

**BUDGETING PROCEDURES IN PUBLIC  
MANUFACTURING ENTERPRISES**  
*(A Case Study of Dairy Development Corporation)*

By

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## **RECOMMENDATION**

This is to Certify that the thesis

Submitted by

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Entitled

**BUDGETING PROCEDURES IN PUBLIC**

**MANUFACTURING ENTERPRISES**

**(A Case Study of Dairy Development Corporation)**

has been prepared as approved by this Department in the prescribe format of  
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# VIVA-VOCE SHEET

We have conducted the viva-voce examination of the thesis presented by

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and found the thesis to be the original work of the students and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for Master's Degree of Business Studies (MBS)

## Viva-Voce Committee

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## **DECLARATION**

I hereby declare that the thesis entitled **BUDGETING PROCEDURES IN PUBLIC MANUFACTURING ENTERPRISES (A Case Study of Dairy Development Corporation)** submitted to the Shanker Dev Campus, faculty of Management, Tribhuvan University is my work, which is prepared as the partial fulfillment of the requirement of the Degree of Master of Business studies (M.B.S.) under the supervision of Mr. Joginder Goet, lecturer of Shanker Dev Campus.

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Researcher

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**Chudamani Bhatt**

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## Abbreviation

A.D.	=	Anno Domini
B.S.	=	Bikram Sambat
BEP	=	Break Even Point
CC	=	Chilling Centres
CEO	=	Chief Executive Officer
CM	=	Contribution Margin
CMPU	=	Contribution Margin Per Unit
CV	=	Coefficient of Variation
CVP	=	Cost Volume Profit
DDC	=	Dairy Development Corporation
Dep.	=	Depreciation
Exp.	=	Expenses
FY	=	Fiscal Year
GDP	=	Gross Domestic Product
HMG/N	=	His Majesty Government of Nepal
Kg.	=	Kilogram
Ltr.	=	Litre
MPCS	=	Milk Produces Co-operative Societies
P.E.	=	Public Enterprises
P/L	=	Profit and Loss
PPC	=	Profit Planning and Control
Rs.	=	Rupees
SD	=	Standard Deviation
SNF	=	Solid Non Fat
SP	=	Selling Price
SR	=	Sales Revenue
USA	=	United States of America
VC	=	Variable Cost
W/O	=	Written Off

# CHAPTER I

## INTRODUCTION

### 1.1 General Background

Nepal is a one of the poorest economy in the world; situated between the world's rapidly growing giant economies India & China. Nepal, a landlocked country with an area of 147,181 sq.km. Nepal is known as a country of natural beauty, bio-diversity, unique, heritage, diverse flora and fauna. The population of country is about 30 million with about five dozen ethnic groups. Per capital income of Nepalese people is less than \$ 240 per annum. Nearly 30% of population is living below poverty line. About 80% total population are employed in with the agriculture and agricultural sector. Agricultural activities like farming, dairy, poultry, keeping cattle etc. are prime area of agriculture sector in Nepal.

In Nepal nearly 31% of the population is living poverty line. It's social indicator, though improving over in previous time periods, are comparable to those of poorer African countries. Much of it's backwardness is attributed with centuries of political & economic isolation, a landlocked mountainous terrain a late start in development process the political conflict, social class system that existed in previous time period. Nepal embarked on economic developments very late in the 1950s. Agriculture sector provides employments to about 60% of people directly & indirectly. This sector contributes about 40% in GDP of total GDP. This industry can contribute a lot in the growth of GDP if few changes regarding traditional agricultural system can be replaced by advanced agriculture system backed by sufficient investment, uses of modern technical equipments etc. The growth in agriculture sector is constraint by small size & domestic market, traditional attitudes in farming and poor conditions of farmers itself. Although a brief period of economic reforms led to significant acceleration of non-agricultural sector growth in early nineties; it has been followed by extended period of political instability during which successive government have been largely in effective in advancing economic progress. This in turn had led to frustrate policies. However different government should have the priority for growth and development in regardless of their own beliefs and principles.

## **1.2 Public Enterprises (PE)**

"Public Enterprises means an activity of business character managed and owned 51% as more by the government central state as local, providing goods/services for a price" (Narain, 1977:7).

"Public Enterprises are generally owned and or controlled by government and are usually autonomously organized with the government providing the initial capital and being responsible for a continuous overview of their activities" (Joshi, 2053:3).

According to freedman, public enterprise is an institution operating a services of an economic as social character in behalf of the government, but as independent legal entity, largely autonomous in its management, through responsible to the public, through government and parliament and subject to some direction by the government, equipped on their hand with independent and separate funds of its own and the legal and commercial attributes of a commercial enterprise.

So, Public enterprise are those institutions where government owns majorities of the shares i.e.(more than 51%) but are largely autonomous in management being responsible to the public for fulfilling at least minimum physical facilities. They play the major roles in achieving the twin objective of social and economic development envisioned in the natural policy.

With the history of the third world, we find that public enterprises are established for rapid social economic development of the country. Public enterprises have to maintain proper balance between profit motive and service motive. Government of developing countries found it necessary to lake sustainable initiation in promoting economic and social development through the better planning and development of public sector activities. Therefore, Public enterprises are attached to be important due to both economic and social reasons. First public enterprise of the world was established in the port of London authority of Britain, which was formed in 1908 A.D.

### **1.2.1 Evolution of PE'S in Nepal**

The concept of public enterprises in Nepal for the first time emerged in 1932 than the Nepal government gave the character to set up the Nepal Trading Corporation Kathmandu in order

to promote government trading in Nepal. But the step towards the incorporation of PE was only initiated in 1953. When the Nepal Rasta Bank Limited established in 1973 in the private sector was restructured as a PE's has been projected as an essential instrument philosophy as well as strategy of the nation development Nepal has been started its planned economic development in 1956 by launching of first five year plan since then the number of public enterprises has been increased substantially in the various field of Nepal Government and now there are 43 public enterprise. Some of them are in privatization process. Public enterprises can be classified as follow:

- Manufacturing PE's
- Commercial PE's
- Financial PE's
- Public PE's
- PE's engaged in social services
- Development of services of PE's

### **1.2.2 Objectives of PE's in Nepalese Economy**

The main objectives of PE's in socio-economic generate objectives are as follow:

- ) Accelerate the rate of economic growth
- ) Development of infrastructure
- ) Success of economic planning
- ) Regional and balance development
- ) Supply of essential commodities
- ) Contribute to national funds
- ) Generate employment opportunities
- ) Development of big industries
- ) Attaining the social justice and social welfare
- ) Saving foreign exchange
- ) Strengthen economic stability
- ) Maintaining economic stability
- ) Acting as a model of entrepreneur
- ) Initiate research and development activities
- ) Pro vision for public utilities

### **1.2.3 Necessities of Public Enterprises**

Most commonly there are existences of two types of enterprises. Namely, first is private organization on which is establish as nation's desire and it affects directly in economic development of country and defends national interest. The reasons that the public enterprises are necessary for any countries are as follows:

- ) Government has specific development priorities and compulsion, which are unlikely to be met by private sector.
- ) Government ignitions are necessary for speeding of economic developing through creating infrastructure, ensuring the managerial capabilities, and so on. A case study of passenger sales of Nepal Airlines Corporation.
- ) The balance of payment is a determine faster for creation of import substituting industry and export promotion industries.
- ) Public Enterprises one created because of land received from socialist countries in Nepal many public enterprise were established by aid received some China and former USSR.
- ) To restrict the foreign domination in home market.
- ) To rise domestic selling and raise certain revenue for different development program.
- ) Redistribution of income can be effected in proper way public enterprises e.g. by lower class consumers or remote areas consumers.
- ) Public Enterprises are also introduced as an agency for development of under development of under developed region.

### **1.3 Dairy Development Corporation**

#### **Introduction**

In accordance with corporation Act B.S. 2021 Dairy Development Corporation (DDC) was established in B.S. 2026 Shrawan 1. The main objectives of DDC are to providing guaranteed market and fair price to the rule milk producers to the urban customers. Prior to the establishment to the corporation a separate dairy development board was constituted to carryout the task of dairy development in Nepal in wider scale. The dairy development activities in Nepal started in Tusal-9, village of Kavre district, in B.S. 2009 on experimental basis with a small scale of milk processing plant under the department of agricultural. In the year B.S. 2010/11 at the initiative of Dairy Development Board, the central dairy plant was establishment which has started milk collection, processing and marketing activities from the year B.S. 2014.

DDC has been collecting cow, buffalo and yak/chaury milk from 39 districts. Its present milk collection network has spread from Pachthar in east of surkhe in the west. DDC has been playing a special role in contributing to uplift the economic status of rural farmers. Thus dairying has been recognize as an effective tool for poverty alleviation and economic development of rural farmers. For example, in the FY 2055/56 DDC had a turnover worth of Rs. 1400 million out of which Rs. 896 million directly reached the rural farmers as milk payment.

DDC provide qualitative milk and milk products to the consumer at national level. The demand of the milk is increasing day by day because of high quality and hygiene DDC is is totally owned by the government. World food programmed government of New Zealand, USAID and Danish Government have been the major donors of the corporation. DDC, could not buy all milk offered by the farmers especially during the flush season. As a consequence, it had to impose milk holiday on certain days during the period. On the other hand, during the lean season DDC had been importing skimmed milk power to meet consumer's demand. To mitigate this problem a skimmed milk power plant was established in 1994, to substitute the import skimmed milk power from the F/Y 2055/56 DDC started exports of the milk to the boarder areas of India.

### **1.3.1 Objective of the DDC**

In the context of DDC, the main objectives defined which are follow:

- ) Provide a guaranteed market for milk to the rural farmers with fair price.
- ) Supply pasteurized milks and milk products to urban customers.
- ) Developed organized milk collection system to meet increasing demand for pasteurized milks and milk products.
- ) Develop an organized marketing system for milk products in urban areas.

### **1.3.2 Product Supplied by DDC**

A brief introduction of the dairy products presently supplied by the DDC as follows:

#### **1 Pasteurized milk**

Milk collected from rural in standardized to contain 3% fat and 8% solids – not fat(S.N.F) and pasteurize by a HTST pasteurize. Milk is heated to 73 degree centigrade for 15 seconds and promptly cooled to 4-5 degree centigrade. DDC also supplies pasteurized whole milk containing 5% fat and 8% S.N.F.

#### **2 Dahi(Yogurt)**

Dahi is one of the best-known and most popular fermented milk products consumed by large sections of the population through out the country. DDC produces two kinds of Dahi i.e. ordinary and special. Ordinary Dahi generally contains 3% Fat, 8% S.N.F. and 4% additional sugar. Special Dahi contains not less than 5% Fat, 3% S.N.F. and 4% additional sugar.

#### **3 Butter**

Butter is the solidified fat of milk, obtained from cream usually by chumming. It contains soluble vitamins A, D, E & K. It contains 80% Fat, more than 2% Curd and 2% common salt.

#### **4 Paneer**

Paneer is one of the indigenous varieties of milk products obtained from fresh buffalo milk. It contains 70-71% moisture, 29-30% total milk solids and 13% milk fat.

#### **5 Ice-cream**

It is frozen dairy product having rich source of calcium, phosphorus and other minerals. It contains 10% milk fat, 3.5% total solids.

#### **6 Cream**

It is obtained from cow and buffalo milk. It contains 32% fat and not more than 0.13 % titrable acidity. It is heated at 77 degree centigrade for 15 minutes and cooled to 4 degree centigrade.

## **7 Yak Cheese**

Yak Cheese is a product of high altitude of alpine region of Nepal obtained from yak milk. It contains not more than 43% moisture and 2.5% of edible salt. It should not contain less than 45% milk fat on dry matter basis. It is considered special variety of cheese in Nepal.

## **8 Kanchan Cheese**

Kanchan Cheese is pure cow milk cheese manufactured in pashupatinagar, Ilam of eastern hilly region of Nepal. This is the best cheese in Nepal and has good market. The chemical composition of kanchan cheese is similar to yak cheese but different in taste.

## **9 Buffalo Cheese**

It is also hard variety of cheese obtained from buffalo milk. It is manufactured in Nagarkot cheese factory and occasionally in Pokhara.

## **10 Skim Milk Powder**

DDC is also manufacturing skim milk powder from Biratnager. It is a milk dried to make it power by evaporation of its water content's. The remaining will be only the said part without fat and also content's about 3-4% moisture.

## **11 Sweet's**

DDC is also producing sweet product's like 'peda', 'lalmohan', 'Rusvery' ect. in the year 065-066 it produced about 135 metric ton. This Product's of DDC are also getting popularity among the consumer of other products of DDC.

## **12 DDC Fresh Milk**

DDC has been also producing a ready to drink milk product name called DDC fresh milk. This product comes in little bottle's in a liquated from in sweet flavor added with almond and kaju.

## **13 Ghee**

DDC ghee is a one major product of DDC it is produced throw butter. For these butter has to be processed at surten temperature for a while it turn in to Yellow-golden color.

### 1.3.3 Collection Network of DDC

DDC have 7 milk supply scheme for milk product production and distribution which are Kathmandu milk supply scheme (KMSS), Biratnager milk supply scheme(BMSS), Hetauda milk supply scheme(HMSS), mid-Westren milk scheme(MWMSS), Janakpur milk supply scheme(JMSS), Lumbini milk supply scheme(LMSS) and Dhangadhi Milk Supply Scheme (DMSS). The collection network under the milk supply scheme is presented is below. A total 66 chilling centers established under the milk supply schemes are in operation across the country for chilling the milk collected from milk produces association(MRA's) and milk produces cooperative societies (MPCS)

#### Collection Network (FY 065/066)

Scheme	MPCS	CC	District Covered
KMSS	281	22	7
BMSS	126	11	4
HMSS	167	8	3
MWMSS	40	4	4
JMSS	25	7	6
LMSS	79	9	3
DMSS	24	5	2
Total	742	66	29

Sources: DDC (sinhabalokan 065/66)

### 1.3.4 Marketing Network of DDC

DDC has managed the milk sales booths and sales centers in various urban areas such as Kathmandu, Biratnager, Hetauda, Pokhara, Butwal, Birgunj, Narayanghat for the sales centers are as follows:

#### Marketing Network (FY065/066)

Project	Milk sales Booth	Milk sales center
Kathmandu	1285	-
Biratnager	137	2
Hetuda	200	2
Western	-	-
Lumbini	60	2
Janakpur	20	1

Total	1702	7
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Source DDC(*sinhabalokan 065/066*)

#### 1.4 Statement of Problems

DDC is one of the manufacturing public enterprises established in Nepal, to fulfill the needs of milk and milk products. Government of Nepal is investing a huge amount every year in the public enterprises but the result is nominal. It is true that the success of any operation depends upon the planning system. Now, the main problem of the public enterprise is suffering from loss. The reason of such planning and application of in proper planning.

Government has invested the huge amount of recourses on DDC. The sale expectation of government from this corporation is to provide the hygienic product's to public promptly at reasonable price. Sometime's DDC has provided a more amount of dividend to the government. The government should provide more autonomy and obtain certain views towards corporation for conducting it's services independently and more effectively.

DDC is one of the leading public enterprise. Functioning in public utility sector such corporation is very much essential for the development of the nation by facilitating the lives and increasing the standard of people. Being so, it is successful operation is very essential not only for the institution itself but for the whole of the country. The above problem's are the hindrance to the corporation for the smooth operation. Rectification of these problems may in fact bring about a sound and self replying dependence in the corporation. The problems faced while across going in to the corporation are listed below.

- ) Why DDC is not able to manage it's internal budget discipline?
- ) Is increasing operating expenses trend to create operational problem?
- ) How government intervention to organization in the decision making process leading to poor budgeting system?
- ) Why DDC has large amount of cash and bank balance idle?

So, this research attempts to show the relationship between effectiveness & efficiency that can be achieved from proper & suitable budgeting system to realize the increasing revenue, profit & finally to turn an enterprise into a healthy & wealthy. Accomplishment of an organization's objectives depends. Upon the availability in allocation of those resources. It is

common that resources are scarce but the organization can do result better through the proper organizational policies and strategy. Hence, it is found that many of the organization either they are business or non-business, they practice budgeting in order to manage their financial and physical targets. Budgeting is utilized for planning process of an organization.

To achieve the remarkable success an organization has to practice profit planning. It contributes the organizations for profitability & better application of resources. It is not only limited up to minimizing risk but also it plays vital role in managerial steps and behaviors. Hence this study is conducted after realizing these above mentioned problems related to budgeting system. This study will examine budgeting culture of DDC.

### **1.5 Objective of the Study**

The basic objective of this study is to review the practice and effectiveness of budgeting of manufacturing concern with special attention to DDC. DDC is given the priority as it is one of the top most enterprises of the nation serving the people since years. The other objectives of the study are as follow:

- ) To analyze the budgeting system of DDC.
- ) To analyze the functional budgets on sales and production sector of DDC.
- ) To analyze the functional activities of DDC.
- ) To provide valuable suggestion & recommendation for improvement of the budgeting system.

### **1.6 Significance of the Study**

This research study is related with the budgeting in DDC which is a manufacturing enterprise. The study will try to analyze the strength & weakness of DDC. It is more important for DDC because it provides suitable suggestions & recommendations for improving the budgeting system. Budgeting contributes to improve profitability as well as overall financial performance of enterprises. It also acts as vital instrument for minimizing future risks, maximizing the output from the scarce resources and predicts the future. It is an important tool in the field of managerial decision making. Therefore, the study is very useful to an entrepreneurs & decision makes.

### **1.7 Limitation of the Study**

In every study, there is pragmatic limitation under which the study is to be made theory & practical does not necessarily match always. Besides till there are other working problems are as follows:

- ) The present study is limited only to budgeting system of DDC.
- ) The whole study is based on secondary data.
- ) The period selected for this study is only five years i.e. from fiscal year 062/063 to 066/067.
- ) The study is accomplished throughout the researcher's limited time, budget.

### **1.8 Scheme of the study**

The following chapters are included in this study:

Chapter-I	Introduction
Chapter-II	Review of Literature
Chapter-III	Research Methodology
Chapter-IV	Presentation & Analysis of Data
Chapter-V	Summary, Conclusion & Recommendation

# **CHAPTER-II**

## **REVIEW OF LITERATURE**

### **2. Introduction**

Review of literature is supported to revise the eminent literature relating to study various books, articles, journals, bulletin, reports, news, statements & thesis etc. which are the bases for preparing it. Some philosophers, writers or researches have given the contribution on it since many years.

Planning & controlling are the primary function of business. A business can't succeed or grow in today's global competitive environment without previous planning of activities. In most case, sales plan is considered the most important which is most difficult to prepare. Sales plan provides basic management decision about marketing. It is an organized approach for developing comprehensive revenue plan.

There are two parts in the review o literature, they are:

- ) Conceptual frame work
- ) Review of related study

### **2.1 Conceptual / Theoretical Review**

It is a part of review of literature. In this framework of decision about theoretical review from tent book, reference book & practice in profit planning & control are considered.

#### **2.1.1 Concept of Profit Planning & Control:**

Profit planning & control is done conceptually on these ground

- ) Profit
- ) Planning
- ) Control

##### **2.1.1.1 Profit**

Every business organization are established with certain objectives & goals. Such organizations have to implement activities to attain these goals by efficient use of human material & capital resources. Most obviously business organization focuses on the return

derived from investment apart from their social responsibility. Management of any organization has to pay certain attention for the proper utilization of resources, increasing productivity so as to earn profit. For this purpose a systematic view of management is very essential for every organization for its survival, growth & development.

An organization designed to make profit & profit is primary measure of its success. "Profit are the acid test of the individual firm's performance"[Joel; 1982: 3]. Almost all the business decisions are judged in relevancy to the profits. Profit is the primary objectives of a business. "Profit is a single for the allocation of resources & yard stick for judging managerial efficiency" (Kulkarni, 1992: 187).

There are several different interpretations of term "Profit". "An economist will say that profit is the reward for entrepreneurship for risk taking" (Joshi, 2054: 165). A labor leader might say that it is a measure of how efficiently labor has produced & that it provides a base for negotiating a wage increase. An investor will view it as a gauge of the return on his or her money. An internal revenue agent might regard it as the base for determining income taxes. The accountant will define it simply as the encase of a firm's revenue over the expenses of producing revenue in a given fiscal period. Using the accountant's measuring stick, management thinks of profit as:

- ) A measure of the performance toward the achievement of its goals.
- ) A tangible expression of the goals it has set for the firm's.
- ) A means of maintaining the health, growth & continuity of the company (Lynch & Williamson, 1993: 100).

"It is ultimate objective of management to maximize profits over the long term, consistent with social responsibility" (Richard, et. al., 1995:385).

There are conceptual conflicts about "Profit". "Profit in the accounting scene tends to become a long-term objective, which measures not only the success of a product but also of the development of the market for it" (Kulkarni, 1987:187).

Economic concept of profit is somehow different from above concept. Economic concept deducts implicit expenses from the accounting profit.

### **2.1.1.2 Planning**

Planning means deciding in advance about the functions of management that is going to take place in the near future. Planning is done on the basis of past expectations . "To plan is to look ahead & chat out the future course of operations. It is the determinant of a course of actions a desired result" (Bhusan, 1995:52).

Planning is the first management function to be performed in the process of management. Planning concentrates on setting & achieving objectives of an organization. "Planning is an analytical through process which includes:

- ) Assessment of the future
- ) Determination of objectives & goals in the light of the future
- ) The development of alternative course of action to achieve such goals & objectives.
- ) Selection of the best course of action among various developed alternatives (Sherlakar, 1982: 4.45).

"Management planning is a process that includes the following phases"

- ) Establishing enterprise objective & goals.
- ) Developing premises about the environment of the entity.
- ) Making decision about options.
- ) Initiating options to activate the plans &
- ) Evaluating performance feedback for re-planning.

(Welsch, et al., 1970:682).

Every successful business has a successful plan. "Planning is the key to good management" (Charles & Gary, 1997: 99).

### **2.1.1.3 Control**

Control is the most importance function of management. Controlling can be defined as a process of measuring & evaluating actual performances of each organizational component of an enterprises & initiating corrective action when necessary to ensure efficient accomplishment of enterprise objectives, goals, policies & standards. A current control

process, designed to help monitor the periodic activities of a business & each responsibility centre has the following phase:

- ) Compare actual performance with planned goal & standard.
- ) Prepare performance report that shows actual results, planned results & any difference between the above & below planned results.
- ) Analyze the variations & the related operations to determine the underlying causes of variations.
- ) Develop alternative option to correct any differences.
- ) Follow up to appraise the effectiveness of the correction.

#### **2.1.1.4 Profit Planning**

Profit planning is planning for future operation in such a way as to maximize the profit as to maintain a special level of profit. A comprehensive profit planning is also known as broad budgeting schedule developed in financial statement. Profit planning deals with the, development of objectives, specification of short-term goal, development of strategic & tactical profit plan.

Profit plan is defined, as an estimation & predetermination of revenues & expressed that estimates how much income will be generated & how it is would be spent in order to meet investment & profit requirement. In the case of institutional operations it presents a plan for spending income in manner that does not result in loss. "It represents an overall plan of operations, covers a definite period of time & formulates the planning decisions of management (William, 1998: 502-504).

Profit planning is an advance decision of expected achievement based on the most efficient operating standard. It is established to compare regularly the actual performance & accomplishment budgeted sales. Profit is the outcomes of effective & efficient management which is affected by various factors. Profit planning is that tool, which manage all the factors efficiently & efficiently. "Profit planning has to resolve a number of conflicting issues before expressing the established dissections & decisions & decisions made by top management. Conflicting & should be brought into produce more sales & profit in working capital & the risk of bad debts" (Welsch, et al., 1970:682).

Therefore the profit planning is a fundamental part of the overall management functions & is a vital part of the total budgeting process. The management determines the profit, goals & prepare budget that will lead them to the realization of these goals. Profit planning is an important approach developed to facilitate for the effective performance of management process like as planning, organizing, staffing, controlling etc.

#### **2.1.1.5 Long-Ranges & Short-Ranges Profit Plan**

While preparing a systematic profit plan two types of profit plans are developed:

- i) Strategic (Long-Range) Profit Plan
- ii) Tactical (Short-Range) Profit Plan

The strategic profit plan takes a time horizon of three or more years in future & the later for short period. A part of this plan is more or less informal as presented by tentative commitments made by the executive committee in the organizational planning seasons. The long range plan covers all the key areas of anticipated activity; sales, expenses, research & development, capital expenditure, cash, profit & return on investment.

The short range plan shows the primarily annual results, the detail by months, responsibility & products. At the end of the month or quarter throughout the year, the sales plan is studied & revised by adding a period in the future & by dropping the period just ended thus tactical sales plan are usually subject to review & revision on a quarterly basis.

#### **2.1.2 Purpose of Profit Planning**

A comprehensive profit planning is a systematic & formalized approach that states & communicates the expectation by accomplishing management of the firm by efficiently utilizing the available resources so as to earn the maximum profit, which is the main objective of any organization. The main objective of PPC is to accomplish planning, co-ordination & control responsibilities. The purpose of budgeting or profit planning & control are as follow:

- ) To co-ordinate the activities & efforts in such a way that the use of resources is maximized.

- ) To communicate expectations to all concerned with the management of the firm. So that they are understood, supported & implemented.
- ) To state the firm's goal (expectations) in clear, formal terms to avoid confusion & to facilitate their attainability.
- ) To provide detailed plan of action for reducing uncertainty & for proper direction of an individual & group efforts to achieve goals.

### **2.1.3 Budgeting: As Tool of Profit Planning**

Budgeting is an expression of firm's plan in financial form for a period of time in future, it is an estimate of the future needs concluded for a definite period. A business budget is plan covering all phases of operations for a definite period in future. It is a formal expression of policies, plans, objectives & goals laid down in advance by top management for the undertaking as a whole.

"Budget, as a tool of planning & control in an organization. Planning involves the specification of basic objectives that will guide it in operational terms, it involves the step of setting objectives specifying goals, formulating strategies & expressing budgets. A budget is a comprehensive & co-ordinate plan expenses of an enterprise for some specified period in future" (Khan & Jain, 1993:296).

"A budget, is a quantitative expression in a plan of action & an aid to co-ordination & implementation. Budgeting includes; sales, production & distribution. Financial aspects of an organization. Budget programs are designed to carry out a variety of functions planning, performance evaluation, co-ordination activities, implementing plans, communicating, motivating & authorizing actions (Horngreen, 1976:121-122).

### **2.1.4 Principle of Budgeting**

The principles of budgeting are as follows:

- ) The budget has to be prepared in terms of cash. Both receipts & payment are made in cash.
- ) Budget should be prepared on an annual basis. This enables the authorities to review their financial position.
- ) Budget estimates should be gross not net.
- ) The budget should draw a clear picture of the financial transaction of the year.

- ) Budget should be balanced in the sense that current expenditure should be met out of current revenue.
- ) Budget should be made on department basis.

### **2.1.5 Process of Budgeting**

The budget is a detail plan of all transactions. It draws a complete picture of income & expenditure. This is growing tendency to move from the single year budget to long-term planning based on work-study & system analysis. Its essential ingredients are:

- ) Analysis
- ) Planning
- ) Monitoring
- ) Evaluation

Profit is not just happen but it is planned. The major process of profit planning is as follows: (Welsch, 1979: 73-75).

- ) Identification & evaluation of internal relevant variables.
- ) Revise of the broad objectives of the business.
- ) Development of specific goals for the business.
- ) Development & evaluation of business strategies.
- ) Specification persecutes management planning instructions.
- ) Preparation & evaluation of project plans.
- ) Development approval of strategic & tactical profit plan.
- ) Implementation of profit plan.

A controlling function of management; preparation of monthly performance reports by responsibility & follow-up the same by providing feedback, take corrective action, re-plan etc. are performed.

### **2.1.6 Limitations of Budgeting**

The following main limitation's of budgeting:

- ) It is difficult, if not impossible, to estimate revenues & express in our company realistically.
- ) Our management has not interest in all the estimates & schedules. our strictly information system is better & works well.
- ) It is not realistic to write out & distribute our goals, policies & guideline to all the supervisors.
- ) Budgeting places too great a deem & on management time especially to revise budgets constantly too much paper work in required.
- ) It takes away management facility.
- ) It creates all kinds of behavioral problems.
- ) It places the management in a strait jacket.
- ) It adds a level of complexity that is not needed.
- ) It is too costly, aside from management time.
- ) The managers, supervisors & others employees hate budgets.

### **2.1.7 Requirements for Effective Budgeting**

#### **i) Support to Top management**

The budget program can only be successful when top management offers the wholehearted support & when all managers are motivated about the implementation of budget program.

#### **ii) Clearly Defined Organization**

Business organization should be defined so as to provide maximum benefits-these should be sound plan with well-defined & adequately maintained responsibilities. Records should be clear, consistently departmentalized & established in such manners will indicate definite responsibility on each unit or section of the business.

#### **iii) Accurate Accounting System**

Accounting system should be developed so far to hold each part of the organization to its responsibilities. The budget manager's co-ordinate action & whenever this is broken down or interfered with the responsible factor should be unmistakably revealed.

#### **iv) Unambiguous Policy**

A budget program is always based on certain fundamentals.

#### **v) Preparing by Responsible Executives**

Formulation of budget in the participation of executives who are entrusted with the performance & implantation is one of the essentials of effective budgeting.

#### **vi) Logical Sequences in the Budget Preparation**

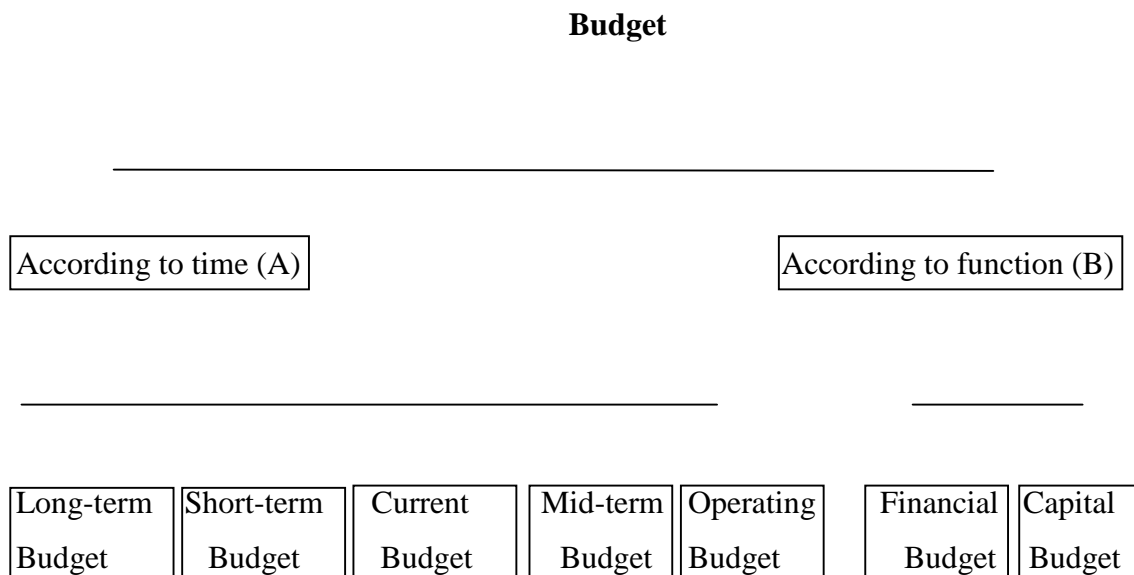
It is essential that proper procedure should be involved for the preparation, submission, examination & review of budget figures in logical sequence.

#### **vii) A Degree of Flexibility**

Flexibility for the both possible & in foreseen circumstances requires essentially in budgeting.

### 2.1.8 Classification of Budget

PPC, the systematic & formalized approach to accomplish planning, co-ordination & control responsibilities of an organization is a comprehensive budget that includes normally two types of budget are as shown in below:



#### A. Classification According to Time

Budgets are classified into four major part of the time factor. They are;

##### 1. Long-term Budget:

Long-term budget is known as strategic plan. Usually it is 5 or 10 years strategic or long-term budget. It requires dept analysis of future market potentials. This may build up for a basic foundation such as population changes, state of economic, industry projection & company objectives. These budgets are related to planning the operating of an organization & expressed in physical quantities.

##### 2. Short-term Budget:

Short-term budget is known as tactical plan. Usually it 12 months detailed by months & quarterly budget. Short-term budget includes detailed plan for each major products & for grouping products. For planning & controlling purpose short-term budget must be developed by responsibility center. Because short-term profit plan provides major consideration for planning & controlling purpose physical units or jobs & expressed in monetary terms.

### **3. Current Budget:**

These budgets cover a period of one month or more & short-term budgets are modified according to current conditions or prevailing situation.

### **4. Mid-term Budget:**

These budgets are drawn usually for a mid-period of whole budgeted years. It is also called intermediate or amendment term budget. These types of budgets are required to adjust the economic fluctuation on long term & short-term budget.

## **B. Classification According to Function:**

Budgets are classified into three major parts of Function. They are:

### **1. Operating Budgets:**

Operating budgets are the budgets that relate to the planning of operations of the enterprises, such as sales, production, purchase, inventory etc. Operating budget is composed of two parts: a program or activity budget that specifies the operations or function to be performed during the next year & a responsibility budget that specifies plans in terms of individual responsibilities.

### **2. Financial Budgets:**

Financial budgets are concerned with the financial implications of the operating budget: the expected cash inflows & cash outflows, financial position & the operating results.

These budgets are connected with:

- i) Search of & use of final capital i.e. Cash Budget
- ii) Prepare a financial statement i.e. Balance sheet and income statement & statements of changes in financial position.

### **3. Capital Budgets:**

These are the budgets, which involve the planning to acquire the projects that require large sums of funds & have long-term implications for the firm, together with the timing, estimated costs & cash flows of each project. "Capital budgets are difficult to prepare because estimates of the cash flow over a long period have to be made which involve a great degree of uncertainty" (Paney, 1999:298).

According to the function budget which content above three types of budget, in separately described as below:

### **I. Sales Budget**

"A sales budget is a detailed schedule of expected sales for coming period. It is usually expressed in both amounts & units. Once the sales budget has been set a decision can be made on the level of production that will be needed to support sales & the production budget can set well. The sales budget in the starting point in preparing the master budget. The sales budget is constructed by multiplying the expected sales in units by the sales price. Generally sales budget is accompanied by computation of expected cash receipts for the forthcoming budget to assist in preparing the case budget for the year. Expected cash receipts are composed of collections on sales made to customer in prior period plus collection budget period" (Welsch & Gordon, 1989: 272-273).

A brief profit planning d described about sales budget on this project work from beginning to ending, lookout over it. Sales budget in the initial budget & classified according to group[s] of products, time, salesman & geographical location. It expressed in quantities (units) & monetary term.

Sales plan (units) = Sales forecast + Policy + Commitment + Promotion work  
(Source & action)

Sales plan (Rs.) = Sales plan (units) x Selling price

Under this plan, pricing policies depends upon the nature & size of business e.g. single pricing policy, multiple pricing policies & average pricing policy.

### **(a) Planning & controlling sales & services (sales & Service Budget):**

Sales budget is the corner stone of profit planning & control. It is also known as ends & means of PPC. It is foundation for the preparation of all other budgets. Sales budget deals both with revenue & cost. It also deals with the policy of business expansion or intensification. "The sales planning process is a necessary part of PPC because (a) it provides for the basic management decisions about marketing, & (b) base on those decisions, it is an organized approach for developing a comprehensive sales plan. If the sales plan is not realistic, most if not all of the other parts of the overall profit plan also are not realistic. Therefore, if the managements believe that realistic sales plan cannot be developed; there is little justification for PPC" (Welsch, et al., 1991:171).

Sales budget prepare for more than one year is called strategic or long-term sales budget & for the period of three months to one year is called tactical or short-term budget. Since sales budget is the sales estimation of the future uncertain period the result of actual sales with less variance from targeted sales would be termed as a good plan. Therefore the efficiency of planner would be expertise on the basis of the same.

### **II. Inventory Budget:**

Inventories may be grouped into three classes: (a) Raw materials (b) Work-in-progress & (c) Finished goods (merchandise for a retailer). As is true of accounts receivable, inventory level depend heavily upon sales. However, whereas receivables build up after sales have been made, inventory must be acquired ahead of sales. Inventory budgets focus on three questions.

- ) How many units of each inventory item should the firm hold in stock?
- ) How many units should be ordered at given time?
- ) At what points should inventory be order?

### **III. Production Budget:**

After the sales budget has been prepared, production requirements for the forthcoming budget period can determine & organize in the form of a production budget sufficient goods will have to be available to meet sales need & provide for the desired ending inventory. A portion of these goods will already exist in fro of beginning inventory. The reminder will have to be produced. Thus, production needed, can be determined by adding budgeted sales units to the

desire ending inventory & deducting by adding budgeted sales units to the desired ending inventory & deducting the beginning inventor from the total.

The production budget is an estimate of the quality of the goods to be manufactured during the budget period. In developing production budget, the first step is a stability policy relative to inventory levels. The next step is the determine the total quality of each production that is to be manufactured during the budget period. The third step is to schedule this production that is to be manufacturing executive must have of overlap, information relative to the manufacturing operation necessary for each product. They must have at h& information relative to the use & capacities of each manufacturing department. The company cost accounts should provide certain historical data essential in planning production qualities & cost. The direct of profit planning & control should provide staff assistance when needed. When the production department completes the recommended production, it should be submitted to the executive.

The production budgeting refers the development of policies about efficient production level, use of production facilities & inventory level. The second step of PPC is the level, use of production facilities & inventory levels. The second step of PPC is the production budget. This is a forecast of production in terms of quantity (Units). It can be computed by following adjustment.

$$\text{Production Budget (units)} = \text{Sales (Units)} - \text{Inventory}$$

Production policies are depending upon the size, nature, economic trend & season (time) of business. They are (a) Stable production policy versus un-stable inventory policy, (b) Un-stable production policy versus stable inventory policy, & (c) Flexibility in both production & inventory.

#### **IV. Material Consumption Budget:**

When the sales plan & required quantities of each product to be manufactured specified in production plan, the next step is to prepare material budget. When the production budget is complete then the requirement of raw material & components is in the process of manufacturing the finished products could be estimated. Base on the production budget, the qualities of materials to be used in determined & this determination of materials usage leads to the solution of the problem of when & how to purchase of each material. A purchase

budget gives the details of materials purchase to be made in the budget period. While preparing the material plan the following items, (a) production requirements for materials & component parts, (b) raw materials & parts inventory level, & (c) purchase of raw materials.

Material consumption Budget= Production (units) x Standard Rate (usage rate)

#### **V. Material Purchase Budget:**

The purchase budget specifies the estimated quantities to be purchased & the estimated cost for each raw material & the required delivery dates. The material & parts budget provides the purchasing manager with the data needed to develop purchase enterprise. The purchasing manager should be assigned the responsibility for preparing a detail plan of purchase. It is direct responsibility of purchasing manager to be knowledge about the market for items that must be purchased & to plan the unit cost for use in the purchase budget. Purchase budget specifies both quantities of raw material to be purchase & amount to purchase materials. The purchase budget is directly concerned with the timing of actual receipt of raw material rather than with the timing of usage or purchase orders.

The purchase manager orderly maintains the time of purchase materials & inventory requirement by material. This budget is based upon the material consumption. How many materials are consumed in finished goods, is the basis concept of material purchase budget. It is expressed into quantities (units) & monetary terms by following adjustment.

Material Purchase Budget (units)= Material Consumption (Units)= Inventory (material)

Material Purchase Budget (Rs.)= Material Purchase (units) x Price Rate

#### **VI. Labor Budget:**

Planning labor cost involves major & complex problem areas. (i) Personnel need, (ii) recruitment (iii) training (iv) job description & evaluation (v) Performance measurement (vi) union negotiations & (vii) wage & salary administration. A comprehensive profit-planning program cannot resolve specific personal problem, but it direct careful consideration to hem & aids in placing them in perspective. Effective planning if long-term & short-term labor cost will benefit both the company & it's complies.

This budget is based upon the production. How many hours & labor are needed to produce finished goods is the basic concept of labor budget. It can be presented separately for different types of labor like: skilled, semi-skilled, and unskilled labor into hours, no of labor & monetary terms by following adjustment.

$$\text{Labor budget (hours)} = \text{Production (units)} \times \text{Standard hour rate}$$

$$\text{Labor budget (Rs.)} = \text{Labor hours} \times \text{Rate per hour}$$

## **VII. Overhead Budget:**

In developing a profit plan expenses must be planned carefully planning expenses should flows on (1) projection cash out flows & (2) effective cost control. Managers should view expenses level essential to support the objective & planned programs of the enterpriser. Thus, expenses planning should not focus on decreasing expenses. Viewed in this light realistic expenses planning & control may prompt either decreasing or decreased expenditure, the gain to the enterprises (Such as profit return on investment, cash) accrue as a result of better operational programs, increasing scope of activities, improved quality & higher employee, performance, expenses planning & control must focus on the relationship between expenditure & benefits derive from those expenditures. The essential benefits must be developed as planned goals & sufficient resources must be planned to support the program essential for their accomplishment.

Overhead is a part of total production costs. It has not directly traceable to specify products & jobs. Manufacturing overhead consists of (i) indirect material, (ii) indirect labor, (iii) all other miscellaneous factory expenses such as taxes insurance, depreciation repairs etc. It create problem on allocation to producing department & service department. Producing department & service department both are planning a vital role in this budget, so should be considered the following steps.

Step 1 Selection of activity base.

Step 2 Planning volumes of activities.

Step 3 Computation of overhead rate of each producing department.

Step 4 Computation of overhead rate of each product.

Step 5 Budgeted costs of goods manufactured.

### **VIII. Cash Budget:**

"Cash budget generally indicates the outflow & inflow. The key point in investment analysis is to focus. Exclusively on difference in expected future cash flows are treated the same whether they arise from operations, purchase or sales of equipment of investment in or recovery of working capital. The opportunity cost & the time value of money are tied to cash flowing in or out of the organization not to the source of the cash" (Khan & Jain, 1993: 175).

Cash budgets are necessary in business operation. Payment must be made in cash & receipts are deposited in the cash account. Cash is a "non-earning" assets in the sense that although it is needed to pay for labor & materials, to buy fixed assets, to pay taxes, to service department, to pay dividends & so on. Cash itself earns no interest. Thus the foal of cash budget is to reduce cash holding to the minimum necessary to conduct business.

"One of the biggest challenges is determining those cash follows relevant to decision making. Relevant cash flows are expected future cash flows that differ among alternatives. Capital investment projects are typically having five major categories of cash flows" (Dangol & Parajapati, 2001: 837).

- i) Initial investment in machine & working capital.
- ii) Cash flow current disposal of the old machine.
- iii) Recurring operating cash flows.
- iv) Cash flow terminal disposal of machine & recovery of working capital.
- v) Income tax impacts on cash flow.

### **IX. Office & Administration Budget**

"Office & administration expenses included operational costs other than manufacturing & administration. In general, they are incurred in the supervision of l& service to all major function of the business rather than in the performance of any on function. Because a large portion of administrative expenses are fixed rather than variable, the nation persists that they can't be controlled. Outside of certain to management salaries, which in the case of a corporation, may be set by the board of director, most administrative expenses one determined by management policies & decision. It is common to find administrative costs top heavy when measured by the volume of business line. Generally I is best to best to base budgeted administrative expenses ion specific plans & programs. Post experience, adjusted for articulated change in management policy the general economic condition is helpful.

Because most administrative expenses are fixed, an analysis of the historical record will generally provide a sound basis for budgeting them" (Welsch, 1986:276-277).

Each administrative expense should be directly identified with a responsibility center & the center manager should be responsible for planning & controlling expenses. They are incurred in the responsibility centers that provide support & service to all functions of the enterprise, rather than in the performance of any one function.

#### **X. Selling & Distribution Budget:**

Selling & distribution expenses are not products. A separate distribution expenses plan should be developed for each responsibility center in the distribution function. This expenses budget should separately identify controllable & non-controllable expenses & budgets should be detailed by interim time period" (Welsch, et al., 1993: 314).

#### **2.1.9 Fundamental of a Comprehensive Profit Planning & Control:**

The major fundamentals of profit planning & control program are;

##### **1. Managerial Involvement**

PCC program requires managerial support, confidence participation & performance orientation. All levels of management especially top management has to consider following points in order to make PPC program successful

- ) Understand the nature & characteristics of profit planning & control.
- ) Be convinced that this particular approach to managing is preferable for this situation.
- ) Be willing to devote the effort required to make it operated.
- ) Support the program in all its ramifications, &
- ) View the results of planning process as performance commitments.
- ) View the results of planning process as performance commitments.

##### **2. Organization Adaptation to PPC**

Sound organizational structure for the enterprise, clear-cut lines of authority & responsibility are the bases for a PPC program. The purpose of organization structure & the assignment of authority are to establish a framework within enterprise objective may be attained in a coordinated & effective way on a continuous basis. Managerial & operational efficiency, except in very small enterprises are increased through desegregated organization sub-units.

These units are assigned with certain authority & responsibility so as to hold them responsible for the outcomes of that unit.

### **3. Responsibility Accounting**

Planning is based upon historical data, present information & future expectations. Among them historical data are largely generated by the accounting system & control includes the measurement of actual results against objectives, goals & plans. Consequently structure of the enterprise.

### **4. Full Communication**

Communication in the management & operation of an enterprise seems as a major managerial problem. Communication is the transmission of ideas & thought from one person to another. Thus unifying ideas, messages, objectives & activities of managers & subordinates toward same understanding enhance their efforts toward better performance in the same direction.

## **5. Realistic Expectations**

Management should not be over confident & over optimistic about business environment & its plans. Failure to achieve objectives may discourage management. Management has set objectives as regards to the sales, production levels, costs, capital expenditures, cash flow & productivity which determine the future success of the PPC program. To be realistic, exceptions must be made in relation (i) to their specific time dimension & (ii) to an assumed (projects) external & internal environment that will prevail during that the span.

## **6. Time Dimension**

Whatever & individual or an entity is ideal or busy; time pass at the same rate. For the effective implementation of PPC concept, it requires that management of the enterprise establish definite time dimension for certain type of decisions. Time dimension perspectives in managerial planning require a clear cut distinction between historical considerations and future consideration. Timing of planning activities suggest that there should be a definite management time schedules established for imitating & completing certain phases planning process.

## **7. Flexible Application**

Every organization should adopt a flexible PPC program because flexibility enables management to grasp the opportunities that are not covered by the budget. Flexibility PPC programmed makes managers & their subordinate feel easy & freedom for making proper decision. Another an important thing is that business runs in the word of uncertainty, factors affecting entity in its objective cannot be always predicted but rather it changes from time to time. Therefore the POPC program should be flexible enough to move accordingly to the changing needs.

## **8. Behavioral Viewpoint**

We cannot implement & get targeted result from ever the best PPC program, if peoples associated in the enterprises are not coordinating each other. These people include both managers & the other employees, because all of these individuals significantly involved in the attainment of enterprise objective. Thus, "People" constitute the most critical part of management not other resources of the firm. For the successful & meaningful PPC program coordination of organizational goal with employees' goal should be made.

## **9. Follow Up**

The fundamental holds that both good & sub standard performance should be carefully investigated for the following reason.

- ) If the PPC program is not successful in achieving the standard of performance, follow-up procedure is necessary to lead in a constructive manner to immediate corrective action.
- ) If the performance exceeds the standard of performance, analyze fact about standard. If it comes true, provide for a transfer of knowledge to similar operation.
- ) Follow-up provide a basis for better planning & control in the future.

### **2.1.10 Merits of profit planning & control**

- ) If forces early consideration of basic policies.
- ) It requires adequate & sound organization structure; that is, there must be a definite assignment of responsibility for each function of the enterprises.
- ) It completes all member of management, from the top down, to participate in the establishment of goals & plans.
- ) It completes departmental managers to make plans in harmony with the plans of other departments & the entire enterprise.
- ) It requires that management put down in figures what is necessary for satisfactory performance.
- ) It requires adequate & appropriate historical accounting data.
- ) It compels management to plan for the most economical use of labor material & capital.
- ) It instills at all levels of management the habit of timely, careful & adequate consideration of the relevant factors before reaching important decision.
- ) It reduces cost by increasing the span of control because fewer supervisors are needed.

## **2.2 Review of Related Studies:**

### **2.2.1 Concept**

Literature review is the study of past research this was conducted by previous researcher in selected area or topic of budgeting. The purpose of literature review is to find out what research studies have been conducted in ones chosen field of study & what remains to be

done? It provides the base for developing comprehensive theoretical frame work. Which hypothesis can be developed for testing literature review can be done by conducting library where there are all inds of published. Materials including thesis, business reports, government publication & other articles are available.

There is no research work made on the related topic on sales budget separately. Whatever the research in the area of budgeting have been made are also not depth & detail on the sales budget because objectives is board but find out is not exit due to the time & resources limit. Some dissertations have been made to review. Submitted in the topic of profit planning & control.

### **2.2.2 Review of Previous Research Work**

**Mr. Adhikari (2004)** has conducted the research on the topic "Profit planning in manufacturing enterprises: A case study of the DDC." This research has highlighted & analyzed the problems & prospects in budget application & implementation. This research study has also tried to find whether new trend of DDC is positive & perfect in case of profit planning & control or not.

#### **His main objectives:**

- ) To analyze the functional budgets on sales & production sector of the DDC.
- ) To analyze various accounting ratios, measures the profitability & efficiency of the DDC.
- ) To analyze the budget target & it's achievement along with reason of deviation, if any.
- ) To provide valuable recommendations & suggestions based on analyses.

#### **His major findings:**

- ) Production & sales of DDC is increasing annually although the growth sales is fluctuated.
- ) The corporation has no paper practice of segregation cost in to fixed cost & variable cost.
- ) Most of the budgeted figures are higher than real figure.
- ) DDC has applied stable inventory policy with opening stock of inventory but this policy is not fixed.

- ) DDC has prepared direct labor budget only based on technical & administration. It is not prepared according to time & rate.
- ) Capacity utilization is very high but the production ratio is less.

**His major recommendations:**

- ) To increase & maintain the present efficiency in every field try to find causes to generate losses for a long period.
- ) DDC should clearly define its board objectives because objectives are the basic guidelines of the enterprises.
- ) DDC should analysis its variances in effective way.
- ) System of periodic performance reports should be strictly followed to be conscious about poor performance & take corrective actions immediately & timely.
- ) DDC should define its long range & short range plan. The plans programs, strategies, goals, targets, policies etc should be formulated. The participation of most of the personnel in planning give them feeling they have formulated the program & makes responsible & committed to accomplish them.

**Mishra (2006)** has a significant contribution on the topic "Profit planning in Tokla Tea Estate (TTE)". The data were collected from both primary & secondary sources. The basic objectives of this research paper are to examine how for the different functional budgets are being applied as a tool of profit planning in the estate.

**His main objectives:**

- ) To interpret the trend of profit/loss & cost of the company in the light of profit plan.
- ) To identify the sales plan for the company in the high of strategic & tactical sales plan.
- ) To analyze the production plan & actual production trend of the company.
- ) To review the Tokla Tea estates Profit Planning on the basis of overall managerial budgeting.

**His Major Findings:**

- ) Inadequate evaluation of relevant internal & external variables.
- ) Problems of maintaining the quality of the products.
- ) Inadequate profit & productively due to lack of skilled manpower, excessive fixed cost & inventory.
- ) Unrealistic sales for casts etc.

**His major recommendations:**

- ) TTE should define short term and long term plan of its programs, strategic, goals, target etc.
- ) Specify the broad objectives and management responsibilities in planning and control.
- ) Careful planning by top management prior to budget initiation and implementation approach should be provided.
- ) TTE must identify about controllable and non-controllable expenses like variable cost, fixed cost, semi variable cost and reduce its over stocking of financing goods, current liability, financing restructure etc.

**K.C. (2007)** has conducted a research on the topic "Profit planning in Herbs Production and Processing Co. Ltd. ". This research work is basically concerned is to highlight the current practice of profit planning & it's effectiveness in the company's.

**His main objectives:**

- ) To examine the present profit planning premises adopted by the companies.
- ) To analyze the difference between budgets & actual achievement of the companies.
- ) To point out suitable suggestion & recommendation.

To conduct this research both primary & secondary source of data have been used. The time period was five years in this study.

**His Major findings:**

- ) Specific goals & objectives are not conveyed to lower level of staff & it denotes the absence of MBO principle of management.
- ) There is lack of proper coordination between the various responsible departments.

- ) There is no cost classification system. Overhead are not classified systematically & it creates problem of analyze its expenses properly.
- ) Absence of skilled & purely academic manpower in budgeting section, the company has unable to prepare systematic future plan.
- ) There is no arrangement of any accounting & management planning training by the company.
- ) Actual sales are very below than budgeted sales.
- ) There is lack of entrepreneurship in the operation of the company.
- ) The companies are suffering from low contribution margin & high fixed cost.

**His major recommendations:**

- ) Company should clearly define its objectives and goals.
- ) Highly qualified and trained manpower should be hired and present manpower should be trained.
- ) Company should have to develop effective program to avoid existing problem.
- ) Company should focus in proper material planning and should try to minimize the gap between planned and actual sales as well as production.
- ) Company should develop periodical performance reports about activities.

**Mr. Poudel (2008)**, has conducted a research on the topic "Profit Planning Practices of JB's Industry" this research study is related with the profit planning.

**His main objectives:**

- ) To make trend analysis of cost and profit.
- ) To examine profitability of JB's industry.
- ) To analyze the post plan on the basis of overall managerial budgeting of JB's industry.
- ) To identify the strength and weakness of industry.
- ) To provide valuable suggestion for maximization of profit of the industry.

**His Major Findings:**

- ) The industry does not use long range profit plan.
- ) The industry has high administrative cost.
- ) The profit trend of the industry is not satisfactory as compared to sales, profit is very low.
- ) There is no systematic and effective cost control mechanism to reduce cost.

) The industry has not practice of cash flow statement.

**His Major Recommendations:**

- ) J.Bs industry shows develop systematic, scientific and realistic strategic sales plan by considering deferent factors affecting sales.
- ) All persons should be given operating to participate on decision making and planning process of the industry.
- ) All department should be delegated full authority and accountability for their work.
- ) Planning department should create new ideas for innovation of new product the research and development department.
- ) To improve the profitability the industry should utilize its ideal capacity by introducing new resources of raw materials.
- ) regular monitoring and supervision is necessary to control the wastage working hour.

**Mr. Pant (2010)** has conducted a research on the topic sales budgeting as the tool of profit planning in public enterprises: A case study of Nepal electricity authority". The data were collected from both primary and secondary sources.

His main objectives:

- ) To analyze the sales budgeting and practices adopted by NEA.
- ) To examine sales trend of NEA.
- ) To analyze the relation between budgeting sales and its effect on profitability of NEA.
- ) To provide valuable recommendation and suggestion to NEA.

His major findings:

- ) NEA has its own system and practices of budgeting.
- ) NEA has a practice of preparing both strategic and tactical profit plan. But the strategic plan is limited only to the top level executives.
- ) There is a high degree of positive correlation between plan sales and actual sales. i.R. 0.99% approximately it means actual sales changes in the same devotion and in about the same speed of the planned sales.
- ) NEA prepares almost all of the necessary budget such as operation budget, financial budget, appropriation budget and NEA has been suffering from series of losses since half decade.

- ) The CV and S.D. of actual sales are different comparison to planned sales. It indicates that actual sales are more variable than the budgeted sales.
- ) NEA has been suffering from loss since last half decade. Its loss is in increasing trend.

**His major recommendations:**

- ) The NEA should have deep analysis of its strength and weakness. It should try to overcome the weakness by applying its strength.
- ) NEA should try to increase the sales value and should reduce the power purchase. It can be done reducing power leakage and wastage, establishing new plants and increasing the capacity utilization.
- ) Government of Nepal should revise about the royalty amount because high royalty expenses seem also a cause of loss to NEA.
- ) NEA should maintain its period performance report systematically and also should take corrective action if necessary.

### **2.3 Research Gap**

All above mentioned studies about profit planning & controls are basically related with the profit planning system of Nepalese business enterprises. The previous research did not disclose which of the profit planning & control tools are in practice which is not & why. All of them have pointed out that there is no proper planning & control system in DDC & other. This research is emphasizing the budgets role in the profit planning system which incorporates the revenue as well as expenses planning present & past researches. This research is conducted to fill up this research gap.

## **CHAPTER III RESEARCH METHODOLOGY**

### **3.1 Methodology**

Research methodology is the way to solve systematically about the research problem. Research methodology is a general plan of how the researcher is going about answering the research questions we has set. The research worked undertaken following a systematic way. This is called the research methodology. This chapter describes the research methodology or research strategy employed in this study. The major contents of research methodology or as follows.

### **3.2 Research Design**

Research design is the plan, structure and strategy of investigation conceived to obtain answers to research questions. Generally, research design refers to definite procedures and techniques. Which guide to study propounds ways for research visibility.

Both analytical as well as descriptive designs have been applied design for this study. This study is closely related with the various areas of sales, production and other related statement.

### **3.3 Period Covered**

The present study covers two times dimensions long range and short range. The time period of five years for the purpose of trend analysis for long planning and the period of one year (current year) for the purpose of short range planning are taken. Data are so collected from fiscal year 2062/063 to 2066/067. For long range planning and for short range planning data are collected from fiscal year 2066/067.

### **3.4 Population and sample**

As this research aims at studying budgeting practices of wholly DDC i.e. a single corporation and data have been analyzed for whole five years of its operatory. It is not concerned with any branch or product of DDC. So, there is not any different in the population and sample terms for this study that means DDC is a sample and population itself.

### **3.5 Nature and Sources of Data**

This study is mostly based on secondary data. However, primary data and information have been obtained through informal discussions with the executives and other related staffs of the DDC. The secondary data were collected from annual reports of DDC. Balance sheet, profit and loss A/C, cost detail sheet previous thesis and other relevant published or unpublished documents of DDC.

### **3.6 Research Variables**

The research variables of this present study is mainly sales, production inventory profit and loss, capacity utilization, manpower, capital expenditure related to short term and long term periods of DDC.

### **3.7 Research Tools Used**

The collected data from various sources are manage to analyze and presented in proper tables, formats and graphs such as table and formats are interpreted and explained wherever necessary. To analyze the collected data financial and statistical tools are used

In statistical tools mean, standard deviation, coefficient of variation, correlation coefficient, regression equation, graphs and diagrams are taken.

## **CHAPTER – IV**

### **PRESENTATION AND ANALYSIS OF DATA**

#### **4.1 Introduction**

The main objective of this research is to examine proper planning system in the public manufacturing enterprises of Nepal and dairy development corporation has been selected for this purpose. These chapters will analysis the various aspects of profit planning and their actual accomplishment. Actually, DDC is a managerial tool which is applied every business either manufacturing or non-manufacturing enterprises. So, that a profit planning is the formal expression of the enterprises plan, goals and objectives stated in financial terms for specific future period of time.

Profit plan is an estimation and production of revenue and expenses that estimate how much income will be generated and how it should be spent in order to meet investment and profit requirements. A profit plan is a numerical plan action, which generally cover the area of revenue and expenditure. The main objectives of profit planning are to present the further forecasting, numerically expressed on appropriate format so as to proper control of profit and cost centers to be established. As a size of organization grows the important of profit planning becomes inevitable. A profit planning must be prepared in advance of commencing operators, stating what and how things are to be done.

Generally, two types of planning. Strategic long-range profit plan and tactical short-range profit plan are formulated by DDC. The present study does not deserve the quality to analyze it in detail because of time and resource constraint. Therefore the study is mainly focused on tactical short-range profit plan of the authority.

Presentation and analysis of data is on important stage of the research study. The presentation is the basis of organization and classification of data for analysis. Research as a media; interpret the data after completing their collection. It is necessary to change the data as requirement. The easy method of presenting the data is to examine it in chart. Graph, table and so on. Before arranging the data in table it is essential to arrange and reorder the row data. The main purpose of analyzing the data is to change it from an unprocessed from to an

understandable presentation. The analysis of data consists of organizing, tabulating and performing statistical analysis.

Therefore, the study is mainly focused on tactical (Short-range) profit plan of DDC.

However the sales, production and other related figures of previous years are also presented and analyzed to know the overall economic and financial trend and to estimate the possible future trend of the DDC. For this purpose the study covers period of 5 years i.e. FY 2062/263 to 2066/067.

## **4.2 Sales Plan**

Sales Plan is the infrastructure of profit plan. Other parts of the profit plan depend upon the sales plan. The prime objective of business is to earn profit. So that the first consideration of sales plan must be made from their profit plan. Sales are the primary source of cash and all the functional budgets are prepared on the basis of sales budget. The efficiency of planner of planning expert can be evaluated from the comparison between actual and planned sales.

### **4.2.1 Tactical Sales Plan**

The short term sales plan includes details for each major product and for grouping of minor products, short term sales plans are usually developed in term of physical units (job) and in sales as short term sales plans must also be developed by marketing responsibility center for planning and control purpose. Short-term sales planes may involve the application of technical analysis. However, managerial intelligence plays a vital role in their determination. A common approach used for short time horizons in a company is to plan initially by quarters and by months for the first quarter. At the end of each month or the year, the sales plan is restudied and revised.

### **4.2.2 Strategic Sales plan**

The long term sales plan uses broad grouping of products with separate consideration of major and new products and services. Long term sales plan usually involve in depth analysis of further market potation changes state of the economy industry projections and finally company objectives. Long term strategies may be focused on long-term pricing policy, development of new products and innovation, present products, new directions in marketing

efforts, expansion or changes in distribution channel and cost patterns. Strategic plan is prepared usually for 5 years and tactical plan for one year or 12 month, 4 month, 6 month etc.

### 4.3 Strategic Sales plan of the DDC.

Profit planning is a part of overall planning process of an organization. Profit planning means the development and acceptance of objectives and goals and involving on organization efficiently to achieve the objectives, goals. So, DDC has prepared tactical plans which are not in systematic way because of inexpert planners competition with private sector, difficulties of packaging, perish ability of products, raw materials and difficulties in transportation. Beyond this the main causes is lack of proper management, rules and regulation and unduly over staffing. The planner can be evaluated from the comparison between actual and planned sales.

The following table shows the sales on actual and planned basis.

**Table: 4.1**  
**Analysis of Sales Plan**

S.N.	Item/ Product	Unit	Description	Year				
				062/063	063/064	064/065	065/066	066/067
1.	Milk	Litre	Target	56874000	59244000	54821000	63157000	58037000
			Achievement	54387000	50018000	494773000	57472800	55621000
			Ach (%)	96	84	90	91	96
2.	Curd	Litre	Target	850150	1350000	1996000	2319000	2892000
			Achievement	904000	1704000	2007000	229900	2712000
			Ach (%)	106	126	101	99	94
3.	Ice-cream	Litre	Target	100700	163000	169000	79000	90000
			Achievement	85000	52000	59000	65000	93000
			Ach (%)	84	32	35	82	103
4.	Butter	Kg	Target	195500	253000	276000	282000	260000
			Achievement	189600	201000	163000	137000	177000
			Ach (%)	97	79	59	49	68
5.	Ghee	Kg	Target	983168	848000	876000	1047000	845000
			Achievement	913000	823000	634000	816660	612000
			Ach (%)	93	97	72	78	72
6.	Cheese	Kg	Target	230800	251000	283000	30000	288000
			Achievement	184000	137000	162000	213000	216000
			Ach (%)	80	55	57	71	75
7.	Panir	Kg	Target	120956	157000	151000	162000	170000
			Achievement	83000	78000	96000	123000	144000

			Ach (%)	69	50	64	76	85
8.	Skim milk powder	Kg	Target	-	-	-	-	-
Achievement			-	-	-	-	-	
Ach (%)			-	-	-	-	-	

In the above table, sales target and achievement of DDC shows that there is gap between the target and achievement of milk sales. The lowest sales achievement is 96% of target (in 062/063, 066/067). Hence there is not fully reached the sales target of milk. The sales achievement of curd is fluctuating with its target in the year 062/063, 063/064 are highest sales achievement then target. The achievement is not less than 94% in the period of study.

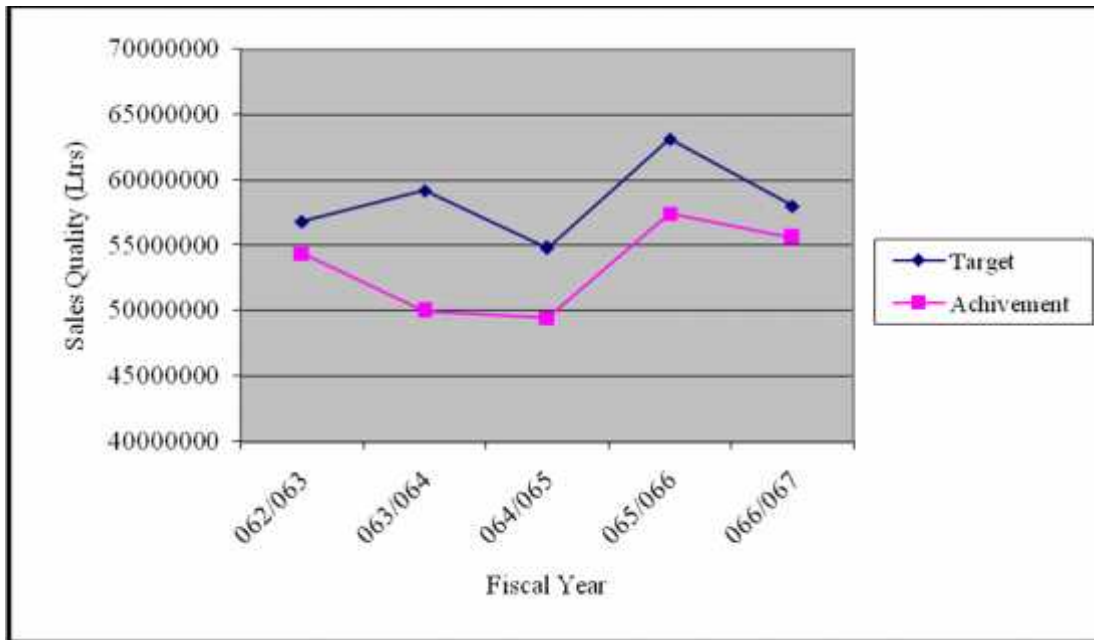
There is more unlikely gap between the target and achievement of ice cream sales. The highest sales achievement is 103% of target (in 066/067) and the lowest sales achievement is 32% (in 063/064). The data shows that there is not any practical approach of planning sales.

The target of butter sales is not fully achieved during the period of 5 years. The highest achievement in year 063/064 by 97%. Similarly, the cheese sales also seem to be over targeted every year. There are unhealthy fluctuations in the sales figure and achievement ratios. There is no matching between sales planning and sales efforts.

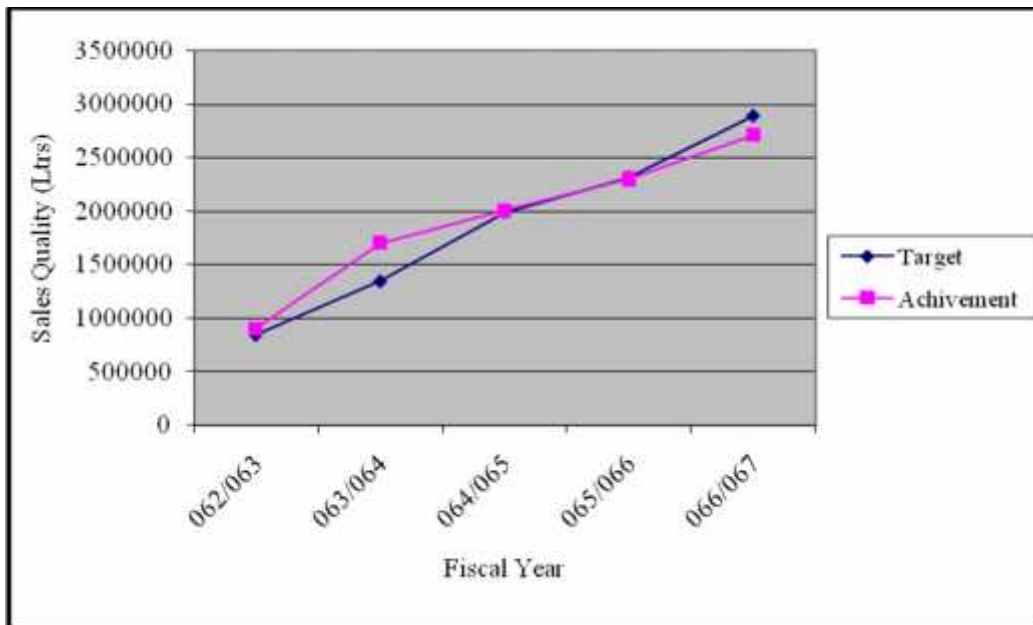
The other product of panir sales achievement is difference between targeted. Sales target is not meted in any year. The highest target achievement in year 066/067 of 85%. Other remaining year target achieved less than 85%. Skim milk powder sales target and sales achievement data is not available an annual sales budget in DDC.

The graphical presentation of above data will be as follows.

**Line graph: 4.1**  
**Target and Achievement of Milk Sales**

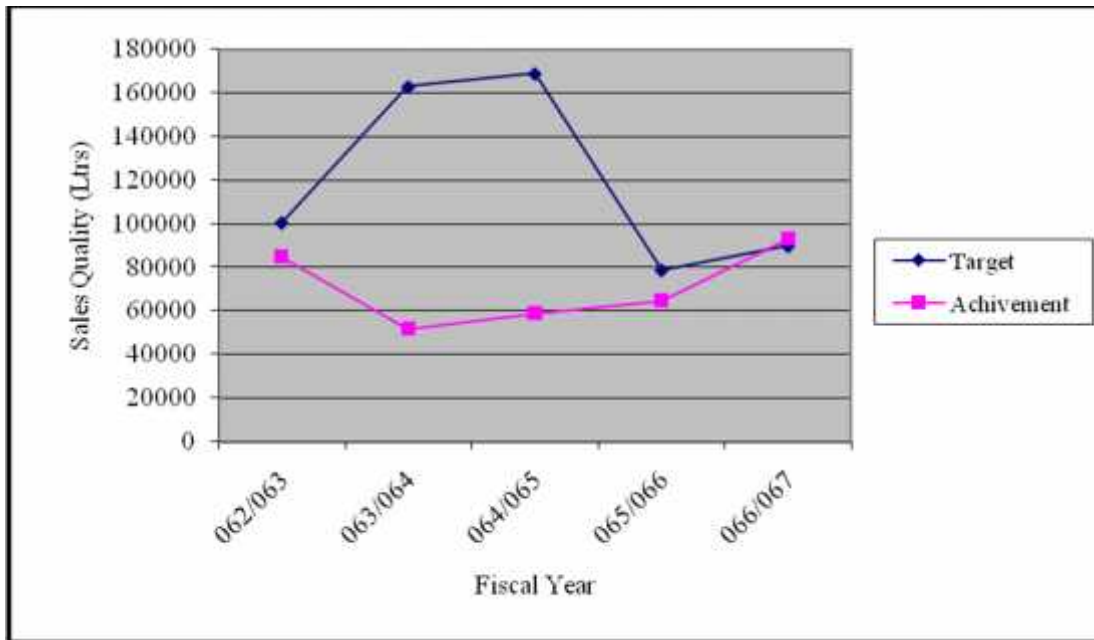


**Line graph: 4.2**  
**Target and Achievement of Curd Sales**



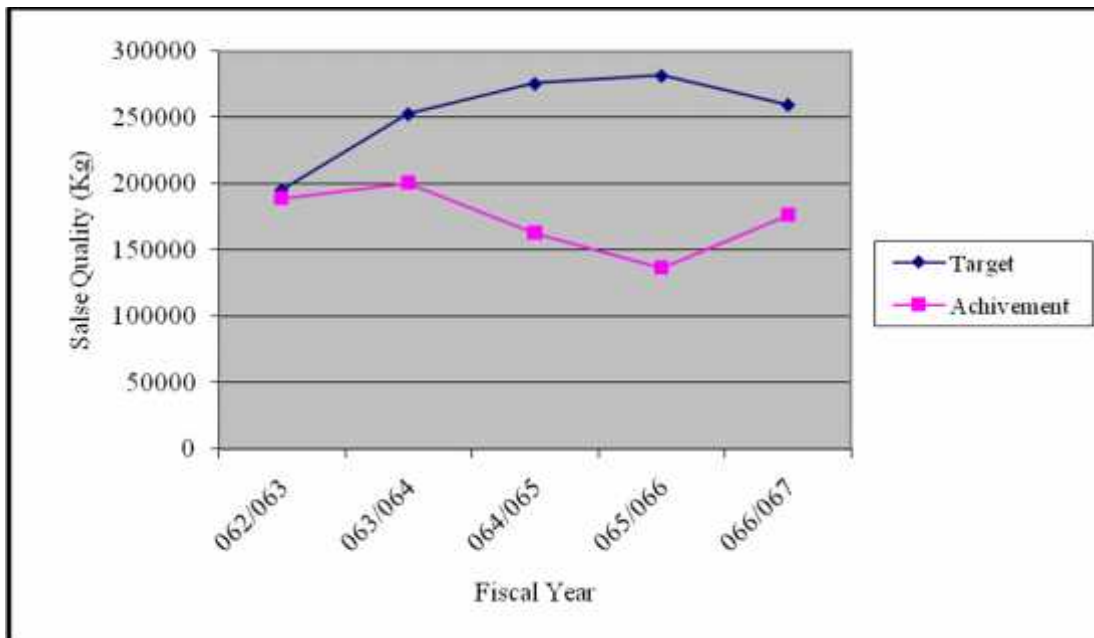
**Line graph: 4.3**

**Target and Achievement of Ice-cream Sales**



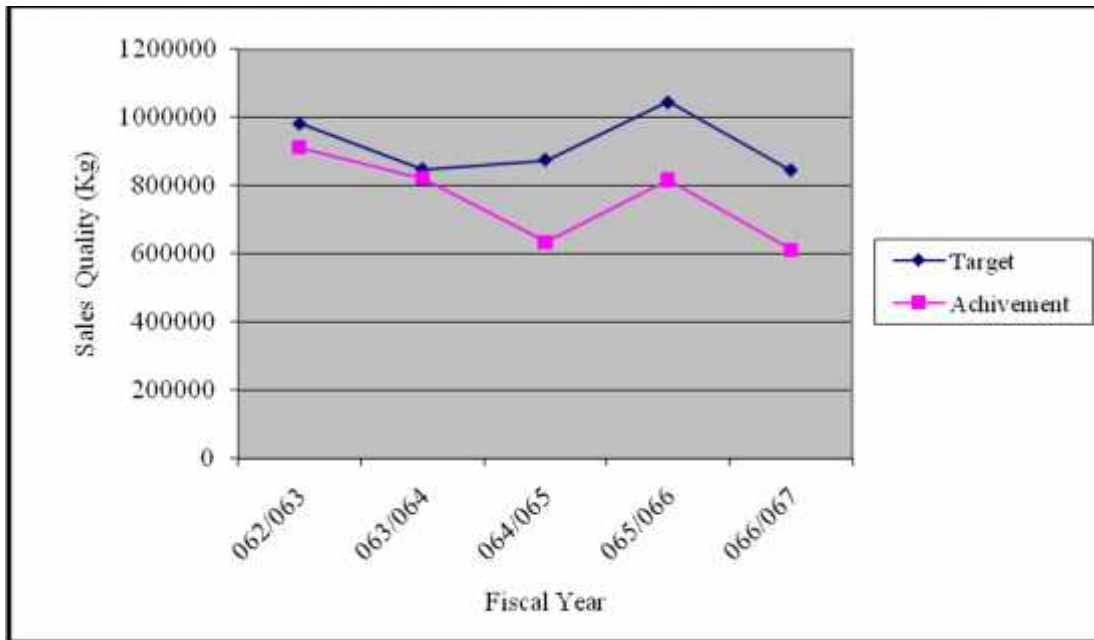
**Line graph: 4.4**

**Target and Achievement of Butter Sales**



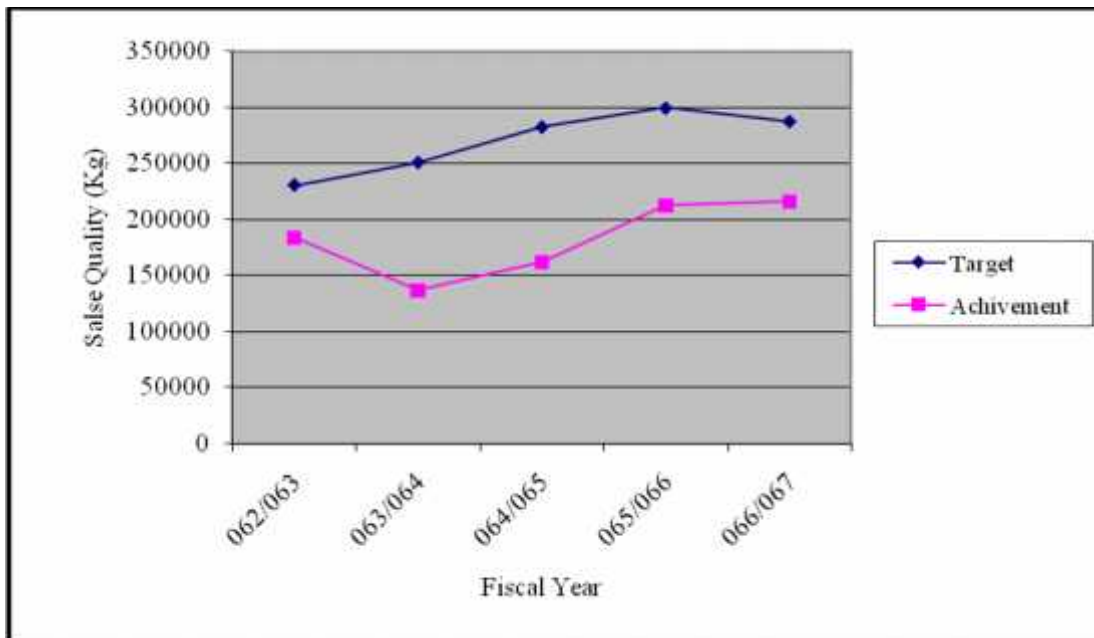
**Line graph: 4.5**

**Target and Achievement of Ghee Sales**



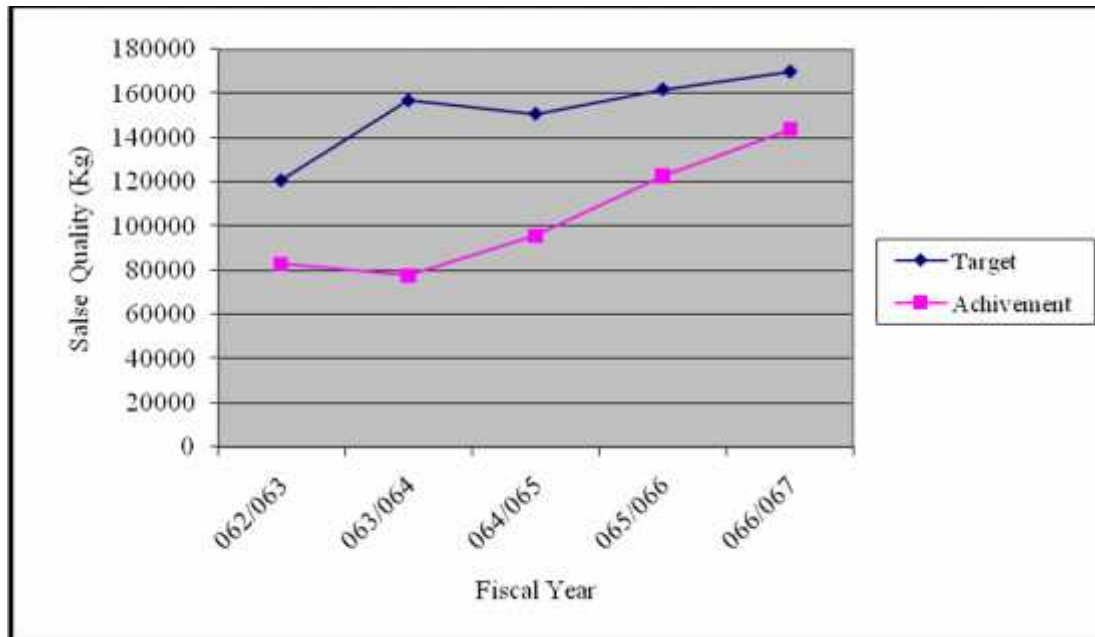
**Line graph: 4.6**

**Target and Achievement of Cheese Sales**



### Line graph: 4.7

#### Target and Achievement of Panir Sales



From the above analysis, the performance of DDC is poor, it has to do more exercise to achieve budgeted sales. The sales data shows that almost all the products have fallen short to get the achievement according to their plan except in some years.

#### 4.3.1 Statistical Analysis of Sales plan

In order to find out the nature of variability in target and achievement of sales of different years, we have to calculate arithmetic mean, standard deviation coefficient of variance and the correlation of the budgeted and actual sales figures of DDC.

The summary of the calculation is as follows:

**Table: 4.2**  
**Statistical Tools for the Analysis of Sales Data**

(mean, S.D, in '000')

S.N	Product	Particular	Unit	Planned (x)	Actual (y)
1	Milk	Mean	Litter	584.27	533.94
		S.D.	Litter	12.43	14.04
		C.V.	%	2.13	2.63
		Correlation		0.65	
2	Curd	Mean	Litter	1881.43	1925.20
		S.D.	Litter	320.74	272.56
		C.V.	%	17.05	14.16
		Correlation		0.97	
3	Butter	Mean	Kg	253.30	173.52
		S.D.	Kg	13.75	9.93
		C.V.	%	5.43	5.72
		Correlation		-0.031	
4	Ice-cream	Mean	Litre	120.34	70.8
		S.D.	Litre	16.97	6.98
		C.V.	%	14.10	9.85
		Correlation		-0.784	
5	Ghee	Mean	Kg	919.83	759.73
		S.D.	Kg	34.18	52.28
		C.V.	%	3.72	6.88
		Correlation		0.64	
6	Cheese	Mean	Kg	270.56	182.4
		S.D.	Kg	11.47	13.48
		C.V.	%	4.24	7.39
		Correlation		0.56	
7	Panir	Mean	Kg	152.19	104.8
		S.D.	Kg	7.51	11.20
		C.V.	%	4.93	10.68
		Correlation		0.68	

Sources: Appendix - I

The above result shows that the actual sales are more consistent than the target in all products except Ghee, Curd. The coefficient of planned sales is greater than those actual sales. The higher value of CV represents the higher degree of variability of data. Therefore the actual sales of all the product (except Curd) are less than their target. When there is smaller figure of average actual sales (Mean Sales) than that of planned sales. Its prove the ambitious expectation of sales. The consistency in actual sales proves that there is no drastic change in the sales of the firm.

The correlation coefficient can be used to analyze and interpret the relationship between planned sales and actual sales. There should be positive correlation between planned sales and actual sales in other words, the sales achievement should increase as the budget increase or vice-versa. There is negative correlation between target and achievement decrease. Coefficient of correlation nearest to 1 is good signal that shows the degree of change in actual sales in nearly according to that in planned sales. The positive correlation of Milk, Curd, Ghee, Cheese, Panir shows the same direction of change in their target and achievement. The mean of actual sales is less than mean target of respective product which indicates the trend of poor achievement.

### 4.3.2 Regression Analysis of Sales Plan

A regression line also can be fitted to show the relationship between the target and actual sales figure. Which helps to estimate the possible sales for the coming year. The regression line of actual sales on target sales (y on x) is as follows:

1. For Milk Sales

$$y - \bar{y} = r \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

$$\text{or, } y - 533940 = 0.65X \frac{14010}{12430} (x - 584270)$$

$$\therefore y = 0.73x + 104974$$

2. For Curd Sales

$$y - \bar{y} = r \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

$$\text{or, } y - 1925200 = 0.97X \frac{272560}{320740} (x - 1881430)$$

$$y = 0.82X374353 \text{-----} \text{ii}$$

3. For Butter Sales

$$y - \bar{y} = r \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

$$y - 173520 = -0.031X \frac{9930}{13750} (x - 253300)$$

$$y = 0.022x + 179191 \text{-----} \text{iii}$$

4. For Ice-cream Sales.

$$y - \bar{y} = r \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

$$y - 70800 = -0.784X \frac{6980}{16970} (x - 120340)$$

$$y = 0.32x + 109606 \text{-----} \text{iv}$$

5. For Ghee Sales

$$y - \bar{y} = r \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

$$y - 759730 = 0.64X \frac{52280}{34180} (x - 919830)$$

6. For Cheese Sales

$$y - \bar{y} = r \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

7. For Panir Sales

$$y - \bar{y} = r \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

Now putting the value of x for 07/068, we can get the expected sales achievement of the relevant product.

**Table 4.3**  
**Expected Sales for FY 067/068**

S.N.	Product	Target for 067/068 (x)	Regression eq.	Expected Sales of 067/068 (y)
1	Milk	59576000	$y=0.73x+104974$	43595454
2	Curd	3835000	$y=0.82x+374353$	3519053
3	Butter	272000	$y=0.22x+179191$	185175
4	Ice-cream	119000	$y=0.32x+109606$	147686
5	Ghee	851000	$y=0.98x-140702$	693278
6	Cheese	384000	$y=0.66x-159825$	93615
7	Panir	257000	$y=0.82x+374353$	210032
8	Skim milk powder	-	-	-

Above calculation shows that the target sales and expected sales of year 067/068 are less than their target sales.

To summarize the sales budget of DDC. The following points can be abstracted.

- ) The actual sales are less than the planned sales of many products.
- ) There is poor correlation between the target and achievement.
- ) The regression analysis shows the mixed (Product wise) trend.
- ) Preparation of plan without the study of market and consumer.

In the conclusion, the sales budget of DDC is not kept in systematic manner. It is found that there is lack of forecasting knowledge. Sales depending up on many other factors and production quantities.

#### **4.4 Productions Plan of DDC**

Production budget preparation process is the second step of DDC. It is prepared with the help of sales budget. A production plan is an estimation of the quantity of goods to be manufactured to meet the planned sales and maintain the desired level of inventory during the planned period. It is based up on the capacity of plant, sales requirement and inventory policy.

The following formula helps to calculate the budget production.

Production= Planned sales + Final Inventory – Beginning Inventory.

Production plan of DDC depends upon the production capacity and availability of raw materials. (i.e, Milk). The capacity of DDC is 25500 ltrs. per hour. If the capacity is utilized 5 hours per shift, the total production capacity is 12,75,000 ltrs and in case of skim milk power by processing 40,000 ltrs. Milk in budgeted sales quantity has been considered in to problems of production plan are:

- (i) Perish ability of raw material and the final product.
- (ii) Old and outdated machinery.
- (iii) Negligence of workers.
- (iv) Government intervention.
- (v) Seasonal supply of main raw material
- (vi) Make of co-ordination among the employees.

**Table: 4.4**  
**Analysis Production Plan**

S.N.	Item/ Product	Unit	Description	Year				
				062/063	063/064	064/065	065/066	066/067
1.	Milk	Litre	Target	78663800	74508000	76496000	81034000	82893000
			Achievement	69050800	62663000	62608000	66700000	76249000
			Ach (%)	88	84	82	82	92
2.	Curd	Litre	Target	850150	1350000	1997000	2319000	2892000
			Achievement	920000	1712000	2030000	2312000	2712000
			Ach (%)	108	127	102	99	94
3.	Ice- cream	Litre	Target	100700	163000	169000	79000	90000
			Achievement	84000	55000	62000	63000	93000
			Ach (%)	83	34	37	80	103
4.	Butter	Kg	Target	1179063	1207000	1395000	1486000	1203000
			Achievement	1301000	1125000	896000	782000	942000
			Ach (%)	110	93	64	53	78
5.	Ghee	Kg	Target	997849	788000	934000	1047000	844000
			Achievement	951000	83000	614000	477000	612000

			Ach (%)	95	102	66	46	73
6.	Cheese	Kg	Target	250300	287000	283000	289000	305000
			Achievement	199000	166000	180000	206000	287000
			Ach (%)	80	58	64	71	94
7.	Panir	Kg	Target	122665	157000	151000	163000	170000
			Achievement	84000	78000	101000	126000	144000
			Ach (%)	68	50	67	77	85
8.	Skim milk powder	Kg	Target	650000	636000	712000	644000	583000
			Achievement	641000	505000	426000	343000	583000
			Ach (%)	99	79	60	53	100

The above table shows that the actual production of Milk is less than the target production of all year all the year actual production is fluctuating between 82% to 92% in the five years period.

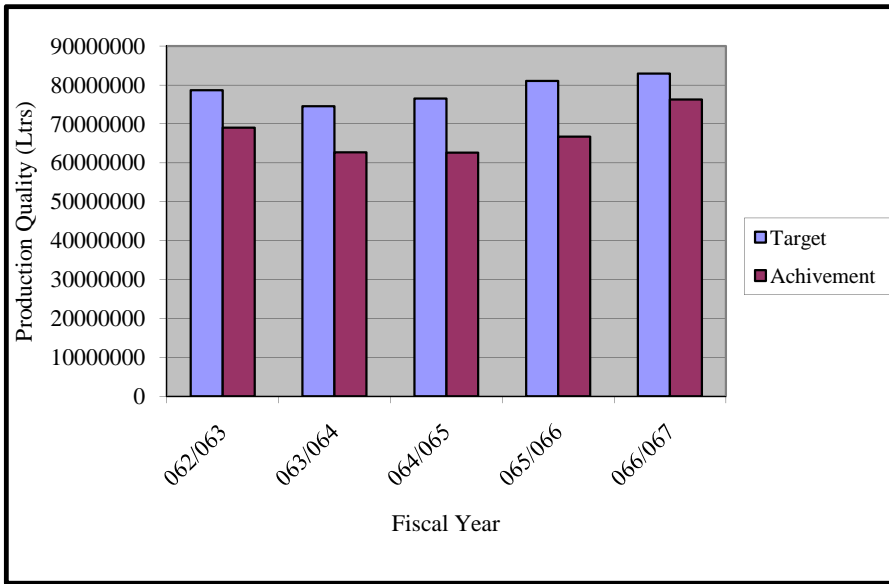
In case of Curd, the actual production have crossed the target production except in 065/066 and 066/067. When target is not met the gap of target and achievement is small. The production of ice-cream has never reached the target except in 066/067.

The production of butter is less than target production except 062/063. The production of Ghee is greater than the target in year 063/064 and it is less than target in the remaining year the actual production is fluctuating between 40% to 95% in the remaining year.

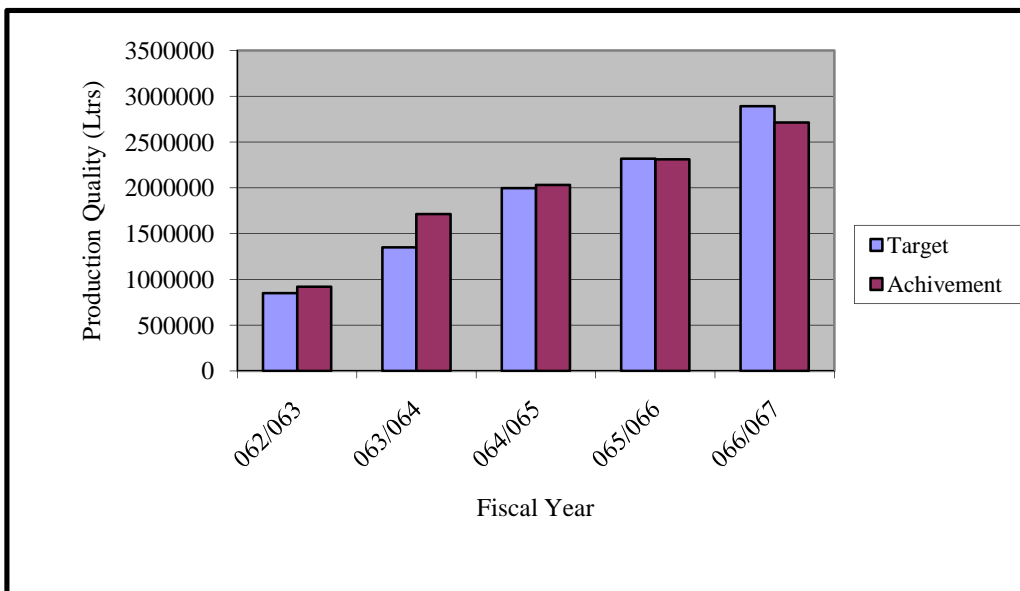
The target of cheese production is not met in the period of 5 years. There is always gap between target and achievement. In case of panir, production is same position of cheese production of skim milk power is fluctuating the target met in year 066/067. Other remaining year less then the target production.

The diagrammatic presentation of production data (planned and actual) of DDC will be as follows:

**Diagram 4.8**  
**Production Target and Achievement of Milk**

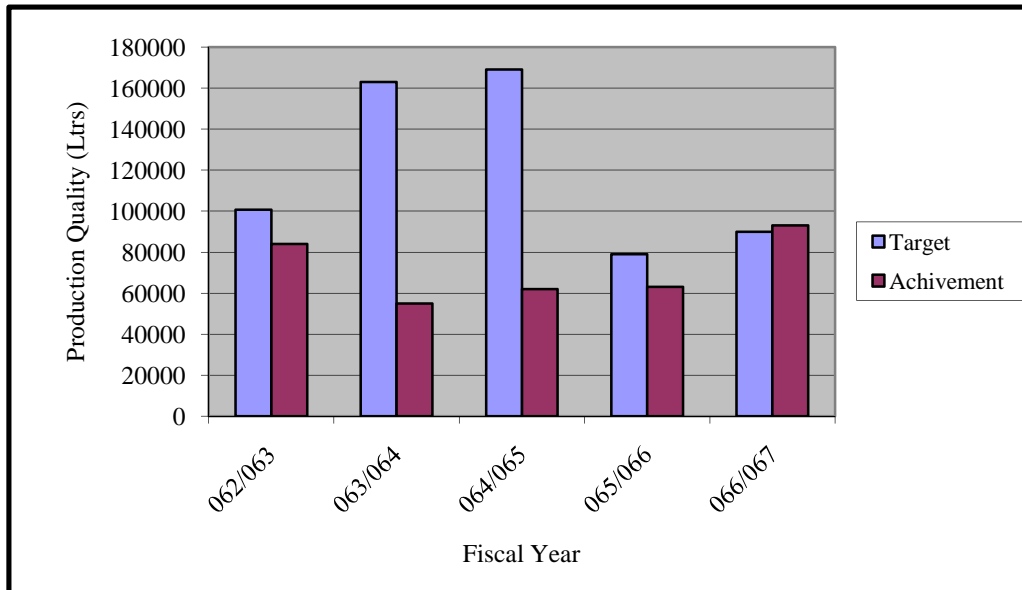


**Diagram 4.9**  
**Production Target and Achievement of Curd**



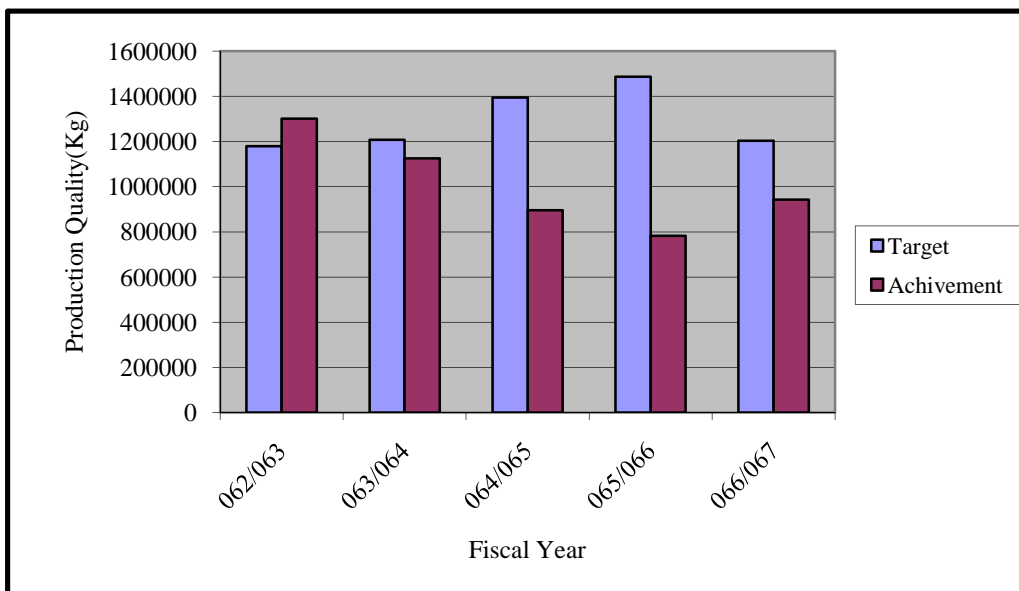
**Diagram 4.10**

**Production Target and Achievement of Ice-cream**

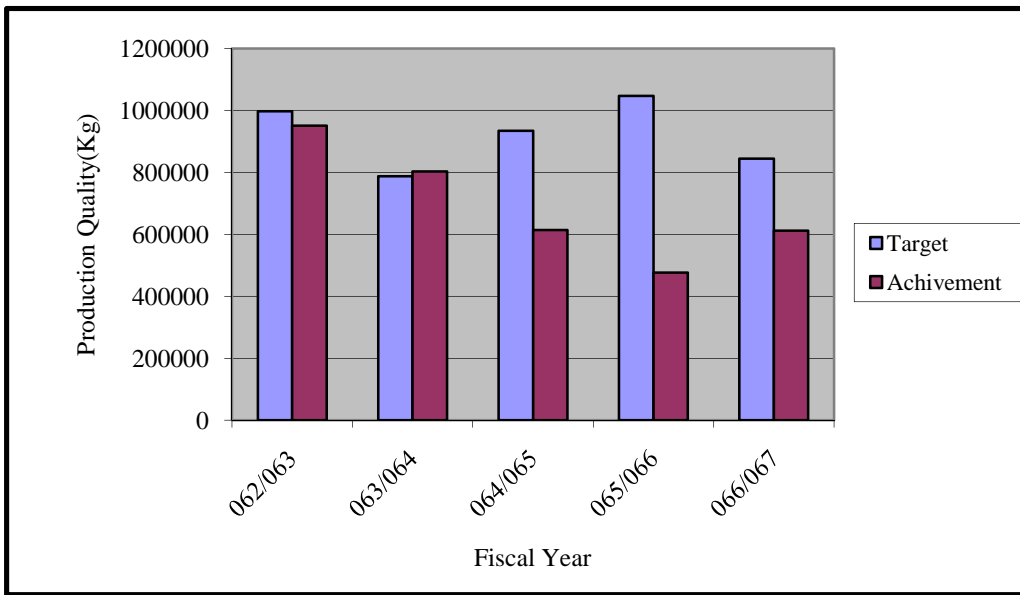


**Diagram 4.11**

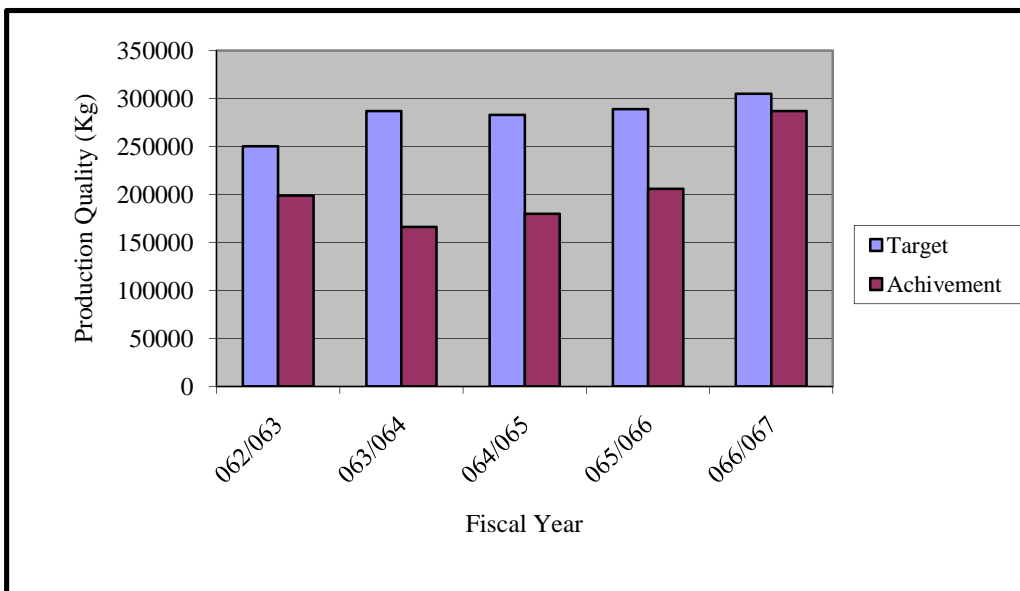
**Production Target and Achievement of Butter**



**Diagram 4.12**  
**Production Target and Achievement of Ghee**

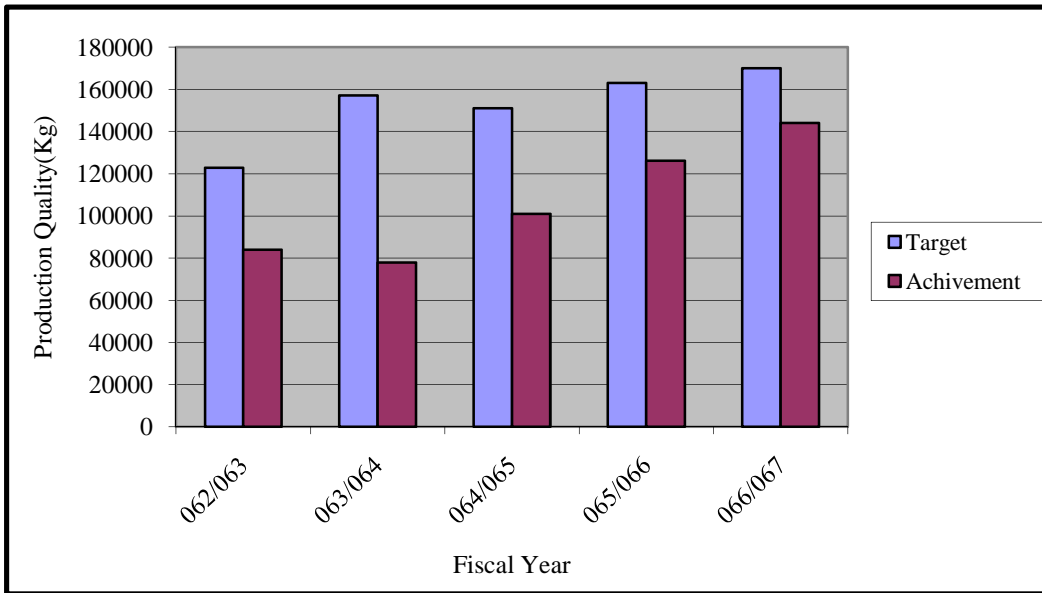


**Diagram 4.13**  
**Production Target and Achievement of Cheese**



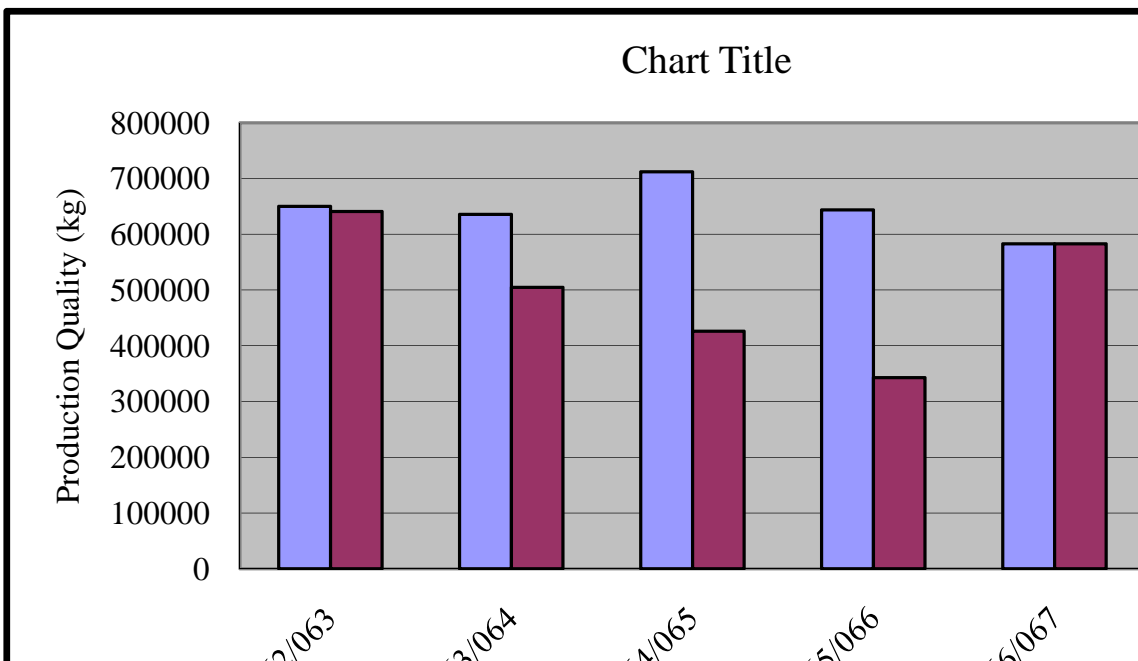
**Diagram 4.14**

**Production Target and Achievement of Panir**



**Diagram 4.15**

**Production Target and Achievement of Skim Milk Powder**



To find the nature of variability of budget production and the actual production of different years mean, standard deviation, coefficient of variance and correlation coefficient should be calculated and analyzed. The summary of the calculation is as follows:

#### 4.4.1 Statistical Analysis of Production Plan

**Table: 4.5**  
**Statistical Tools for the Analysis of Production Data**

S.N	Product	Particular	Unit	Planned (x)	Actual (y)
1	Milk	Mean	Litter	78719000	67454000
		S.D.	Litter	6742000	11265000
		C.V.	%	8.50	16.70
		Correlation		0.867	
2	Curd	Mean	Litter	1881600	1937200
		S.D.	Litter	320750	270910
		C.V.	%	17.04	13.98
		Correlation		0.977	
3	Ice-cream	Mean	Kg	120340	71400
		S.D.	Kg	16970	6490
		C.V.	%	14.10	9.09
		Correlation		-0.62	
4	Butter	Mean	Litre	129400	100920
		S.D.	Litre	5520	8190
		C.V.	%	4.27	8.11
		Correlation		0.82	
5	Ghee	Mean	Kg	922170	691400
		S.D.	Kg	42690	63530
		C.V.	%	4.27	9.18
		Correlation		- 0.212	
6	Cheese	Mean	Kg	282860	207600
		S.D.	Kg	8010	18840
		C.V.	%	2.83	9.07
		Correlation		0.49	

7	Panir	Mean	Kg	152730	106600
		S.D.	Kg	6660	11190
		C.V.	%	4.36	10.4
		Correlation		0.586	
8	Skim Milk Powder	Mean	Kg	645000	499600
		S.D.	Kg	18370	47710
		C.V.	%	2.84	9.54
		Correlation		0.0338	

(Source: Appendix-II)

The above result shows that the actual production is more consistent than the target in products. The mean (average) of actual production of each product (except Curd and Panir) is less than mean budget of respective product. The coefficient of Variance of budgeted production of each product (except Curd and Ice-cream) is less than actual production. It proves that production budget is more variable. Here, production achievement looks so poor and setting of production target is ambitious. The consistent figures of production achievement represent the non progressive or low progressive trend of production.

The figure of correlation coefficient of Ice-cream production is negative which prove the impractical target setting. The figure of correlation coefficient is positive its proves that the similar direction of changes in target and achievement. The smaller figure of correlation coefficient its shows that the lower relation of production target and achievement.

#### 4.2.2 Regression Analysis of Production Plan

The regression line shows the degree of relationship between target production and actual production. It makes the forecasting possible in coming year.

The regression line of production achievement y on x is as follows:

1. For Milk Production

$$y - \bar{y} = r \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

$$\text{or, } y - 674540 = 0.867 \times \frac{12650}{67420} (x - 787190)$$

$$\therefore y = 1.45x - 465817 \text{ _____ } i$$

2. For Curd Production

$$y \bar{Z} y \bar{X} r \frac{\uparrow y}{\uparrow x} (x \bar{Z} \bar{x})$$

$$\sigma r, y - 1937200 = 0.977X \frac{270910}{320750} (x - 1881600)$$

$$\therefore y = 0.83x - 384526 \text{ _____ } ii$$

3. For Ice-cream Production

$$y \bar{Z} y \bar{X} r \frac{\uparrow y}{\uparrow x} (x \bar{Z} \bar{x})$$

$$\sigma r, y - 71400 = 0.62X \frac{64908190}{16970} (x - 120340)$$

$$\therefore y = 0.24x + 99934 \text{ _____ } iv$$

4. For Butter Production

$$y \bar{Z} y \bar{X} r \frac{\uparrow y}{\uparrow x} (x \bar{Z} \bar{x})$$

5. For Ghee Production

$$y \bar{Z} y \bar{X} r \frac{\uparrow y}{\uparrow x} (x \bar{Z} \bar{x})$$

6. For Cheese Production

$$y \bar{Z} y \bar{X} r \frac{\uparrow y}{\uparrow x} (x \bar{Z} \bar{x})$$

7. For Panir Production

$$y \bar{Z} y \bar{X} r \frac{\uparrow y}{\uparrow x} (x \bar{Z} \bar{x})$$

8. For Skim Milk Powder Production

$$y - \bar{y} = r \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

Now putting the value of x for 07/068 in above equations. We can get the expected sales achievement of the relevant product.

**Table: 4.6**  
**Expected Production for FY 067/068**

S.N.	Product	Target for 067/068 (x)	Regression eq. (y=a+bx)	Expected Production of 067/068 (y)
1	Milk	88813000	y=1.45x-465817	128313033 ltr
2	Curd	3835000	y=0.83x+384526	35655776 ltr
3	Butter	119000	y=0.24x+99934	128494 ltr
4	Ice-cream	1252000	y=0.31x+60806	448926 ltr
5	Ghee	851000	y=0.32x+396305	668625 kg
6	Cheese	408000	y=1.15x-118399	350801 kg
7	Panir	257000	y=0.98x-43776	208084 kg
8	Skim milk powder	623000	y=0.087x+442974	497180 kg

To conclude the production budget of DDC, the following points can be abstracted.

- ) The actual production is more consistent than budget in most of the products.
- ) There is poor correlation between the target and achievement of most product except negative correlation of ice-cream.
- ) The regression analysis shows the product wise mixed trend.
- ) As a maximum production achievement average is less than target.
- ) There is lack of foresightedness in planning the production.

## 4.5 Material Budget

Material are essential for every manufacturing concern materials means raw material; component parts, semi-finished goods as well as other subsidiary materials for production function. Without raw materials manufacturing enterprise can't produce finished goods.

Raw materials to be purchased are calculated by raw materials to be purchased are calculated by using following formula:

Raw material to be purchase= Raw material requirement + Ending inventories of raw materials – Beginning inventories

DDC has established a network milk collection centers these centers are introduced with grass root level that is in direct contact with farmers. Usually milk is collected in the morning and evening. Most of the milk collected on the collection center is transported by farmers to the chilling centers.

DDC has not prepared the raw materials purchase budget and not considering about raw material inventories. So, DDC mostly depends upon the collecting of milk. But has not implemented any effective and scientific program to the farmers to improve animal husbandry nor milk collection centers are expanded to rural areas. So, thousand of liters of milk produced in those areas is being unless with no return to farmers. DDC is unable to collect very cheapest milk of rural area.

There are invariably some losses of milk due to handling transportation and human errors in testing etc. There are always some loses during milk collection at collection center and chilling center and chilling center to plan. Generally, the percentage of losses in milk collection center is 1-105%, 1.4% losses at the plant, 1% store losses and distribution to 0.5%.

Due to fluctuation in milk collection, DDC has to recombine a reconstitute with imparted powder milk heavily during lean period starting February to July in order to keep up demand of milk and milk products. The surplus milk in on project its delivered to another project for belonging the supply and demand partion in flush as well as in lean season. Now a day DDC is producing skim milk power as a raw material from Biratnager milk supply scheme from 052/053.

Following chilling center and co-operatives collected milk.

**Table: 4.7**  
**Description of Chilling Centers and Co-operatives**

<b>Projects</b>	<b>Districts</b>	<b>CC</b>	<b>MPC</b>	<b>Capacity (Ltr)</b>
KMSS	7	22	281	109000
BMSS	4	11	126	3800
HMSS	3	8	167	40200
NMSS	4	4	40	21000
JMSS	6	7	25	9000
LMSS	3	9	79	3200
DMSS	2	5	24	5000
Total	29	66	742	254200

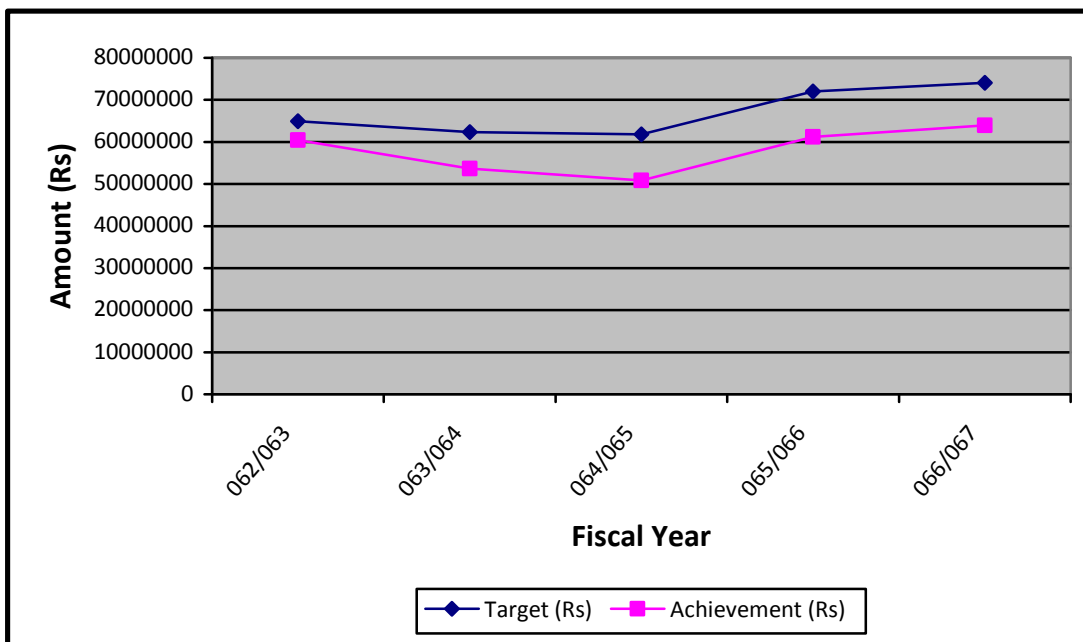
The Following table 4.8 shows milk collection and progress of DDC.

**Table: 4.8**  
**Milk Collection and Comparative Progress**

Years	Target (Rs)	Achievement (Rs)	% Progress
<b>062/063</b>	64966400	60424800	93
<b>063/064</b>	62307000	53684000	86
<b>064/065</b>	61845000	50841000	82
<b>065/066</b>	72010000	61208500	85
<b>066/067</b>	74081000	63946000	86
<b>Average</b>	67041880	58020860	86.6

The milk collection data shows that the achievement of collection milk from the farmers is always less than target. The highest collection achievement is 93% of target (in 062/063). The lowest collection achievement is 82% of target (in 064/065) and the average collection achievement is 86.6% of target.

**Line Graph: 4.16**  
**Milk Collection Target and Achievement**



**Table 4.9**

**Statistical Tools for the Analysis of Milk Collection Data**

S.N	Particular	Unit	Planned(x)	Actual (y)
1	Mean	Litre.	67042000	58021000
2	S.D	Litre.	2262000	2203000
3	CV.	%	3.37	3.79
4	Correlation		0.8857	

(Source: Appendix-III)

The above result shows that the planned and actual figures both are not of so variable nature. There is positive (but low) correlation in budget and achievement. The average of actual data is smaller than that of target.

The regression line of achievement can be fitted as following.

$$y - \bar{y} = r \frac{\sum y}{\sum x} (x - \bar{x})$$

$$\text{or, } y - 58021000 = 0.8857 \times \frac{2203000}{2262000} (x - 67042000)$$

$$y = 0.86x + 364880 \dots \dots \dots (i)$$

Now, Putting the value of x in above equation (i) for the year 067/068,

We can get the expected milk collection achievement as follows.

$$\begin{aligned} y &= 0.86x + 364880 \\ &= 0.86 \times 78974000 + 364880 \\ &= 68282520 \text{ Liters.} \end{aligned}$$

Hence, the expected achievement of milk collection in 067/068 (when target is 78974000 Liters.) is 68282520 Liters.

**4.6 Labour Budget**

Labor is the most important factor of production. Labor budget includes the basic data about the direct labor requirement, number of direct labor employees needed. Labor cost of each product units and investment requirements. Labor cost involve all expenses made by

employees, board executive, middle management personnel, staff officers, skilled and unskilled employee etc. The following table shows the manpower of DDC.

**Table: 4.10**  
**Technical and Administrative Staff**

S.N.	Name of Project	Technical		Administrative	
		Officer	Assistant	Officer	Assistant
1	Central office (Lainchor)	13	11	14	35
2	Ktm. Milk Distribution	30	218	11	102
3.	Hetauda Milk Distribution	7	84	5	31
4.	Biratnager Milk Distribution	4	112	6	36
5.	Lumbini Milk Distribution	5	30	1	15
6.	Janakpur Milk Distribution	4	5	1	3
7.	Nepalgunj Milk Distribution	2	18	1	3
8.	Dhangadi milk Distribution	-	3	-	-
9.	Milk Processing and Selling and Distribution Project	7	125	6	38
	Total	72	606	45	263

#### **4.7 Capacity Utilization**

Analysis of capacity utilization is an important factor in manufacturing enterprises. Production and sales both plans are depended upon the capacity. The full utilization of capacity by efficient and scientific management technique certainly increases the return of enterprises.

DDC has total production capacity of 25500 hrs. per hour. When operated 5 hours per shift, the total production capacity is 127500 ltrs per day. Skim milk plant produces 3 metric tons milk power by processing 4000 ltrs. of milk in maximum level.

**Table: 4.11**  
**Capacity Established**

S.N.	Particular	Production Capacity Per hour (liters)	
		Per hour	Per day (5 hours shift)
1	KMSS	1800	90000
2	HMSS	3200	16000
3	BMSS	11800	25000
4	LMSS	2200	12000
5	NMSS	800	2800
	Total	12800	145800

Annual Capacity = 145800X365 = 53217000 ltr.

**Table: 4.12**  
**Capacity Utilization**  
**(Milk Production)**

FY	Production (in Liters)	% Capacity Utilization
<b>062/063</b>	69050800	129.75
<b>063/064</b>	62663000	117.74
<b>064/065</b>	62608000	117.64
<b>065/066</b>	66700000	125.33
<b>066/067</b>	76249000	143.28
<b>Average</b>	67454160	100.95

$$\% \text{ Capacity Utilization} = \frac{\text{Production}}{\text{Capacity}} \times 100$$

Above table shows the position of capacity utilization. Overall capacity utilization is greater than normal capacity. DDC has its capacity to relive from low production and sales. The maximum capacity utilization is 143.28% of normal capital (in 066/067). The minimum capacity utilization is 117.64% of normal capacity (in 064/065) and the average capacity utilization is 100.95% of normal company.

## 4.8 Overhead Budget

The manufacturing factory should develop various expenses for maintenance. DDC's administrative expenses, collection expenses, processing expenses, selling expenses, are given below.

### 4.8.1 Administrative Overhead

Administration overhead mention to all indirect operation expenses like salary, fuel, services, charges etc. in the context of DDC there is not policy of planning the administrative expenses including all indirect expenses. It prepares on actual basis. There is not any budget planning to run properly.

The following table has denoted the condition of administrative expenses from fiscal year 062/063 to 066/067.

**Table: 4.13**

**Actual Administrative Expenses FY 062/063 to 066/067**

<b>Fiscal Year</b>	<b>Amount in Rs.</b>
<b>062/063</b>	78800000
<b>063/064</b>	83800000
<b>064/065</b>	81800000
<b>065/066</b>	124409000
<b>066/067</b>	124639000

Above table shows that the administrative expenses has been increasing.

**Table: 4.14**

**Trend Analysis of Administrative Expenses**

**(Fitting Straight Line Trend)**

<b>FY</b>	<b>Expenses in Rs (y)</b>	<b>Deviation from 2064/065 (x)</b>	<b>x<sup>2</sup></b>	<b>xy</b>
062/063	78800000	-2	4	-157600000
063/064	83800000	-1	1	-83800000
064/065	81800000	0	0	0

065/066	124409000	1	1	124409000
066/067	124639000	2	4	249278000
	$\phi y=493448000$	$\phi x=0$	$\phi x^2=10$	$\phi xy=132287000$

Straight line trend  $y_c = a + bx$

Where,  $Y_c =$  Dependent Variable

$$a = \frac{\phi y}{n} = \frac{493448000}{5} = 98689600$$

$a =$  Constant Value

$$b = \frac{\phi xy}{\phi x^2} = \frac{132287000}{10} = 13228700$$

$b =$  Slope of trend line

$x =$  Independent variable

Hence,  $y_c = 98689600 + 13228700x$

Above calculation shows that there is the increasing trend of administrative expenses. The administrative expenses will be increased by the average of Rs. 13228700 every year.

#### 4.8.2 Collection Expenses

These expenses are done in collection process like milk purchase, transportation expenses, salary and wages, commission etc. It prepares collection expenses budget on actual basis, there is not and budget planning to run properly.

The following table shows the condition of collection expenses from fiscal year 062/063 to 066/067.

**Table: 4.15**

**Actual Collection Expenses FY 062/063 to 06/067**

Fiscal Year	Amount in Rs.
062/063	1144700000
063/064	1209500000
064/065	1332300000
065/066	1497700000
066/067	1654400000

**Table No: 4.16**  
**Trend Analysis of Collection Expenses**  
**(Fitting Straight Line Trend)**

In '00000' Rs.)

FY	Expenses in Rs (y)	Deviation from 2064/065 (x)	x <sup>2</sup>	xy
062/063	11447	-2	4	-22894
063/064	12095	-1	1	-12095
064/065	13323	0	0	0
065/066	14977	1	1	14977
066/067	165	2	4	33088
	∑y=68386	∑x=0	∑x <sup>2</sup> =10	∑xy=13076

Straight line trend  $y_c = a + bx$

$$a = \frac{\sum y}{n} = \frac{68386}{5} = 13677.2$$

Where,  $Y_c$  = Dependent Variable

$$b = \frac{\sum xy}{\sum x^2} = \frac{13076}{10} = 1307.6$$

a = Constant Value

b = Slope of trend line

x = Independent variable

Hence,  $y_c = 13677.2 + 1307.6x$

Above calculation shows that there is the increasing trend of collection expenses. The collection expenses will be increased by the average of Rs. 130760000 every year.

### 4.8.3 Selling Expenses

Selling expenses are incurred in selling process. Under the selling expenses, many indirect expenses are included they are salesmen salary, allowance; warehouse rent trade promotion expenses, rent, tax etc. It prepare on actual basis, there is not any budget planning.

Following tables shows the position of selling expenses.

**Table: 4.17**

**Actual Selling Expenses FY 062/063 to 06/067**

<b>Fiscal Year</b>	<b>Amount in Rs.</b>
<b>062/063</b>	42700000
<b>063/064</b>	46400000
<b>064/065</b>	61300000
<b>065/066</b>	66652000
<b>066/067</b>	77365000

**Table : 4.18**

**Trend Analysis of Selling Expenses**

**(Fitting Straight Line Trend)**

(in '00000' Rs)

<b>FY</b>	<b>Expenses in Rs (y)</b>	<b>Deviation from 2064/065 (x)</b>	<b>x<sup>2</sup></b>	<b>xy</b>
<b>062/063</b>	427	-2	4	-845
<b>063/064</b>	464	-1	1	-464
<b>064/065</b>	613	0	0	0
<b>065/066</b>	666.52	1	1	666.56
<b>066/067</b>	773.65	2	4	1547.3
	$\phi y=2944.17$	$\phi x=0$	$\phi x^2=10$	$\phi xy=895.82$

Straight line trend  $y_c = a + bx$

$$a = \frac{\phi y}{n} = \frac{493448000}{5} = 98689600$$

Where,  $Y_c$  = Dependent Variable

$$b = \frac{\phi xy}{\phi x^2} = \frac{895.82}{10} = 89.582$$

a = Constant Value

b = Slope of trend line

Hence,  $y_c = 58883400 + 8958200x$

x = Independent variable

Above calculation shows that there is the increasing trend of selling expenses. The selling expenses will be increased by the average of Rs. 8958200 every year.

#### 4.8.4 Processing Expenses

Under processing expenses, skim milk power expenses, packaging expenses, transportation expenses, water and electricity expenses, fuel, salary and wages, maintenance, insurance, process losses etc are included. It prepare on actual basis, there is not any budget planning.

Following table shows the position of processing expenses from fiscal year 062/063 to 066/067.

**Table: 4.19**  
**Actual Processing Expenses FY 062/063 to 066/067**

Fiscal Year	Amount in Rs.
062/063	284100000
063/064	287900000
064/065	358500000
065/066	330853000
066/067	360152000

Above table shows that processing expenses in each year of the study. As the ratio of expenses are generally increased (except 065/066).

**Table: 4.20**  
**Trend Analysis of Processing Expenses**  
**(Fitting Straight Line Trend)**

(in '00000' Rs)

FY	Expenses in Rs (y)	Deviation from 2064/065 (x)	x <sup>2</sup>	xy
062/063	2841	-2	4	-5682
063/064	2879	-1	1	-2879
064/065	3585	0	0	0
065/066	3308.53	1	1	3308.53
066/067	3601.52	2	4	7203.04
	$\phi y=16215.05$	$\phi x=0$	$\phi x^2=10$	$\phi xy=1950.57$

Straight line trend  $y_c = a + bx$

Where,  $Y_c =$  Dependent Variable

$$a = \frac{\phi y}{n} = \frac{16215.05}{5} = 3243.01$$

$a =$  Constant Value

$$b = \frac{\phi xy}{\phi x^2} = \frac{1950.57}{10} = 195.057$$

$b =$  Slope of trend line

$x =$  Independent variable

Hence,  $y_c = 324301000 + 19505700x$

Above calculation shows that there is the increasing trend of processing expenses. The processing expenses will be increased by the average of Rs. 19505700 every year.

## 4.9 Cost-volume Profit Analysis

Study of CVP analysis each factor depends on each other on each other. Profit depends up on sales, selling price depends upon cost and cost depends upon the production. CVP analysis is the help factor of managerial decision making. CVP analysis helps to determine the profit goal of the enterprise will be achieved.

### 4.9.1 Identification Of Cost Variability

Knowledge of cost variability is essential in cost planning and control. There are three different categories of cost. Variable cost are directly and proportionately increase with the level of activity. The variable cost should be zero at zero activity. They change directly with changes in activity level in a responsibility center.

Semi variable expenses that are neither fixed nor variable because they possess some characteristic of both. As output changes, semi-variable expenses changes in the same direction but not in proportion to the change in output.

Fixed cost do not change in short term period with in a relevant range. Fixed cost remain constant in total amount and is unaffected by changing level of activity.

According to accounting department of DDC, variable cost and fixed cost of Fy 062/063 to 066/067 are given below:

**Table: 4.21**  
**Identification of Cost Variability**

(in '00000'Rs)

FY	062/063		063/064		064/065		065/066		066/067	
	Fixed	Variable	Fixed	Variable	Fixed	Variable	Fixed	Variable	Fixed	Variable
Collection	-	11447	-	12095	-	13323	-	14977	-	16544
Processing	-	2841	-	2879	-	3585	-	3308.53	-	3601.52
Selling	-	427	-	464	-	613	-	666.52	-	773.65
Administration	788	-	838	-	818	-	1244	-	1246	-
Depreciation	317.78	-	343	-	365	-	366	-	369	-
Interest on Loan	46.7	-	36.2	-	32.2	-	9.2	-	15.1	-
Gratuity	537	-	163	-	554	-	731	-	553	-
Total	1689.48	14715	1380.2	15438	1769.2	17521	2350.2	18952.05	2183.1	20919.17

The expenses of DDC are classified in to variable and fixed on the basis of judgmental basis. The collection cost, processing cost and selling cost are classified as variable cost whereas administrative cost, depreciation, interest on loan and gratuity are classified as fixed cost.

The CVP analysis of DDC is based on the following assumption.

- ) All cost can be classified in to fixed cost and variable cost.
- ) Sales price does not change as units of sales change.
- ) Calculations are based on total basis not on product wise.
- ) Fixed costs will remain constant and variable costs vary proportionately with activity.
- ) Activity base is selected in terms of sales revenue.
- ) Opening and closing stock are changed.

Generally following formula are used in the CVP analysis .

$$i) \text{ BEP (in Rs.)} = \frac{\text{Fixed Cost}}{\text{PVC Ratio}}$$

$$ii) \text{ BEP (in Quantity)} = \frac{\text{Fixed Cost}}{\text{CMPV}}$$

$$\text{iii) P/V Ratio} = \frac{\text{CM}}{\text{Sales Revenue}} \text{ or } 1 - \frac{\text{VC}}{\text{SR}}$$

$$\text{iv) Margin of Safety} = \text{Actual Sales} - \text{BE Sales} \text{ or } \frac{\text{Profit/Loss}}{\text{P/V Ratio}}$$

$$\text{v) CM} = \text{SP} - \text{VC} \text{ or } \text{P/V Ratio} \times \text{SR}$$

**Table: 4.22**  
**Calculation of BEP**  
**for FY 062/063 to 06/067**

(in '00000 Rs')

Particular	Sales Revenue	Variable Cost	Fixed cost	CM	P/V Ratio	BE Sales Rs.	Margin of Safety
Ref	1	2	3	4=1-2	5=4/1	6=3/5	7=1-6
Fiscal Year							
062/063	15363.40	14715	1689.48	921.41	0.06	28158	(12794.6)
063/064	16803.54	15438	1380.2	1365.54	0.081	17039.51	(235.97)
064/065	18006.74	17521	1769.2	485.74	0.027	65525.93	(47519.19)
065/066	21933.1	18925.5	2350.2	2981.05	0.14	16787.14	5145.96
066/067	26283.51	20919.17	2183.1	5364.34	0.204	10701.47	15582.04

It is difficult to analyze BEP of DDC. It has been operated below the break-even point on the basis of present cost structure. The sales revenues have not covered the total cost. Sales revenue is below than BEP in the year 062/063, 063/064 and 064/065. It is operating under full capacity. So it is very difficult to increase production and sales to meet the BE point without increasing other fixed cost. There is not clear record and cost classification system.

On the conclusion, the collection Processing and administrative cost is very high and low price of products is unable to meet the BE point. So, the government should not press DDC to purchase milk from the farmers at high rate and sell at low price because it is unbalance the financial position of DDC.

#### **4.10 Major Findings**

From the analysis of financial and non-financial aspects of DDC. It is found that DDC is suffering from internal and external problem. It is running in very weak position. Some major findings of my study are as follows.

- J DDC has not strategic planning of milk collection. It has been practicing tactical planning only.
- J The sales trend of milk and dairy products shows to collect more to increase sales. Actual collection, sales and production of milk and dairy products are not increase as requirement.
- J The budged sales of milk and dairy products are higher than the actual sales.
- J DDC has the policy of fixed pricing.
- J DDC has not followed the loan to livestock farmers.
- J The capacity utilization rate is increasing but DDC has not met its needed capacity to get profit. So it falls under losses every year.
- J DDC has applied stable inventory policies (Opening stock of inventory equal to closing stock of inventory) but this policy is not applied in practices, closing stocks quantity is not fixed.
- J There is not seen the inventory of more product.
- J DDC has not been practicing to plan effective execution of program by supervision and monitoring.
- J Personnel management is very poor. Employees are not also satisfied to the working style of DDC.
- J DDC has problem of maintaining the qualities of the product because there is lack of proper training.
- J DDC has utilized excess fund without proper policy under corporation fund, subsidy, can-revaluing fund etc.
- J DDC has not been practicing flexible budgeting.
- J The balance sheet of DDC shows the huge amount of fixed assets and current assets.
- J DDC does not prepare case flow. It is not doing comparative study of the balance sheet for knowing the position of the fund obtaining and utilization.
- J DDC has not cleared the working capital management. Current assets and current liabilities are not classified properly.
- J CVP analysis show more cost of production and low price of product.
- J The sales revenue has lower the break even sales of year 062/063, 063/064 and 064/065 that means it has not considered BEP.
- J There is not separate planning department and expert planner. So, it plans on traditional method.

- ) The top level executive are only involved in planning and decision making and lower level participation is not encouraged.
- ) DDC has depended on rural farmers but it does not provide any training of motivational activities to the farmers.
- ) DDC has prepared direct labour budget only based on technical and administration. It is not prepared according to time and rate.
- ) DDC's administrative, collection, processing and selling expenses are increasing trend of every year.

## **CHAPTER- V**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Summary**

Nepal is one of the poorest underdeveloped countries in the world. The unstable political system, bureaucratic and political corruption, lack of industrial environment, illiteracy, lack of public consciousness, lack of technical education, political interference, lack of business knowledge, lack of planning and monitoring system etc. are the major barriers for the development of industrial sector in Nepal.

DDC is a manufacturing enterprise. Its main objectives is to provide service to urban people by producing and supplying milk and dairy products rather than earning profit. DDC's other objectives is to upgrade economic condition of rural people by promoting the livestock occupation. Analyzing the past data and its present performance. DDC is totally forgetting its objectives. The grater amount of losses in every year, unscientific human resource management, unbalancing organizational structure etc is the main causes of its poor performance.

DDC has not extended its plans and programmers in all sectors. The planning system is not scientific private dairy industries are dominating the role of DDC but this is not yet evaluated by the management of DDC. Capacity utilization, profit planning. Human resource management are not a bit well in DDC. Studying the present operational of DDC, there arise the following questions:

- ) Why planning system and execution of plans and programmers are not effectively performed?
- ) What is the administration doing?
- ) What is the reason behind the continuous loss of the organization?
- ) Why do the management not able to bring the DDC in right track?

DDC is producing many types of products. Under dairy development corporation, there are seven projects conducting, they are as follows:

- ) Kathmandu Milk Supply Scheme.
- ) Biratnager Milk Supply Scheme.
- ) Hetauda Milk Supply Scheme.
- ) Janakpur Milk Supply Scheme.
- ) Lumbini Milk Supply Scheme.
- ) Nepalgunj Milk Supply Scheme.
- ) Dhangadhi Milk Supply Scheme.

There are 66 chilling centers and 742 co-operative milk collection centers of DDC.

The main objectives of the study is to analyze and interpret the profit plan in DDC, capacity utilization, human resource management , financial performance as P/L A/C and balance sheet and sales fore casting of the corporation.

Profiting planning is the systematic and continuous process of a work from the starting to the finishing time. It helps to goal and the objectives of the enterprises early.

A sales planning is the starting point of profit. It is an estimation of expected sales of future, success and failure of the organization depends upon sales plan. So, it is prepared on detail and suitable time period. Main purpose of sales planning is to reduce uncertainty of future revenue and to control sales activities. Production planning is the second step of profit planning. Estimation of the number of units to be produced to meet the sales requirements for certain period is called production planning. It is directly affected by opening and closing stock and required sales units.

Fiscal year 2062/063 data is analyzed to final out the strength and weakness of DDC. Primary and secondary data are used in this study. Mean, standard deviation, correlation, regression, CV are used as statistical tools to find out nature of data.

The correlation between actual and budgeted sales and production is positive and negative (Mixed nature) of products. Production plan of DDC is based up on the sales and opening and closing inventory and also on production capacity. The coefficient of variation of actual sales is higher than that of budgeted production of most product and actual production is

mixed nature high and below of product the regression analysis shows the mixed (product wise) trend.

DDC is operating under the breakeven point and is unable to earn operating profit, capacity of plant is over utilized to meet the production requirement for sales. Profit and loss A/C of DDC is not satisfactory, its unnecessary loss of every heads. Its operating same trend the position of liquidation in near future. The balance sheet shows that financial aspect is very weak and long term is being increased and fixed assets and accumulated losses are increased.

## **5.2 Conclusions**

The main objective of this study was to analyze the planning system, management process and the goals of DDC in the present context. Thus studying these topics and then analyzing by the help of PPC tools and techniques. The following conclusion has been drawn on behalf of the performance of DDC.

### **Planning**

The planning system of DDC in according with its objectives focused. The proper planning system and other sub-plans could not be found. In analyzing the planning system. It could find that DDC is adopting just in time planning. There is no right use and application of PPC, human resource management plan, performance evaluation for employees, milk collection and supplying plan, pricing system advertising and promotion policy, financial plan, milk collection plan etc. DDC has been practicing only tactical (short term) planning rather than strategic (long term) planning.

### **Accounting**

The timely preparation of financial statements, cost sheet, periodic profit and loss, cost statement etc can lead to fixation of price correctly and constitute strong test of managerial efficiency. Internal audit can be of great utility in helping DDC enhance its performance by taking suitable corrective action.

Thus, analyzing the above techniques and tools of accounting system of DDC, thi aspect is very poor. Only profit and loss, balance sheet etc are generally being kept as a recording

system but other tools and techniques has not been kept properly. Similarly internal accrediting is not satisfactory.

## **Resources**

It is necessary that human resources to be of maximum utility to the PE's should be made every ready and fit for service of PE's by giving them finely and adequate training, education, exposure to foreign suitable technical knowledge, in addition to furnishing them attractive remuneration and facilities depending upon their qualification these factors are not properly managed in DDC.

## **Organization**

The organization pattern of DDC is not accordance with scientific management system. The communication and decision making environment is also according to the interest of top level management. The organization Patten of DDC is not helpful to perform the present challenging work.

## **Research and Development**

As research and development are main works of an organization. So, management should be positive minded in this respect and should use funds in this area as required. DDC has no any new research and development program. Such as market, new product, new facility, machinery etc.

## **Public Relations**

A good public relation always keeps the management constantly in close touch with its environment and consumers, which helps itself in updating and adapting itself to changing circumstances. The public relation of DDC in comparison with other subject matter is good but this is not developing in same basis.

## **Productivity**

DDC has generally adopted the quality control technique in limited dairy products but this has not been effectively executed. DDC has utilizing full capacity for the production of milk and dairy products but the productivity is very low.

## **Production**

Production is a most important element in any PE's. If we analyze the production level of DDC the quantity of production of milk and dairy products is very low in comparison with the demand of dairy products. The production level and the rate of production is not stable. Sometimes, the production is higher than demand and sometimes the production level is not meeting the demand. So, the production quantity and rate of production is not satisfactory.

## **Sales**

The actual sales of DDC is also depending upon the demand of the market and sometimes due to the reason of variability in production quantity, the sales figure is not going in a right track because of establishment of many other dairy industries in private sector, DDC is not researching the market and not adopting appropriate selling strategy. So, a sale is not in favor of DDC.

Despite the above analyzed subject matter some other things can be concluded after this research study.

- ) The management of the corporation has applied annual sales budget. There is substantial gap between sales target and achievement of each year.
- ) When comparing the actual and targeted production of the corporation, there has been significantly difference in among the fiscal years.
- ) There is not well developed system of performance evaluation for employees.
- ) Objective of the DDC is not clear.
- ) Expenses are not identified as fixed and variable in DDC.
- ) DDC sells only on cash.
- ) DDC has not prepared flexible budget.
- ) DDC has not clear financial ratio analysis.
- ) DDC has adopted stable inventory policy but this policy is not applied in practices.
- ) DDC has not satisfactory achievement of specific goals the main causes of low achievement is no full autonomy, under capitalization, corruption, political interference etc.
- ) DDC shows the following strengths and weakness.
  - Strengths
    - No problem of sales

- Experienced staffs
- Local milk
- High quality products
- Weakness
  - Absence of clear objectives
  - Political justification
  - Lack of skilled manpower
  - Lack of available sufficient milk
  - Govt. interference in the management
  - Absence of incentives to employees
  - Absence of required performance evaluation.
- ) Distribution system of DDC is producer → dealer → retailer → consumer.
- ) The top level executives are only involved in planning and decision making and lower level participation is not encouraged.
- ) DDC will not be able to eliminate loss and to make profit.

### **5.3 Recommendations**

The analysis of the profit planning system and the present operation of DDC according to the objectives of this study. Some suggestion are recommended for short term and long term.

- ) DDC should try to forecast and prepare long range forecasting of profit planning.
- ) DDC should increase actual sales because it is decreasing and loss is occurring.
- ) DDC should try to reduce unlikely gap between the target and achievement of products of sales budget and production.
- ) DDC should try to increase collection chilling centers and collection network.
- ) DDC should try to remove its losses of milk in production, storing and distribution process.
- ) The budget should be prepared on the realistic ground with the study of market and consumer.
- ) DDC should develop its specific goals for the coming budget.
- ) DDC should prepare flexible budget and capacity should be utilized as shown by flexible budget and capacity should be utilized as shown by flexible budget.

- ) Collection administration and processing cost should be controlled.
- ) BE sales of DDC is very high but actual sales is below the breakeven point. Thus, DDC reduce variable cost and increase the price of production.
- ) DDC should be challengeable action programmers to execute profit planning by competing with other dairy industries, different kinds of facilitation program to produce plenty of milk and incentive to farmers in budgets.
- ) DDC must hire trained and highly qualified manpower of budgeting and planning.
- ) Proper motivational program and reward and punishment system must be conducted for effective execution of profit planning.
- ) DDC should take fair and profitable price for its product.
- ) DDC have to seriously consider about optimum capacity utilization when preparing profit plans. Optimum capacity utilization helps in many aspect of DDC.
- ) Deviation from budget should be analyzed and necessary corrective steps have to be taken on the basis of actual sales and production.
- ) DDC should be reduce collection cost, uneconomic collection counters must be closed up and some of the milk collection centers should keep only in season. When enough milk supply is obtained. So that, profit plan becomes attractive.
- ) CVP analysis, financial ratio, cash flow and cost of production should be analyzed while pricing and pricing should be done on the basis of production and principles of profit planning.
- ) Sales promotion in different ways should be done.
- ) Organizational structure should be maintained effectively to get high efficiency in operational of profit plans.
- ) Profit planning manuals should be communicated from top to lower levels each person should be participated on decision making process. It should maintain proper coordination within the organization. So, profit plan budgeting.

## Appendix-I

### Calculation of Statistical Tools of Sales Data

(in '00000' ltrs)

#### A) Milk Sales

Year	Target	Achievement					
062/063	568.74	543.87	-15.53	9.93	241.18	98.60	-154.21
063/064	592.44	500.18	8.17	-33.76	66.75	1139.74	-275.82
064/065	548.21	494.73	-36.06	-39.21	1300.32	1537.42	1413.91
065/066	631.57	574.72	47.30	40.78	2237.29	1663.00	1928.89
066/067	580.37	556.21	-3.90	22.27	15.21	495.95	-86.85
	$\phi = 2921.33$	$\phi = 2669.71$	$\phi = 0$	$\phi = 0$	$\phi = 21701.11$	$\phi = 21561.11$	$\phi = 21561.11$

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$= \frac{\phi x}{N} = 584.27$	$= \frac{\phi y}{N} = 533.94$
2	SD	$\sigma_n = \frac{\sqrt{\phi x^2}}{N} = 12.43$	$\sigma_y = 14.04$
3	CV	$CV_n = \frac{12.43}{584.27} \times 100 = 2.13\%$	$CV_n = \frac{14.04}{533.94} \times 100 = 2.63\%$
4	Correlation (r)	$r = \frac{\phi xy}{\sqrt{\phi x^2} \sqrt{\phi y^2}} =$	$= 0.65$

#### B) Curd Sales

(in '000' ltrs)

Year	Target	Achievement					
062/063	850.15	904.00	-1031.28	-1021.20	1063538.44	1042849.44	1053143.14
063/064	1350.15	1704.00	-531.43	-221.20	282417.84	48929.44	117552.32
064/065	1996.00	2007.00	114.57	81.80	13126.28	6691.24	9371.83
065/066	2319.00	2299.00	437.57	373.80	191467.50	139726.44	163563.70
066/067	2892.00	2712.00	1010.57	786.80	1021251.73	619054.24	795116.48
	$\phi = 9407.15$	$\phi = 9626$	$\phi = 0$	$\phi = 0$	$\phi = 21561.11$	$\phi = 21561.11$	$\phi = 21561.11$

S.N.	Particular	Calculations	
		Target (x)	Achievement (y)
1	Mean	$\bar{x} = \frac{\phi x}{N} = \frac{9407.15}{16} = 588.1$	$\bar{y} = \frac{\phi y}{N} = \frac{9626}{16} = 601.625$
2	SD	$\sigma_n = \frac{\sqrt{\phi x^2}}{N} = \frac{\sqrt{2571801.79}}{16} = 320.74$	$\sigma_y = \frac{\sqrt{\phi y^2}}{N} = \frac{\sqrt{1857250.80}}{16} = 272.56$
3	CV	$CV_n = \frac{320.74}{588.1} \times 100 = 54.54\%$	$CV_n = \frac{272.56}{601.625} \times 100 = 45.31\%$

		17.05%	
4	Correlation (r)	$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{2138747.47}{\sqrt{2571801.79} \times \sqrt{1857250.80}} = 0.97$	

### C) Ice- Cream Sales

(in '000' ltrs)

Year	Target (x)	Achievement (y)	$x = x - \bar{x}$	$y = y - \bar{y}$	$x^2$	$y^2$	xy
062/063	100.70	85	-19.64	14.2	385.73	201.64	-287.89
063/064	163	52	42.66	-18.8	1819.88	353.44	-802.00
064/065	169	59	48.66	-11.8	2367.80	139.24	-574.20
065/066	79	65	-41.34	-5.8	1709.00	33.64	239.77
066/067	90	93	-30.34	22.2	920.52	492.84	-673.55
	$\sum x = 601.70$	$\sum y = 354$	$\sum x = 0$	$\sum y = 0$	$\sum x^2 = 11801.79$	$\sum y^2 = 1857250.80$	$\sum xy = 2138747.47$

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\sum x}{N} = 120.34$	$\frac{\sum y}{N} = 70.8$
2	SD	$\sigma_x = \frac{\sqrt{\sum x^2}}{N} = 16.97$	$\sigma_y = \frac{\sqrt{\sum y^2}}{N} = 6.98$
3	CV	$CV_x = \frac{\sigma_x}{\bar{x}} \times 100 = 14.10\%$	$CV_y = \frac{\sigma_y}{\bar{y}} \times 100 = 9.85\%$
4	Correlation (r)	$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = -0.784$	

### D) Butter Sales

(in '000' kg)

Year	Target	Achievement					
062/063	195.50	189.60	-57.8	16.08	3340.8	258.56	-929.42
063/064	253	201	-0.30	27.48	0.09	755	-8.24
064/065	276	163	22.7	-10.52	515.29	110.67	-238.8
065/066	282	137	28.7	-36.52	823.69	1333.71	1048.12
066/067	260	177	6.7	3.48	44.89	12.11	23.31
	$\sum x = 1266.5$	$\sum y = 867.60$	$\sum x = 0$	$\sum y = 0$	$\sum x^2 = 1582100$	$\sum y^2 = 750831$	$\sum xy = 100000$

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\sum x}{N} = 253.30$	$\frac{\sum y}{N} = 173.52$

2	SD	$\sigma_x = \frac{\sqrt{\phi x^2}}{N} = 13.75$	$\sigma_y = \frac{\sqrt{\phi y^2}}{N} = 9.93$
3	CV	$CV_n = \frac{\sigma_x}{\bar{x}} \times 100 = 5.43\%$	$CV_n = \frac{\sigma_y}{\bar{y}} \times 100 = 5.72\%$
4	Correlation (r)	$r = \frac{\phi xy}{\sqrt{\phi x^2} \sqrt{\phi y^2}} = -0.031$	

### E)Ghee Sales

(in '000' kg)

Year	Target	Achievement					
062/063	983.168	913	63.34	153.27	411.7	23.491.7	9708
063/064	848	823	-71.83	63.27	5159	4003	-4544.68
064/065	876	634	-43.83	-125.73	1921	15808	5510.75
065/066	1047	816.66	127	56.93	16129	3241	7230
066/067	845	612	-74.83	-147.6	5599	21803	11049
	$\phi = 4599.108$	$\phi = 3798.66$	$\phi = 0$	$\phi = 0$	$\phi = 28949.07$	$\phi = 20960.3$	$\phi = 28969.1$

S.N.	Particular	Calculations	
		Target (x)	Achievement (y)
1	Mean	$\bar{x} = \frac{\phi x}{N} = \frac{4599.168}{5} = 919.83$	$\bar{y} = \frac{\phi y}{N} = \frac{3798.66}{5} = 759.73$
2	SD	$\sigma_x = \frac{\sqrt{\phi x^2}}{N} = \frac{\sqrt{29219.7}}{5} = 34.18$	$\sigma_y = \frac{\sqrt{\phi y^2}}{N} = \frac{\sqrt{68340.7}}{5} = 52.28$
3	CV	$CV_n = \frac{\sigma_x}{\bar{x}} \times 100 = \frac{34.18}{919.83} \times 100 = 3.72\%$	$CV_n = \frac{\sigma_y}{\bar{y}} \times 100 = \frac{52.28}{759.73} \times 100 = 6.88\%$
4	Correlation (r)	$r = \frac{\phi xy}{\sqrt{\phi x^2} \sqrt{\phi y^2}} = \frac{28949.07}{\sqrt{29219.7} \times \sqrt{68340.7}} = 0.64$	

### F) Cheese Sales

(in '000' kg)

Year	Target (x)	Achievement (y)	$x = x - \bar{x}$	$y = y - \bar{y}$	$x^2$	$y^2$	xy
062/063	230.8	184	-39.76	1.6	1581	2.56	63.61
063/064	251	137	-19.56	-45.4	382.6	2061.16	888
064/065	283	162	12.44	-20.4	154.75	416.16	-253.78
065/066	300	213	29.44	30.6	866.7	936.36	900.86
066/067	288	216	17.44	33.6	304	1128.96	586
	$\phi x = 1352.8$	$\phi y = 912$	$\phi x = 0$	$\phi y = 0$	$\phi x^2 = 28949.07$	$\phi y^2 = 20960.3$	$\phi xy = 28969.1$

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\sum x}{N} = 270.56$	$\frac{\sum y}{N} = 182.4$
2	SD	$\sigma_x = \frac{\sqrt{\sum x^2}}{N} = 11.47$	$\sigma_y = \frac{\sqrt{\sum y^2}}{N} = 13.48$
3	CV	$CV_x = \frac{\sigma_x}{\bar{x}} \times 100 = 4.24\%$	$CV_y = \frac{\sigma_y}{\bar{y}} \times 100 = 7.39\%$
4	Correlation (r)	$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = 0.56$	

### G) Panir Sales

(in '000' kg)

Year	Target	Achievement					
062/063	120.965	83	-31.255	-21.8	975	475.24	680.7
063/064	157	78	4.81	-26.8	23.14	718.24	-128.9
064/065	151	96	-1.19	-8.8	1.42	77.44	10.47
065/066	162	123	9.81	18.2	96.24	331.24	178.54
066/067	170	144	17.81	39.2	317.19	1536.64	698.15
	$\sum = 760.965$	$\sum = 524$	$\sum = 0$	$\sum = 0$	$\sum = 975$	$\sum = 3171.9$	$\sum = 1536.64$

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\sum x}{N} = 152.19$	$\frac{\sum y}{N} = 104.8$
2	SD	$\sigma_x = \frac{\sqrt{\sum x^2}}{N} = 7.51$	$\sigma_y = \frac{\sqrt{\sum y^2}}{N} = 11.20$
3	CV	$CV_x = \frac{\sigma_x}{\bar{x}} \times 100 = 4.93\%$	$CV_y = \frac{\sigma_y}{\bar{y}} \times 100 = 10.68\%$
4	Correlation (r)	$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = 0.68$	

## Appendix-II

### Calculation of Statistical Tools of Production Data

(in '00000' ltrs)

#### A) Milk Production

Year	Target	Achievement					
062/063	786.64	690.51	-0.55	15.97	0.3025	255.04	-8.78
063/064	745.08	626.63	-42.11	-47.91	1773.25	2295.37	2017.49
064/065	764.96	626.08	-22.11	-48.46	494.17	2348.37	1077.27
065/066	810.34	667.00	23.15	-7.54	535.92	56.85	-174.55
066/067	828.93	762.49	41.74	87.95	1742.23	7735.20	3671.03
	$\phi = 3935.95$	$\phi = 3372.71$	$\phi = 0$	$\phi = 0$	$\phi = 11999.75$	$\phi = 11999.75$	$\phi = 11999.75$

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\phi x}{N} = 787.19$	$\frac{\phi y}{N} = 674.54$
2	SD	$\sigma_n = \frac{\sqrt{\phi x^2}}{N} = 67.42$	$\sigma_y = \frac{\sqrt{\phi y^2}}{N} = 112.65$
3	CV	$CV_n = \frac{\sigma_n}{\text{Mean}} \times 100 = 8.56\%$	$CV_n = \frac{\sigma_y}{\text{Mean}} \times 100 = 16.70\%$
4	Correlation (r)	$r = \frac{\phi xy}{\sqrt{\phi x^2} \sqrt{\phi y^2}} = 0.867$	

#### B) Curd Production

(in '000' ltrs)

Year	Target	Achievement					
062/063	850.15	920	-1031.45	-1017.2	1063889.10	1034695.84	1049190.94
063/064	1350.15	1712	-513.60	-225.2	282598.56	50715.04	119716.32
064/065	1997	2030	115.4	92.8	13317.16	8611.84	10709.12
065/066	2319	2312	437.4	374.8	191318.76	140475.04	163937.52
066/067	2892	2712	1010.4	774.8	1020908.16	600315.04	782857.92
	$\phi = 9407.15$	$\phi = 9686$	$\phi = 0$	$\phi = 0$	$\phi = 11999.75$	$\phi = 11999.75$	$\phi = 11999.75$

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\phi x}{N} = 1881.$	$\frac{\phi y}{N} = 1937.20$
2	SD	$\sigma_n = \frac{\sqrt{\phi x^2}}{N} = 320.75$	$\sigma_y = \frac{\sqrt{\phi y^2}}{N} = 270.91$

3	CV	$CV_n = \frac{\sigma}{\bar{x}} \times 100 = \frac{1.704}{10} \times 100 = 17.04\%$	$CV_n = \frac{\sigma}{\bar{y}} \times 100 = \frac{1.398}{10} \times 100 = 13.98\%$
4	Correlation (r)	$r = \frac{\phi_{xy}}{\sqrt{\phi_x^2} \sqrt{\phi_y^2}} = \frac{0.977}{1} = 0.977$	

### C) Ice- Cream Production

(in '000' ltrs)

Year	Target	Achievement					
062/063	100.7	84	-19.64	12.6	385.73	158.76	-247.46
063/064	163	55	42.66	-16.4	1819.88	268.96	-699.62
064/065	169	62	48.66	-9.4	2367.80	88.36	-457.40
065/066	79	63	-41.34	-8.4	1709.00	70.56	347.26
066/067	90	93	-30.34	21.6	920.52	466.56	-655.34
	$\phi = 601.7$	$\phi = 357$	$\phi = 0$	$\phi = 0$	$\phi = 11751.93$	$\phi = 783.16$	$\phi = 5927.26$

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\phi_x}{N} = \frac{601.7}{5} = 120.34$	$\frac{\phi_y}{N} = \frac{357}{5} = 71.4$
2	SD	$\sigma_x = \frac{\sqrt{\phi_x^2}}{N} = \frac{1697}{100} = 16.97$	$\sigma_y = \frac{\sqrt{\phi_y^2}}{N} = \frac{649}{100} = 6.49$
3	CV	$CV_n = \frac{\sigma_x}{\bar{x}} \times 100 = \frac{16.97}{120.34} \times 100 = 14.10\%$	$CV_n = \frac{\sigma_y}{\bar{y}} \times 100 = \frac{6.49}{71.4} \times 100 = 9.09\%$
4	Correlation (r)	$r = \frac{\phi_{xy}}{\sqrt{\phi_x^2} \sqrt{\phi_y^2}} = \frac{0}{1697 \times 649} = -0.62$	

### D) Butter Production

(in '000' kg)

Year	Target	Achievement					
062/063	117.90	130.10	-11.5	29.18	132.25	851.47	-335.57
063/064	120.70	112.50	-8.5	11.58	75.69	134.09	-100.75
064/065	139.50	89.60	10.1	-11.32	102.01	128.14	-114.33
065/066	148.60	78.20	19.2	-22.72	368.64	516.20	-436.22
066/067	120.30	94.20	-9.10	-6.72	82.81	45.16	61.15
	$\phi = 647$	$\phi = 504.60$	$\phi = 0$	$\phi = 0$	$\phi = 11751.93$	$\phi = 783.16$	$\phi = 5927.26$

S.N.	Particular	Calculations
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		Target	Achievement
1	Mean	$\frac{\sum x}{N} = 129.4$	$\frac{\sum y}{N} = 100.92$
2	SD	$\sigma_x = \frac{\sqrt{\sum x^2}}{N} = 5.52$	$\sigma_y = \frac{\sqrt{\sum y^2}}{N} = 8.19$
3	CV	$CV_n = \frac{\sigma_x}{\bar{x}} \times 100 = 4.27\%$	$CV_n = \frac{\sigma_y}{\bar{y}} \times 100 = 8.11\%$
4	Correlation (r)	$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = 0.82$	

### E) Ghee Production

(in '000' kg)

Year	Target	Achievement					
062/063	997.85	951	75.68	259.6	5727.46	67392.16	19646.53
063/064	788	803	-134.17	111.6	18001.59	12454.56	-14973.37
064/065	934	614	11.83	-77.4	139.95	5990.76	-915.64
065/066	1047	477	124.83	-214.4	15582.53	45967.36	-26763.55
066/067	844	612	-78.17	-79.4	6110.55	6304.36	6206.70
	$\sum = 4610.85$	$\sum = 3457$	$\sum = 0$	$\sum = 0$	$\sum = 5727.46$	$\sum = 67392.16$	$\sum = 19646.53$

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\sum x}{N} = 922.17$	$\frac{\sum y}{N} = 619.4$
2	SD	$\sigma_x = \frac{\sqrt{\sum x^2}}{N} = 42.69$	$\sigma_y = \frac{\sqrt{\sum y^2}}{N} = 63.53$
3	CV	$CV_n = \frac{\sigma_x}{\bar{x}} \times 100 = 4.27\%$	$CV_n = \frac{\sigma_y}{\bar{y}} \times 100 = 9.18\%$
4	Correlation (r)	$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = 0.212$	

### F) Cheese Production

(in '000' kg)

Year	Target	Achievement					
062/063	250.30	199	-32.56	-8.6	1060.15	73.96	280.02
063/064	287	166	4.14	-41.6	17.14	1730.56	-172.22
064/065	283	180	0.14	-27.6	0.02	761.76	-3.86
065/066	289	206	6.14	-1.6	37.70	2.56	-9.82
066/067	305	287	22.14	79.4	490.20	6304.36	1757.92

	$\phi = 1414.30$	$\phi = 1038$	$\phi = 0$	$\phi = 0$	$\phi$ ΧΚΙ ΕΛΛ	$\phi$ ΧΡΠΤΜΑ	$\phi$ ΧΚΡΕΛΗΝ
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S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\phi x}{N} = 282.86$	$\frac{\phi y}{N} = 207$
2	SD	$\sigma_n = \frac{\sqrt{\phi x^2}}{N} = 8.01$	$\sigma_y = \frac{\sqrt{\phi y^2}}{N} = 18.84$
3	CV	$CV_n = X 100 = 2.83\%$	$CV_n = X 100 = 9.07\%$
4	Correlation (r)	$r = \frac{\phi xy}{\sqrt{\phi x^2} \sqrt{\phi y^2}} = 0.49$	

### G) Panir Production

(in '000' kg)

Year	Target	Achievement					
062/063	122.665	84	-30.1	-22.6	906	510.76	680.26
063/064	157	78	4.27	-28.6	18.23	817.96	-122.12
064/065	151	101	-1.73	-5.6	2.99	31.30	9.68
065/066	163	126	10.27	19.4	105.47	376.36	199.24
066/067	170	144	-8.73	37.4	76.21	1398.76	326.50
	$\phi = 763.665$	$\phi = 553$	$\phi = 0$	$\phi = 0$	$\phi$ ΧΚΚΙ ΡΕ	$\phi$ ΧΜΚΜΕΛΑ	$\phi$ ΧΚΙ ΣΜΕΟ

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\phi x}{N} = 152.73$	$\frac{\phi y}{N} = 106.6$
2	SD	$\sigma_n = \frac{\sqrt{\phi x^2}}{N} = 6.66$	$\sigma_y = \frac{\sqrt{\phi y^2}}{N} = 11.19$
3	CV	$CV_n = X 100 = 4.36\%$	$CV_n = X 100 = 10.49\%$
4	Correlation (r)	$r = \frac{\phi xy}{\sqrt{\phi x^2} \sqrt{\phi y^2}} = 0.586$	

### H) Skim Milk Powder Production

(in '000' kg)

Year	Target	Achievement					
062/063	650	641	5	141.4	25	19994	707
063/064	636	501	-9	5.4	81	29.16	-48
064/065	712	420	67	-73.6	4489	5416.96	-4931.2

065/066	644	343	-1	-156.6	1	24523.56	-156.6
066/067	583	583	-62	83.4	3844	6955.56	5170.8
	$\phi = 3225$	$\phi = 2498$	$\phi = 0$	$\phi = 0$	$\phi = 3844$	$\phi = 24523.56$	$\phi = 5170.8$

S.N.	Particular	Calculations	
		Target (x)	Achievement (y)
1	Mean	$\bar{x} = \frac{\phi x}{N} = \frac{3225}{5} = 645$	$\bar{y} = \frac{\phi y}{N} = \frac{2498}{5} = 499.6$
2	SD	$\sigma_x = \frac{\sqrt{\phi x^2}}{N} = \frac{\sqrt{8440}}{5} = 18.37$	$\sigma_y = \frac{\sqrt{\phi y^2}}{N} = \frac{\sqrt{56919.24}}{5} = 47.71$
3	CV	$CV_x = \frac{\sigma_x}{\bar{x}} \times 100 = \frac{18.37}{645} \times 100 = 2.84\%$	$CV_y = \frac{\sigma_y}{\bar{y}} \times 100 = \frac{47.71}{499.6} \times 100 = 9.54\%$
4	Correlation (r)	$r = \frac{\phi xy}{\sqrt{\phi x^2} \sqrt{\phi y^2}} = \frac{7414}{\sqrt{8440} \times \sqrt{56919.24}} = 0.0388$	

## Appendix-III

### Analysis of Milk Collection

(in '00000' ltrs)

#### A) Milk Collection

Year	Target	Achievement					
062/063	649.664	604.248	-20.756	24.038	430	577.82	-498.93
063/064	623.07	508.41	-47.35	-43.37	2242.02	1880.95	2053.56
064/065	618.45	612.085	-51.97	-71.8	2701	5155.24	3731.45
065/066	720.10	612.085	49.68	31.875	2468.10	1016.01	1583.55
066/067	740.81	639.46	70.39	59.25	4954.75	3510.56	4170.61
	$\phi = 3352.094$	$\phi = 2901.043$	$\phi = 0$	$\phi = 0$	$\phi = 11040.24$	$\phi = 12796.68$	$\phi = 12140.58$

S.N.	Particular	Calculations	
		Target	Achievement
1	Mean	$\frac{\phi_x}{N} = \frac{3352.094}{5} = 670.42$	$\frac{\phi_y}{N} = \frac{2901.043}{5} = 580.21$
2	SD	$\sigma_x = \frac{\sqrt{\phi_x^2}}{N} = \frac{\sqrt{12796.69}}{5} = 22.62$	$\sigma_y = \frac{\sqrt{\phi_y^2}}{N} = \frac{\sqrt{12140.58}}{5} = 22.03$
3	CV	$CV_n = \frac{22.62}{670.42} \times 100 = 3.37\%$	$CV_n = \frac{22.03}{580.21} \times 100 = 3.379\%$
4	Correlation (r)	$r = \frac{\phi_{xy}}{\sqrt{\phi_x^2} \sqrt{\phi_y^2}} = \frac{11040.24}{\sqrt{12796.68} \sqrt{12140.58}} = 0.8857$	

**Appendix-IV**  
**Comparative Profit and Loss Account**  
**From FY 062/063 to 06/067**

<b>Particulars</b>	<b>062/063</b>	<b>063/064</b>	<b>064/065</b>	<b>065/066</b>	<b>066/067</b>
Sales Revenue	1536340564	1680353679	1800673560	2193309447	2628350971
Cost of Sales	1371815215	1497384582	1629164826	1916107145	2312063599
Gross Profit	164525349	182969097	171508734	277202302	316287372
Other Income	16939055	12462762	13755732	14981455	17541086
Business Expenses					
Dist. Exp.	42681441	46437352	62355205	66652247	73918539
Adm. Exp.	73529349	80209132	117665206	123494625	133951778
Operational Profit	65253714	68785375	5244055	102036885	12595814
Interest Exp.	4663760	3614718	3213105	916235	1501770
Dep. Exp.	31778505	34209863	36434380	36666382	36962464
Gratuity Exp.	53753234	16258298	55386751	73063749	55230249
Exp. W/O	600033	-	-	-	-
Total Business Expenses	90795532	54082880	95034236	110646366	93694483
P/L Before Income Tax	(25541918)	14702495	(89790181)	(8609481)	32263685
Income Tax	-	-	-	-	(6452731)
P/L After Income Tax	(25541918)	14702495	(89790181)	(8609481)	25810927
Net P/L	(25541918)	14702495	(89790181)	(8609481)	25810927
Accumulated P/L	(22194562)	(247456480)	(24089469)	(335879650)	(344489132)
Income Tax till 061/062	-	(13335484)	-	-	-
Income Tax Paid (062/063 and 063/064)	-	-	-	-	(6402787)
P/L Transfer to B/S	(24756480)	(246089469)	(335879650)	(344489131)	(325080991)

**Appendix-V**  
**Comparative Balance Sheet**  
**From FY 062/063 to 06/067**

<b>Particulars</b>	<b>062/063</b>	<b>063/064</b>	<b>064/065</b>	<b>065/066</b>	<b>066/067</b>
Assets					
Fixed Assets					
a) Presently on use	259592818	254143382	234316243	246655983	245283776
b) Installed (but not yet used)	10723587	602896	9329718	4316696	17256686
c) Grant fund investment & Balances	1545246	-	-	-	-
d) Current Assets	541335258	558331546	463426146	583782894	680990300
e) Accumulated Loss	247456480	246089469	335879650	344489131	325080991
f) Share Investment	-	-	-	7001700	17001700
g) Preliminary Expenses of Dhangadi Dairy Supply scheme	-	-	-	-	853173
<b>Total</b>	<b>1060653398</b>	<b>1064593358</b>	<b>1042951757</b>	<b>1186246404</b>	<b>1286466626</b>
Liabilities					
a) Corporation Fund	5508022389	550802389	550802389	670080104	670080104
b) Foreign Grant Fund	1545264	-	-	-	-
c) Long Term Loan	83301488	82351382	79026010	6650744	3325372
d) Current Liabilities & Provision	425004257	431439587	413123358	509515556	613061150
<b>Total</b>	<b>1060653398</b>	<b>1064593358</b>	<b>1042951757</b>	<b>1186246404</b>	<b>1286466626</b>

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