CHAPETER NO. 4
ORGANASATION AND MANAGEMENT OF MAHANAND

4.1 Introduction

Dairy co-operative account for the major share of processed liquid milk market by 170 co-operative milk producers unions, which federation in 15 state co-operative milk marketing federation. The organized sector still remains a minor stake holder and handles about the milk whereas the unorganized sector of the dhuhiyas and mithaiwallas still control industries. The demand for milk and dairy products is income elastic and growth in per capita income expected to increase demand for milk and milk product.

Chart No.4.1
Structure of Indian Dairy Industries

4.2. Organizational Structure of Mahanand

All state level federation are member of National Co-operative Dairy of India (NCDFI). The become members by purchasing share. The NDCFI board consist of the entire chairman and managing directors of the state federation, state co-operative union. The main function of the NCDFI is to promote the dairy industry on a co-operative basis. It offers services in procurement, processing and marketing of milk and milk product from one state to another with in the country and is also
responsible for international marketing NCDFI also co-ordinates the supply of the army, further it organize and operates the national milk grid. It helps the member’s federation in the purchase, storage and distribution of machinery and equipment.

4.2.1 National Cooperative Dairy Federation of India [NCDFI]

The National Cooperative Dairy Federation of India [NCDFI], based at Anand [Gujarat], is the apex organisation for the cooperative dairy sector. Its members include federal dairy cooperatives of states and union territories. Primary objective of NCDFI is to facilitate the working of dairy cooperatives through coordination, networking. Important activities of NCDFI includes; coordinating sale of milk and milk products of its members to the Ministry of Defence and other para-military organizations, and marketing of frozen semen doses produced by Sabarmati Ashram Gaushala [cowshed] and Animal Breeding Centre

Chart No 4.2

Structure of Co-operative Milk federation

Source-byelaws of co-operative federation and co-operative Act

4.2.2 State Co-operative Milk Federation

The district /taluka and multistate co-operative dairy union (Dudh Sangh) are federation in to the state level co-operative milk federation by subscribing to it at least one share. The federation is responsible for developing and implementing policies on co-operative marketing and procurement of all member union liquid milk and milk products and co-operative marketing of support services to members out of its net profit the federation distributes the profit share among all the member unions according to the milk procured by them and provision of byelaws. The federation

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board consists of the elected chairman of all members unions and the federation managing director other members are representatives of resister co-operative societies and nominees of NDDB. Only the elected chairman of the member unions has voting rights and elects the chairman of the milk federation.

The federation board is advised by its programming committee, which is composed of each member’s union chief executive, the federation chief quality control officer and one or more non-voting co-operative technical representative of NDDB. The federations managing director is the committee’s chairperson and General Manager, its secretary. The programming committee meets once every month and is also responsible for day to day implementation of the board’s policies and plans.

4.2.3 District/Taluka Co-operative Milk Union (Dudh Sangh)

All the registered village dairy co-operatives are affiliated with and members of the District/ Taluka co-operative milk producers union which enables them to jointly own a dairy processing plant and cattle feed plant. In order to become a member of the union, a registered society has to pay a nominal entrance fee and must purchased at least one share of the union. The union controlled by the board of directors consisting of 16 to 17 members of whom 12 democratically elected from among the chairman of the member village dairy societies. The remaining 4 to 5 members includes the union managing director as a members secretary, one or two representative of financing institute and a nomine each from resisters co-operative societies and the federation. The five members are not eligible to complete for the post of chairman, who is elected by all of the board of director members. One third of the elected board members retire every year by rotation so that each member carries out these duties for five years. This ensures continuity in management.

The board frames the general policy for the union (Dudh Sangh) and employees the managing director/ general manager while the board determines the numbers type and pay scales of personnel, it is the managing director’s general manager who appoints the junior staff. The union (Dudh Sangh) important function

1. Procurement, processing and marketing
2. Strengthening of co-operative movement
3. Origination of extension activities.
4. Provided rural development services
The union owns and operates a dairy plant, a cattle feed plant, fodder and bull mother farms, semen’s collection station for animal husbandry activities. In addition, the union carries out research, development and other promotional activities for the all over benefit of milk producers. The union provided facilities cattle feeds, fodders seeds and various veterinary services and bank through loan cattle purchase. The total cost of these programmes is includes in the milk price structure in its therefore at the union level professional are hire for specialized purpose that individuals producers can’t afford. The union distribute among producers dividends on their share and bonus in relation to the quality of milk supplied by them during the year. The milk products processed by the union are marketed through the federation.

4.2.4 Dairy Co-operative Societies (DCS)

The basic unit in the Maharashtra co-operative milk federation is the milk producer’s co-operative society, a voluntary association of milk producers in a village who wish to market their milk collectively. Every milk producer, who as one milch animal that is owned becomes a member of the co-operative societies, At a general meeting of all the members the representatives are elected to form a managing committee, which run the day-to-day affair of the co-operative society by setting the policies and appointing necessary staff out of managing committee members, one member is elected as chairperson. Every day the society collection the surplus milk from its producers members. The producers are supply of milk usually within 12 hours (for morning milk, in the same evening and for evening milk, the next morning). The payment is made on the basis of FAT and SNF (solid not fat) content of the milk supplied by the in living producer. The District / Taluka milk union organizes the transport of collected milk twice daily according to the schedule based on the quantity of the milk collected and the capacity of bulk milk coolers maximum its affiliated member co-operative.

The origin of co-operation is due to injustice exploitation of poor people, the working of co-operative societies is depends upon the co-operative principle and Economic affair of co-operative principle. Private person gavali collects milk from the rural farmers. This business was generally practiced ground the city at a walk able distance so that fresh milk would reach within two to three hours of milking. Village grazer collects the animal’s cows and buffaloes from the backyards. The farmers bring milk to the milk shop by carrying it head and on their shoulder. “The first co-
operative law was constituted in 1904 the beginning of the co-operative movement in India. The defects of the 1904 Act were remedied in 1912. When another co-operative societies Act was enacted. First co-operative dairy society Act was enacted. A first co-operative dairy society was established at Allahabad (UP) in 1913.¹

The producers in this system are not regular and remunerative payment for their milk, but also have access to the milk production enhancement in put support services to further improve their productivity and income. One of the staff members of society is trained to carry out this function. Societies also market the liquid milk locally at the village level. In addition supply of balanced cattle feed in addition to regular payment and support service members also receive the price difference dividend and bonus dividing from net profit of the society business as per the provisions of the society’s byelaws.
4.3.1 Board of Director

Mahanand board of director in 34 director elected from members milk union district, taluka/ multistate co-operative milk federation and 4 employees representative director elected from Mahanand department wise , one representative through national dairy development board of India (NDDB), one director joint registrar co-operative dairy and dairy development officer (Maharashtra) and managing director (MD) . Mahanand board of director are elected through the co-operative act and byelaws of Mahanand. Board of director elected for five year (co-operative years). The numbers of directors and their tenure of office are fixed as per the act, rules and byelaws of the Mahanand. The board of directors is concerned with overall policies, while an executive is entrusted with task of actual execution of policies.

The board of director meets once in every month in which issues are decided by a majority of votes. If there is equality of votes, the chairman or presiding officer shall having right of a second or casting vote. The basic duty of the board of directors is to manage the business of Mahanand with provision of the co-operative act, its rules and byelaws Mahanand following important duties and authorities of Board of Directors.

1. To raise funds necessary for the purpose of carrying out the function of the Mahanand in the form of loan, government schemes and deposit etc.
2. To grant advance to need full members.
3. To sanction investment of the funds in new project.
4. To makes a rules of milk procurement quality, quantity and milk, by-products sale rate quality and regarding any other business policies.
5. To lay down from time to time, the respective duties of the officers and other employees of the Mahanand.
6. To make a policies for raising a milk procurement and milk sales.
7. To appoint, suspend, remove and exercise discipliner control over all officers and employees of the Mahanand.
8. To frame regulation for the conduct of the business of the Mahanand in accordance with and rules contained in the byelaws of the Mahanand.
9. To grant purchases of material of lab and regarding with business of Mahanand.

10. To permission of expenses in various department and regarded work to authorised officers.

11. To make a rate of milk purchase and sale milk and by product.

The board is empowered to contribute executive committee to attend to less important duties like the admission of members, deal with matters related to legal proceeding ensure compliance of audit objections incurs contingent expenses and increase in milk procurement and milk sale. The board of director can delegate any power to executive committee, the chairman or secretary or any other officer. Have to work according to work to rules and regulation laid down by the board of director, generally the terms of office of the elected members of the board of directors is five co-operative years. The managing directors of the Mahanand convince the meeting of the board of directors on the advice of the chairman.

4.3.2 Executive Committee

The executive is appointed by the Mahanand byelaws. The board of directors has a power to constitute an executive committee and other functional committees to look specific functions. The main functions to enrol new members in accordance with the provisions of the Mahanand byelaws in addition the committee has to exercise powers delegated to it by the board of directors. The committee has power as laid down by the act, rules and byelaws of the Mahanand, quorum for the committee meeting should be one third of the members.

4.3.3 Chairman and Vice Chairman

The chairman and the vice chairman are elected from amongst the members of the board of directors, the excluding NDDB representative, Employee representative, Joint resister co-operative dairy, Dairy Development Officer (Maharashtra). Elected all director are representative of district co-operative dairy federation, Taluka co-operative dairy federation and multi state co-operative milk union and other one NDDB representative, Joint resister co-operative dairy, and Dairy development officer( Maharashtra) and number of four directors are various Mahanand department employees representative, so all directors are Mahanand full knowledge about co-operative dairy business.
1. The chairman supervises controls, guides the affairs of the milk federation and is responsible to the board of directors. In performing theses responsibilities and duties, he exercise the power delegated to him according to him by the board of directors and vested in him according to the act and byelaws of the Mahanand.

2. The chairman presides over the meeting of general body, board of director, executive committees and subcommittee.

3. In times of emergency, chairman exercises full powers of the board of directors and he himself decides about the state of emergency and keeps a watch over the affair of the Mahanand.

4. In the absence of chairman the vice chairman presides the general meetings of the general body, the board of directors the executive committee and exercise such power and performs such duties as are delegate and assigned to him in writing by the chairman in accordance with provision of the byelaws of Mahanand.

4.3.4 Managing Director

The managing director deals with and supervises the day to day affair of the dairy. He is its chief executive officer (CEO), according to byelaws of the Mahanand powers and duties of managing directors are as follows.

1. To exercise general control over the administration of the Mahanand.

2. To convince the meeting of the general body and the executive committee.

3. To accept the funds and to guarantee on behalf of the dairy and to make arrangement the safe custody and protection of the cash and other transaction. All financial and legal business responsibility after the board of director and its policies.

4. To sign of all financial transaction and accounting document.

5. To sign of all resisters and mortgage deeds and legal document and regarding the court cases i.e. income tax, sale tax, provident fund, service tax etc. responsibility of the managing director after finance manager or account.

6. Milk procurement, milk and milk product sale quality and sale, purchase rate under the food safety act, co-operative act, consumers act, income tax act, service tax, and sale tax act through all business transaction carry responsibility on managing director.
7. To appoint the staff on an trainee basis a period of six months in accordance with the provision of the dairy budget.

8. To assign the responsibility, duties and rights of the staff in various department.

9. To take action a while dealing with the legal or disputed matter or claims of any nature, to give sanction of financing the project scheme submitted by primary to a certain limit.

10. To delegate in full or in part his power and authority to any employee of Mahanand.

The functions of the dairy are the appointment of the staff for its different offices/ department, the approval of the projects and schemes of the government, the management of the milk procurement, milk and milk products sales of dairy, the control and supervision of the overall the activities dairy, its branches and offices. All these functions are under the controls and administration of the managing director at the Mahanand’s head offices. To assist and share the duties and responsibilities of the managing directors and to relive him for more important matters, decision making and consultation with top management.

4.3.5 Department wise Functions and Duties of Officers

1. Administrative Department
   1. Appointment of employee.
   2. To recived and send mails of Govt. and Semi Government.
   3. Judiciary work.
   4. To control and solve problems of all departments.
   5. To conduct work of Board of Directors.

2. Dairy Department
   1. Collection of milk and distribution of it to the customer of Maharashtra state.
   2. Processing on milk and packaging.
   3. Customer compliant : To solve the complaints of the customer and milk supplier with the help of quality control and marketing department.
   4. To maintain the milk collection and distribution quantity.

3. Quality Control Department
   1. To check the members collected milk quality according to Food Safety Act.
   2. To give written answer to the members Dudh Sangh regarding milk quality.
3. To find out fact of consumer complaint and report to the managing director.
4. To check raw material after receiving it in the store department.

4. **Marketing Department**
   1. To create market for by products of Mahanand such as Shrikhand, Amrakhand, Sterilize milk, Ghee, Paneer etc.
   2. To solve the problems of milk distributors and customers.
   3. Marketing of milk and milk products with the help of wholesalers, franchisers and Railway booth shoppers.
   4. To supply the quantitave milk within time to distributors.
   5. To do research for milk and milk products development and increase market.
   6. To advertise Mahanands milk products.

5. **Farmers Union and Animal Husbandry Department**
   1. To conduct Central and State Governments policies and funding as per the Dudh Mahasanghs regulations.
   2. As per Directors permission provide benefits to the members dudh sangh.
   3. To check members various proposals and requirements and make recommendations.
   4. Technically guidance to Farmers Union and Animal Husbandry.

6. **Human Resource Department**
   1. To implement welfare schemes for workers and officers.
   2. To provide employees Bus service, Canteen, lockers services etc.
   3. To make a report on employees facilities and work and send it to managing body.
   4. To conduct work as per the employees rules and regulations.
   5. To solve personal and work related problems of employees.

7. **Purchase Department**
   1. To call requirement from the related departments.
   2. To call Tender and quantative rates from material suppliers.
   3. To place purchase order after getting permission from the director body.
   4. To check and accept material as per purchase order.
   5. In case of defect then to check its quantity, quality, rates and make suitable action.
   6. To maintain purchase record.
8. **Store Department**
   1. To accept the purchased material by the purchase department.
   2. To preserve material in the store department.
   3. To distribute material as per the demand.
   4. To sale the scrap material after calling tenders.
   6. To maintain record in the inward outward register.
   7. To make purchase allocation register, vouchers and other important registers.
   8. To insure material as per its important.

9. **Security Department**
   1. To check incoming and outgoing vehicles.
   2. To send persons after giving them visitors pass.
   3. To check all visitors.
   4. To watch all dairy premises.

10. **Transport Department**
    1. To provide vehicle service to officers.
    2. To purchase new vehicle (if previous is outdated)
    3. To sale the old vehicles after calling tenders.
    4. To maintain and repair all vehicles.

11. **Engineering Department**
    1. To solve complaints about milk and milk products.
    2. To maintain and repair machinery of Mahanand dairy.
    3. To purchase machinery as per requirement.
    4. To get information about new technology from visiting various dairy and inform it to directors.

12. **Account Department**
    1. To make payment within time to the member Sanghs.
    2. To pay dues to the traders about the purchase.
    3. To complete the work regarding bank transactions, loan, D.D. and other account related work.
    4. To maintain record as per the co-operative act.
    5. To inform members about dues time to time.
    6. To show accounting statements to the board of directors.
4.4 Management Challenges of Mahanand

The Mahanand dairies is procured, process and market milk and milk products. In this channel, the milk produced is deposited by the farmers in the collection centres at the village level and then this milk is pooled and transferred to the chilling centres and bulk milk cooling units in Taluka District Dudh Sangh where the milk is cooled to 4°C to 3°C. Then it is filled into insulated tankers and transported to the processing plants where the milk is tested and transferred into milk tankers in Mahanand dairy. This milk received is then processed into various categories of liquid milk and value added products. Then the packaged milk is transported to the milk parlours or retail outlets from where it reaches the consumers. In case of the value added milk products having longer shelf life, they are transported to the distribution centres and carrying and forwarding agent. The carrying and for wording agent then supplies the required amount of stock to the various retail outlets and milk parlours from where consumers can bye the products.

Chart No.4.4

Milk Supply Chain of Mahanand

Source - Mahanand
Mahanand is the apex institution of dairy co-operative in Maharashtra state, Maharashtra Rajay Sahakari Dudh Mahasangh, Marayadit, Mumbai (here after called as Mahanad) is an apex federation of District/Taluka co-operative milk unions established to implement the operation flood in state of Maharashtra. The main objective of Mahanand is to procure milk from the member milk union at remunerative rate and distribute the same to the consumers at reasonable rate. Mahanand is thus working as a vital link between the milk producers and consumers and working for the economic development and unliftment of the farmers in the areas, one of the core function of Mahanand milk procurement from district co-operative milk federation, taluka co-operative milk federation and multistate co-operative milk federation and milk and milk product sale to customer in regionable rate.

Milk is procured from the farmers at the village cooperative societies and is then sent to the district cooperative Dudh Sangh by trucks in cans or by tankers from the bulk coolers located at the villages. It is weighed and tested for fat at the dairy docks and then the milk is pasteurized. The dairy then converts the milk in to liquid milk for sale and various by the state-level Dairy Federation (Mahanand) which markets the products of the Mahanand dairy in the state. Surplus milk of District Dudh Sangh, after meeting the local liquid milk requirement and converting into various products, is then sale to the local market.

**4.4.1 Management Challenges at the Milk Collection Level**

District and Taluka Dudh Sangh milk supply to Mahanand Dairy. District/Taluka Dudh Sangh are milk Collection from Primary Dairy Co-operative societies. And Dairy Co-operative societies milk collection from milk producer farmers. All level milk collection issues and challenges following

1. Inadequate feeding of animals with burgeoning human population there is an increasing pressure on the land resources for cultivation of food crops and fodder crops are not preferred. This apart the small holders are not able to feed the animals with balanced diet of concentrates and roughages due to lack of financial support.

2. More disease incidence milk producers who are not members of cooperative societies often get deprived of good animal health care facilities in terms of routine vaccination and prophylactic disease prevention measures. Financial constraints generally inhibit this farmer’s access to the organized veterinary services and they still rely on the quacks and conventional treatment methods.
Lacks of animal care facilities in rural area this major effect on procure a quality and quantity of milk.

3. High production costs compared to the amount of efforts and maintenance costs being involved in the production of milk, the farmers do not get remunerative prices due to low market prices and lack of elasticity in the prices of milk.

4. The farmers are not only paid less according to the quality of milk but also their payment gets delayed from time to time. This comes in line with the sick and non performing milk cooperative unions which pass on the perils of mismanagement and marketing losses to these poor farmers.

5. The milk producers are lack of financial supports and good quality animal feed. The important challenges dairy co-operative societies are facing today is related their milk quality.

6. Dairy co-operative societies have not made satisfactory effort to increasing milk production. There is lack honest milk producers farmer. The members of dairy co-operative societies supply their milk to privet dairy.

7. Primary dairy co-operative milk producers societies are not supply hybrid varieties of cattle and buffalo.

8. There is also lack honest leader ship in dairy co-operative societies. The many co-operative societies in one village there is tough competition.

9. The dairy co-operative societies lack of milk chilling storage tank (bulk milk cooler). And ultra Modern computerized automatic milk collection system.

10. Involvement of too many intermediaries keeping in view the large no of intermediaries involved in the milk collection procedures the milk looses its quality in the process. This leads to increased microbial contamination and fluctuation in the volume of the milk before reaching the collection canters and bulk coolers.

11. Manipulation of the quality of milk by the farmers: The farmers not being able to get fair and remunerative prices for the milk often tend to give adulterated milk at the collection centres. They often add additives to forge the fat content of the milk and get better price for the lot. Addition of vegetable fat, animal fat, starch, etc. has been quite frequent among the farmers to alter the fat and solid content of the milk.
12. The logistical challenge of collecting milk from each and every farmer twice on a daily basis. The farmer usually loses much time waiting in the que to deposit their milk at the collection centres thus resulting in loss of net working man days.

13. Poor management of some of the village cooperatives have led to huge losses in the trade due to which farmers have lost faith in these enter it is.

14. Milk being a highly perishable product requires be processing or cooling as soon as possible after milking, so as to prevent spoilage and contamination. However to ensure this there is a need of refrigerated milk silos for storage which are not present at the village levels or primary dairy co-operative societies.

**Technology Used in milk collection in Primary dairy society’s level**

The importance of speed of operations should be emphasized, because milk collection centres receive milk from farmers daily. On an average, if the saving in time per farmer were 10 minutes every day, it would amount to a huge saving to the tune of hours per day! The deployment of technology was considered instrumental to realize such savings.

**Electronic Milko-Tester** - The conventional Gerber method takes 2 to 3 hours to ascertain the fat content of milk. This in turn leads to a delay in the payment to the farmer as the payment is made strictly on the quality of milk. An electronic milko tester model is not only economical but also simple to operate. Moreover, it is suited to village conditions. The greatest advantage of this tester is the accuracy coupled with the rapidity of analysis of fat content. It works on the principle of light scattering with manual homogenization. It operates on AC-mains as well as on battery, with a built-in battery charger and an automatic switch-over to the battery in case of power failure.

**The Micro-Processor-Based Milk Collection System** - Milko-testers reduce the time taken to ascertain the quality and the fat content of milk which in turn helps in overcoming all associated problems of the traditional method of testing such as storage of samples and handling of corrosive chemicals. However, the calculation and
payment of bills remained as cumbersome as ever since the bills were still being calculated manually.

**REIL-developed milk collection system:** This system has been operational in Mogri for the past several years. It consists of three pieces of equipment, placed along side each other: (a) the Electronic Milk Tester (EMT); (b) the Milk Weighing System (MWS); and (c) the Data Processor (DP). The printer is a supplementary piece of equipment.

The EMT and the MWS are interfaced with the Data Processor (DP). This system needs only three operators. Under this system each farmer is given a plastic card with a code number as his or her identification. The DP reads the identification on the card and the farmer pours his milk into a steel trough over a weigh-bridge. The weight of the milk gets displayed to the farmer and instantaneously gets transferred to the DP in litres. One man is required to fill the cans after the milk has been weighed, while the second operator takes a 5ml. sample of the milk and holds it up to a tube of a fat testing machine. The hand lever of a machine is then moved thrice and the fat content of the milk sample is displayed on the monitor and also transferred to the DP. A small printer attached to the DP gives a slip that reads the farmer’s name, quantity of milk, percentage of fat and the amount of the payment to be made.

The calculations of the payment are made on the basis of a rate chart as the price of the milk depends on its fat content. With this slip the farmer can collect his or her money from an adjoining window. The payment is rounded to the closest rupee value and the balance is credited to his account the next day. The entire process takes about 20 seconds. The DP has the added advantage of storing the transaction of milk collection of all farmers of the shift. At the end of the shift the machine prints out the individual transactions along with the grand totals.

**Other functions made possible by this system**

1. Entry of year, date, cow/buffalo milk fat rate, shift and membership number into the DP at initialization;
2. Erasing and rectifying any incorrect data that may have been fed in inadvertently;
3. Independent displays of the weight and fat content by the MWS and the EMT on individual display ports;
4. Storage of weight and fat content figures in the memory of the DP and immediate printout of all the necessary details to each farmer;
5. A memory capacity to hold the data for up to 1,000 farmers; and
6. Data can be sent online to a PC via RS232C serial communication at the end of a shift.

ATE Enterprises Ltd. developed milk collection system: -This system has been operational in the Nasik district for the past several years. The system is similar to the one developed by REIL except for some additional functions such as:
1. A digital display port facing the farmer showing the farmer’s code number, quantity of milk, the fat percentage and the total amount of money to be paid to the farmer;
2. A battery backed RAM for the DP to enable storage of all transactions for a period of 11 days. After this the DP can be attached to a standard dot matrix printer which prints out all the transactions. This ledger is then sorted and processed by a ROM-based program.

PC-based milk collection system: -The micro-processor based milk collection system facilitates speedy collection of milk, an efficient and accurate measurement of fat content and quick payment to the farmer. The PC-based system not only enhances the speed of services at each cooperative, but also increases the efficiency and reliability of overall operations. Among other things, it:
1. Stores individual milk collection details on a suitable storage device for yearly analysis;
2. Facilitates the complete financial accounting of the cooperative society;
3. Maintains records of cattle feed, ghee1 and other local milk sale of the society;
4. Monitors the animal breeding, health and nutrition programmes; and
5. Maintains records of the members, for instance, details of their land holdings and animals.

The benefit of information technology (IT) to the societies is manifold. The number of people required for the manual procedure has come down. Daily accounts can be obtained immediately. The computer can, within moments,
Calculate the profits of the society on the basis of the data received from the dairy regarding the payment made to the milk society for the previous day’s collection. The income and expenditure incurred by the society can also be incorporated. Perhaps most significantly, the farmers are now ensured of correct and honest payments.

**Benefits of the Automatic Milk Collection System Station to Dairy Co-operative Societies**

The main benefits of the automatic milk collection systems as compared to the conventional methods are as follows:

1. Immediate payment for the milk delivered;
2. Accurate information about the fat content, quantity of milk and the payment due to the farmer is displayed;
3. Accuracy in weighing the milk on the MWS as against the manual process where milk was weighed using measuring containers which very often led to a financial loss to farmers;
4. Immediate testing of the quality of milk as against testing after 2 to 3 hours of collection;
5. The card reader unit ensures speed of operation and an error-free entry of identification number of the farmer; and
6. The elimination of manual registers for all kinds of information and data storage

**4.4.2 Management challenges at the processing level**

1. Seasonality of production and fluctuating supply- Maharashtra being a tropical state renders a hot and humid climate for the animals and thus fluctuations in the milk production. There is a flush season in the cooler parts of the year whereas the production goes down in the warmer months. Thus at times, the surplus of milk exceeds the processing capacity and milk goes waste whereas on the other hand the processing capacity goes underutilized in the lean period.

2. Adulteration and Food safety- The most important aspect of milk processing is its purity and wholesomeness. There has been an instance of cheap substitution of skimmed milk powder with below standard substances which is hazardous to health. Even though there are certain Food safety Acts but still
every other day we get to know about various tankers of spurious milk being apprehended.

3. Absence quality standards- There is absence of stringent quality standards like HACCP, Codex etc in most of the Mahanands members Dudh sangh which bars Mahanand dairy products for exports into the foreign market.

4. Lack of co-operation among the members Dudh Sangh and Mahanand in milk shortage period. Members of Mahanand milk supply to other dairy in milk shortage period. So not available in sufficient quantity milk in milk shortage period and created a problem in milk processing and marketing.

5. Raw-milk handling of members Dudh Sangh of Mahanand needs to be upgraded in terms of physic co-chemical and microbiological attributes of the milk collected. Better operational efficiencies are needed to improve yield, reduce waste, minimize fat and protein losses during processing, control production costs, save energy, and extend shelf life.

**Procurement and Processing** The most vital part of the supply chain in the Mahanand’s dairy is on the procurement side. The challenge lies in integrating all the milk producers from most of the untapped milk pockets in Maharashtra state. The participation of Mhanand’s in improving the procurement and processing function in dairy through some of these possible interventions.

1. Identification of potential milk pockets,
2. Planning and development of strategic locations for milk collection.
3. Design, build and operate a milk collection network
4. Design, build, own and operate milk processing facility

The major idea behind these initiatives would be to ensure fair amount of remunerative prices to the farmers, create an assured supply base, organize the untapped milk pockets and most important to reduce the time lag between procurement and processing to prevent wastage.

**4.4.3 Management challenges at the Marketing level**

1. Most of the milk of Mahanand by the dairy co-operatives goes to the urban market. The rural consumers are still dependent on the informal and unorganized market channels.
2. A large fraction of the consumer base in India is yet to accept the clean and supply milk from co-operative dairies due higher costs. The mindset of buying fresh whole milk from the milkman is still prevalent in the Indian consumers.

3. The milk market in Maharashtra still faces the challenge of getting co-operative sector. The unorganized market makes it competes with the organized market in relation to prices.

4. With the removal of the quantitative restriction (beginning April 2001) on dairy products under the agreement between the world Trade Organization and the government of the India, the Dairy industries of India has been facing a threat of increasing imports in the form of milk and milk products from other developed nation of the world. The recently 2012-13 in Indian Government import a large quantity in skim milk powder(SMP) from other develop nation of the world. This bad effect on Indian dairy industries a many powder plant stop the production of SMP and created a flood of Milk in India. This is man made flood of milk effect on all Indian Organized and unorganized milk industries in losses and also this major effect on Mahanand and their members Dudh Sangh to liquid milk marketing.

5. All Taluka and District Dudh Sangh Members of Mahanand are sale of milk and milk product at separate brand name, so create a competition between Mahanand and their Members Dudh Sangh to sale of milk and milk products.