Issue-09 No.02 September 2022

prices besides other assistance.

- Several other benefits such as group insurance, cattle insurance etc and scholarships to the children of the milk producers are provided
- Encouragement is given to the dairy farms by offering additional rates to the farmers. Union provides Encouragement to the cow readers through payment of transportation and insurance charges incurred by them.
- In order to encourage development of good breed of cattle, bulls are procured from• Haryana and given to the farmers at 50 percent subsidy.
- In order to develop the skills of dairy farmers, employees and others the existing training centre is converted into a 'Resource centre' For the farmers who have purchased cows under Rashtriya Kisan vikas yojana, payment

of Rs.1/- extra was offered for their milk and to that extent, an amount of Rs. 428 lakhs distributed for the year 2011-2012.

TECHNICAL INPUTS AND MILK ENHANCEMENT PROGRAM:

The various technical inputs offered to the milk producers in phased manner for the purpose of milk production enhancement are classified as follows:

1. Artificial Insemination Services

2. Milk Marketing

3. National Milk Grid

Artificial Insemination Services: There is a sperm production center in the dairy, maintaining 20 Murrah Bulls for semen production purpose and producing 50,000 of semen every year. Further it is running 120 201 artificial insemination centers societies with the workers after giving them training in veterinary, first aid and artificial insemination.

THEORETICAL FRAME WORK

The topic supply chain management is basically concerned with the following process of supply chain management and operations, like

1. Procurement and Production
2. Packaging
3. Distribution

Practices followed by Sangam Dairy Products ltd. Guntur

1. PROCUREMENT AND PRODUCTION PROCESS

The very first step of production at the Dins haw's dairy foods ltd. is procurement process Procurement of raw milk plays a crucial and key role in production process and in dairy industry as whole. The procurement process involves mainly following things as

- •Suppliers
- •Quantity
- •Quality
- •Cost
- •Transportation, handling, storage

Suppliers:

ISSN: 2278-4632
Vol-12 Issue-09 No.02 September 2022

There are two modes of raw milk procurement & supply.

1. Own collection
2. Other dairies

Own collection:-Dinshaw's has established dairies all over the Vidarbha and Maharashtra which provides a continuous supply of milk. This own collection also includes two modes as

(a)Chilling centers

(b)Bulk coolers

Chilling centers:-There are twelve chilling centers across Guntur region.

These plants are having capacity of 25000 liters. Milk is stored at low temperature & as per the capacity of plant supply is provided.

Bulk coolers:-These are milk storage plants having low storage capacity around 5000ltrs farmers provide the milk in loose i.e. 5 to 10 ltr each. Dinshaw's provide support to the dairy farmers to run their farms MILK PRODUCTION The buffalo and the cow and to a very limited extent the goat are the main milchanimals in the India. The buffalo contributes some 64 per cent, the cow 33 per cent and the goat 3 per cent of the total milk produced in India.

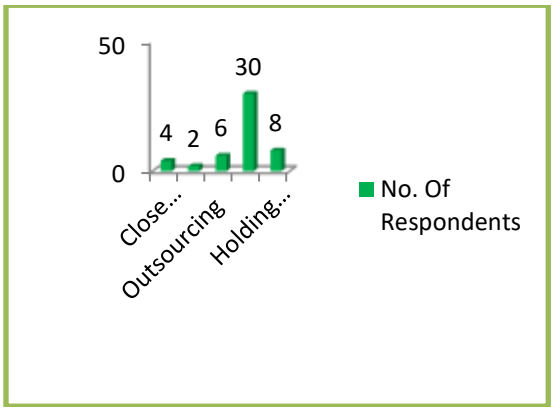
In order to increase milk production we must have to:

- Upgrade our animals
- Better feeding practices and
- Well organized veterinary services, including artificial insemination.

DATA ANALYSIS AND INTERPRETATION

1. How do you manage your supply chain?

Opinion	No. Of Respondents
Close partnership with supplier	4
JIT Supply	2
Outsourcing	6
Many Suppliers	30
Holding Safety Stock	8



Interpretation

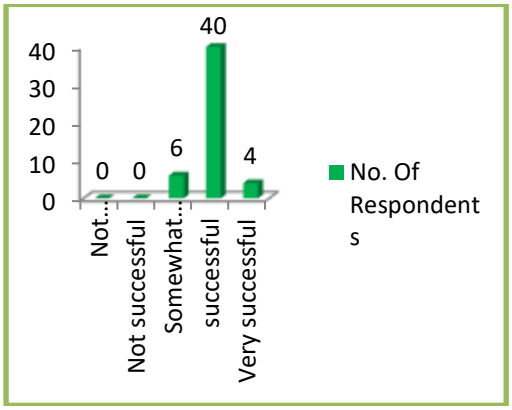
From the above table and graph we are identified Out of 50 employees of Sangam Dairy foods maximum number of employees thinks that supply chain management of company is managed by many suppliers.

2. How successful do you think in your company in managing its supply chain in general?

Opinion	No. Of Respondents
Not successful at all	0
Not successful	0

ISSN: 2278-4632
Vol-12 Issue-09 No.02 September 2022

Somewhat successful	6
successful	40
Very successful	4



CONCLUSION

According to the study done on the feedback of questionnaire, data interpretation and analysis the results are as follows-

The result shows that the Sangam dairy foods ltd. practices supply chain with the help of many suppliers. Meanwhile the company is managing its supply chain successfully. The company has a separate logistics and dispatch department. Sangam dairy foods ltd has a clear and sophisticated logistic plan.

Operational activities and supply chain management activities of the Sangam Dairy foods ltd are by the support of supply chain benchmarking. The company is planning to implement and practice the e-procurement, EDI plan strategically in future.

Current supply chain management and IT activities of the company are going flawless and in future there is scope for better supply chain and distribution network. The current transportation and logistics management of the company is sufficient and is flexible enough so as to change the current policies if any.

The study has shown us that there is some obstacles during handling and storage of dairy products which creates hurdle in SCM therefore should be eradicated.