

ISBN: 978-81-69967-15-0



AGRICULTURAL FINANCE AND COOPERATION

Dr. Girish Mahajan



Bhumi Publishing, India
First Edition: October 2026

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(ISBN: 978-81-69967-15-0)

DOI: <https://doi.org/10.5281/zenodo.23313918>

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Bhumi Publishing

October 2026

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Published by Bhumi Publishing,

a publishing unit of Bhumi Gramin Vikas Sanstha



Nigave Khalasa, Tal – Karveer, Dist – Kolhapur, Maharashtra, INDIA 416 207

E-mail: bhumipublishing@gmail.com



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PREFACE

Agricultural finance and cooperation are essential components of agricultural development, supporting farmers in accessing credit, managing financial resources, adopting improved technologies, and strengthening rural livelihoods. In an agricultural economy, timely and adequate finance plays a vital role in enhancing productivity, improving farm income, and promoting sustainable agricultural practices. Cooperation, meanwhile, encourages collective action, mutual assistance, and the equitable distribution of economic benefits among farming communities.

The book *Agricultural Finance and Cooperation* provides a comprehensive introduction to the fundamental concepts, principles, institutions, and practices associated with agricultural credit and cooperative organizations. It covers the nature and significance of agricultural finance, types of agricultural loans, basic economic and business principles, loan application procedures, repayment plans, and tools of farm financial management. The chapters also explain the structure and functions of financial and cooperative institutions, financial ratios, the time value of money, project appraisal, and the management of agricultural risks and uncertainties.

A significant part of this book is devoted to the principles and development of cooperation in India. It examines the history of the cooperative movement, cooperative credit structures, marketing, farming, dairy, fisheries, tea, consumer, labour, storage, and warehousing cooperatives. The importance of cooperative education and training is also discussed, emphasizing their role in developing capable leadership, improving institutional efficiency, and strengthening rural communities. An annexure on income tax calculation further supports the practical understanding of financial matters.

This book is primarily intended for undergraduate students, teachers, researchers, agricultural professionals, and individuals interested in agricultural economics, rural finance, and cooperative management. The content is organized to facilitate conceptual understanding and practical learning.

It is hoped that this book will serve as a useful academic resource, encourage informed financial decision-making, and promote a deeper understanding of agricultural finance and cooperation in strengthening the agricultural sector and advancing rural development.

- Dr. Girish Mahajan

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CHAPTER 1

NATURE AND SIGNIFICANCE OF AGRICULTURAL FINANCE

Usefulness of Agricultural Finance: Agricultural finance as a branch of Agricultural Economics is one of the most important fields of specialisation for the students, bankers, extension workers and management experts because it throws light on how to acquire and utilize the funds efficiently. Hence, this book will enable the students to get acquainted with the tools of farm financial management and would prove quite fruitful in their future career.

Meaning and Scope of Agricultural Finance: Agricultural finance is the economic study of the acquisition and use of capital in agriculture. It deals with the supply of and demand for funds in the agricultural sector of the economy. A knowledge of fundamental economic and management principles and analytical procedure facilitate the control over capital and using it efficiently. The investment analysis helps to determine how much capital it will pay to allocate two alternative areas. Financial analysis relating to income, repayment capacity and risk management indicate the total amount of capital that the farm business can profitably and safely use. An understanding of agricultural credit institution and legal and regulatory environment in which they operate helps in the selection of lenders who can provide the proper amount of credit along with the terms and conditions and related services needed to adequately finance the business. It means agricultural finance is the study of credit.

The word Credit comes from the Latin word “Credo” which means I Belief. Therefore, credit is extended on the belief that the borrower will be willing and able to repay the loan at some specified date in the future. In the economic history of the world, there were long period of time when the lending of money and collection of interest were considered immoral or unprincipled in the society. The taboos (social inhibitory norm) crept into both the religious and civil laws of the society. However, modern society has recognized the role of credit and the payment for the use of another person’s funds / assets as a desirable means of increasing the welfare of the economy as a whole.

Nature of Agricultural Finance: Agricultural finance is a branch of agricultural economics that studies and manages the money, credit, and financial resources used in farming businesses.

The nature of agricultural finance is generally examined across two main levels and two primary perspectives. These levels are micro-finance and macro finance and the two primary perspectives are borrowing side and lending side.

Micro finance (Individual level) focuses on single farm business units. It analyzes how an individual farmer decides to borrow money, chooses a credit source, and allocates funds for seeds, equipment, or land improvements.

Macro-finance (Aggregate Level) looks at the agricultural sector across the entire economy. It deals with total national credit needs, government policies, and the rules governing rural credit institutions. From Borrowing Side, it examines the farmer's credit requirements, repayment capacity, and how loans are utilized for crop production or livestock and from lending side, it examines how banks, cooperatives, and government agencies operate, set interest rates, and manage loan procedures.

Unique Characteristics:

- **High Uncertainty:** It must account for natural risks like unpredictable weather, pests, and fluctuating market prices that affect farm income.
- **Resource Transformation:** It helps farmers transition from traditional, low-yield methods to capital-intensive, modern technologies by breaking the cycle of low savings and low investment.

Importance and Scope of Credit in Agriculture:

In the past, agriculture and industry were non-contrary to each other's so far as credit management is concerned. At present, both stand for the same putting. The investment in industry was considered to be quite remunerative as compared to agriculture. However, things have since changed substantially as agriculture has become quite paying on account of the availability of wide array of high yielding varieties seeds supported by improved inputs particularly after green revolution. In the past, agriculture was regarded as a risky business due to its biological nature as a result of which there was no control over the end products. In the new light, the following statement gives ample evidence that agriculture is as secure as industry in terms of financial preposition.

These statements bring out two facts very clearly. First, investment in some parts of enterprise like crop production is absolutely invisible and hence repayment or recovery is less secure. Second, investment in all enterprises in agriculture or supported by agriculture is completely visible and hence the recovery is more secure. The institutional agencies, therefore, have greater scope for extended credit facilities in agricultural sector. The new technology in crop production wherever applied has developed the capacity to reduce fluctuation in yield (as in Punjab) and therefore, more certainty of obtaining the expected output.

Agriculture has additional market advantage over industry. The sale of industrial product after production is not sure. Therefore, there is more storage and marketing cost. On the other hand, agricultural products being the necessities of life, find ready market and a farmer can sell his produce to repay the loan even more easily than industrialist. Further the farmers are to be financed only once during a crop season and do not require finance for storage and marketing except for some transportation cost.

Table 1: Sector-Wise Classification of Agricultural Credit and Investment Profile

Agriculture Sector	Item of Investment	Nature of loan	Nature of Investment	Repayment
Crop Production	Seeds, fertilizers, pesticides etc.	Short-term	Invisible	Less-secure
	Tractors, tools and implements	Medium-term	Visible	Secure
	Construction of wells for irrigation	Medium-term	Visible	Less – secure
	Development of farms	Long-term	Visible	More-secure
	Plantation crop like tea, coffee.	Long-term	Invisible	Less-secure
Dairy Farming	Purchase of animals and feeds, construction of sheds etc.	Long-term	Visible	Secure
Poultry Farming	Purchase of birds, construction of poultry farm, purchase of seeds, feed etc.	Long-term	Visible	Secure
Construction of Warehouses, godaown	Cement, bricks etc.	Long-term	Visible	More-secure
Agro -industry	Raw- material	Long-term	Visible	More-secure
Agricultural Material	Construction material	Long-term	Visible	More-secure
Transportation	Trucks	Long-term	Visible	More-secure
Production of fertilizers, pesticides etc	Plant machinery and raw material	Long-term	Visible	More-secure
Allied Activities	Supply and distribution of machinery, agricultural inputs etc (service unit establishment etc)	Long-term	Visible	More-secure

Credit Needs of a Developing Agriculture:

With the coming into the prevalence of new agricultural techniques, the farmers are learning about new inputs and their great advantage and becoming highly responsive to them. They may even surpass all expectation and produce higher yield than the experimental farms. The high yielding varieties of crops supported by critical inputs (irrigation, fertilizers, and pesticides) can increase the yield of farms more than the experimental farm. Moreover, with the introduction of

multiple cropping in the new strategy, long-term investment is giving much higher net return on the capital employed. Even short-term capital has also become highly remunerative due to more control over the end product and lower risk. Furthermore, the declaration of the minimum support price by the government has made agriculture more secure and viable.

Credit Needs under Existing Labours of resources:

Now with about six decades of intensification of agriculture through various developmental programs (IAAP, HYVP, IADP, SFDA, IRDP, TRYSEM), there has been tremendous increase and expansion in the agricultural credit system. However, lot more is to be done in this sector. There are mainly three groups of farmers so far as the scope for credit expansion is concerned.

(a) Responsive Farmers: These farmers are highly responsive to various improved agricultural program and practices like quality seeds, fertilizers, improved implements etc. Progressive and educated farmers, commercial minded land owner may be included in this category. The yield on their farms is sufficiently high. These farmers have the capacity and ability for investment on their own.

There is greater scope for self investment. Worth mentioning, a major portion of institutional finance so far has gone to these farmers. They are easily assessable and highly responsive. They enjoy all types of institutional facility.

(b) Potential Farmers: The second group consists of farmers who have heard about the improved agricultural practices but they have no access to such resources. Some of them may not even wish to use these resources unless they understand the result of such demonstration. The yield on their farm represents the average of the area and there is a great scope for improvement provided new resources are properly used. This class consists of medium land owner provided they are properly tackled by the government extension and institutional finance. Their investment capacity is limited as compared to first group. But with the credit, they may respond well to need of the country. The group provide greater opportunity to the institutional lending agency for direct farm finance for crop loan and indirect farm finance for production loan.

(c) Subsistence Farmers: This group consist of substance farmers whose only means of livelihood is farming. Small and marginal farmers, tenants may be included in this category. These are within the vicious circle of poverty and low production. They are ignorant about the use of new resources and hence remain stagnant and sluggish. These farmers cannot come out from the vicious circle unless there are some concerted efforts on the part of the government. They have a low resource base. A block, a tehsil or a village where these farmers are concentrated should be isolated and declared backward for the purpose of special assistance and development derived. The programmes like SFDA (1970), MFAL (1970), IRDP (1970), TRYSEM (1980), RLEGP (1983), CAPART (1986), JRY (1980). This group of farmers can be converted into potential or responsive group provided their

financial requirements are met with the institutional finance and through a system of supervised credit and service loan.

Importance of the Study of Agricultural Finance: The study of agricultural finance involves two aspects i.e. acquisition of funds and the optimum utilization of funds within the farm business. The importance of agricultural finance to farmer-borrower, lending agencies and farm credit advisory services are discussed here under:

1. Importance to Farmer-Borrower: Agricultural finance is one of the important resource input. The farm entrepreneur has to know the marginal productivity of capital on his farm for rational and optimal use and has to learn the judicious use so that Return from Fixed Farm Resources (RFFR) are maximised. This is important especially when the borrowed funds are used. In this connection the knowledge of management principles and credit structure helps the farmers in making purposeful and judicious decisions on the following aspects:

- i. How best to use the limited funds?
- ii. Whether to borrow or not to borrow if so, how much to borrow?
- iii. When to borrow?
- iv. From whom to borrow and at what cost?
- v. When and how best to repay the loan?
- vi. How will it affect the farm organisation and its functional efficiency?
- vii. How will it affect his repaying capacity?
- viii. What degree of risk will it involve?

2. Importance to Lending Agencies: To the lending agencies, the study of agricultural finance is essential because they will be interested in profitability of funds lend as well as minimization of risks of losing the funds advanced. Therefore, it helps in the following ways:

- i. Realistically appraising the credit worthiness of the cultivator so that loans are advanced with a minimum of risk.
- ii. Enhancing the repaying capacity of the borrower so that the repayment is assured.
- iii. Participation in production planning and management in order to maximise the returns to farm resources which would lead to improvement in repaying capacity of the borrower and thus to reduce the risk of non-payment.

3. Importance to Credit Advisory Service: To the Credit Advisory Service (CAS), the importance of the study of agricultural finance is self evident. No one can guide the farmer in making rational decisions in the acquisition of credit unless he knows the various sources and their structure and financing. On the farm, utilisation of funds is a specialised as well as crucial task. The farmer needs to be guided in the most efficient utilisation of capital so that the returns are maximised. Therefore, CAS would play a pivotal role in production planning with the farmer and plans for the acquisition of funds. The lending agency may also depend on their appropriate assessment to reduce risk.

CHAPTER 2

BASIC CONCEPTS AND TERMS USED IN AGRICULTURAL FINANCE

Farm Inventory: It is defined as a complete list along with the evaluation of farm resources that are available for business at a point of time. It is under all the farm resources viz. land, machinery, buildings, farm produce, and input supply including cash in hand or in the bank.

Balance Sheet: It refers to a particular point of time and indicates a financial condition of farmers. It includes all assets and liabilities of a farmer at a particular point of time. If there is an excess of assets over liabilities, it shows profit or net-worth otherwise loss.

Income Statement: It is a record of receipts and gains during a specified period less the expenses and losses during the same period usually a year. Thus, it is a measurement of input and output in terms of value.

Cash Flow Analysis: It refers to the statement of cash receipts and cash expenses during a particular period. If cash inflow (income) is more than cash outflow (expenses), net cash income results.

Difference between Income Statement and Cash Flow Analysis: Income statement answers *"Is the business profitable?"* The cash flow statement answers, *"Does the business have enough cash to pay its bills?"*

Trading Account: It is the total performance of the firm during the year.

Inventory Adjustment: During the production process, a certain proportion of each farm asset is consumed in the business that is called depreciation. Depreciation is defined as the loss of value of assets due to use (wear and tear). Therefore, inventory adjustment is needed to depreciate the value of assets in use in order to avoid over counting.

Farm Capital: Manmade non-human resource used in production.

Fixed Capital: Fixed capital consists of investment in land improvement, buildings, roads, fences, drains, ditches, irrigation structures, water channels, machineries, implements, livestock both draft and milch animal etc. This form of capital carries with it the fixed costs computed generally as depreciation and interest. Fixed capital is also called as non- recurring capital.

Variable Capital: Variable capital includes all items of capital such as seed, feed, fuel, fertilizers, insecticides, pesticides, custom charges for lived machineries etc and they comprise the variable cost on the farm. Variable capital is also called as working operating or recurring capital.

Equity Capital: Capital financed from own services/ saving are known as equity capital.

Debt Capital: Debt capitals are financed from borrowed funds.

Asset: A person what to own such as land, buildings, cash in hand or in bank, good-will etc. is called asset. Land is a tangible asset while management is an intangible asset.

Liability: The things which a person has to pay such as long-term loans, medium –term loan etc is called liabilities.

Liabilities are financial or legal obligations owed to others. In accounting and finance, the three main types of liabilities are **current liabilities** (short-term debts due within one year), **non-current liabilities** (long-term obligations due after a year), and **contingent liabilities** (potential debts dependent on future events). Total liabilities mean what a farmer owes.

Capital (or Net worth): Assets- Liabilities. The excess of assets over liabilities is called the net-worth of the debtor.

Current Asset: Current asset includes cash, raw material, input like seed, fuel, fertilizers etc.

Working Asset: Working asset includes machinery, implements, and livestock.

Fixed Asset: Fixed asset includes one with long life such as land and building.

Total Asset: Current assets + Working assets + fixed assets

Liquidity: Cash generating power is known as liquidity. Seeds, fertilizers are less liquid than bonds and securities.

Pay Back Period: The time period which gives the total (present value) flow of return from investment that is equal to the total cost incurred compounded to the present.

Dawn Money (Margin Money): It refers to the borrower contribution to the investment envisaged.

Grace Period: Some investments do not yield immediate return and have a long gestation period. For example, forestry, orchards etc. There is no recovery expected during the gestation period. If it is allowed by the lending agencies, it is known as grace period.

Repayment Period: This is the normal period during which the loan is scheduled to be recovered.

Advances: Amount of loan fixed by any institution during a particular period is called advances.

Instalment: The medium and long-term loans are paid in instalments i.e. pre-fixed amount of recovery which is a part of loan for a period may be a month or quarter, half-yearly or yearly.

Recovery: The amount that has already been realised is called recovery.

Outstanding (Hindi mai Bakaya Rashi): The principle plus interest that remains to be recovered is called outstanding and it refers to a specific date as on 31st Dec., 2025.

Overdue: The amount that was due at a particular date but has not been recovered by that date is called overdue.

Overdue = Total Instalment due – Recovery

Remittances: It simply means return back the rest of the money to the institution, if not consumed for the purpose it was being meant for by any institution. **(Hindi meaning- paisa lotana)**

Redemption: Redemption means the act of saving someone from sin or evil, or the process of buying back something previously sold or paid off.

Rescheduling of Loan: Rescheduling means spreading payments for one year over remaining instalments. It can be based on monthly, fortnightly, half-yearly, yearly instalments.

Rephrasing of Loan: Rephrasing allowing one or more extra years for repayment.

Difference between Credit and Loan: No interest is associated with credit while, loan is always associated with interest.

Bonds and Debentures: Bonds and debentures are either IOUs or loans where you lend your money to a government or a company, and they promise to pay you back with regular interest.

Think of them like a formal certificate that says, "Thank you for the loan; here is your interest, and I will return your money on a specific date."

A **Bond** is a loan agreement where you give money to a government or a large corporation. Bonds are usually **secured** by physical assets or collateral (like property or equipment). If the issuer fails to pay, those assets can be sold to give you your money back. Because they are tied to physical assets or government backing, they are safer, which means they usually pay a lower interest rate. [

A **Debenture** is a specific type of loan certificate issued mostly by companies. Debentures are usually **unsecured**. They are not backed by any specific physical property or collateral. Instead, they rely entirely on the trust and credit rating of the company. Because they lack physical security, they carry a higher risk, so they usually offer a higher interest rate to reward you for taking that extra chance.

Key Differences at a Glance

Issuer: **Bonds** are issued by governments, public groups, and big companies, while **Debentures** are mostly issued by private or public companies.

Collateral: **Bonds** are normally backed by a guarantee or assets, whereas **Debentures** rely only on the company's good name and financial health.

Interest Rate: **Bonds** give lower returns because they are safer, while **Debentures** give higher returns to match the higher risk.

Credit: The word credit comes from the word "Credo" which means "I belief". Therefore, credit is extended on the belief that the borrower will be willing and able to repay the loan at some specified date in future.

Tools of Farm Financial Management: There are three tools of farm financial management and these are given as under:

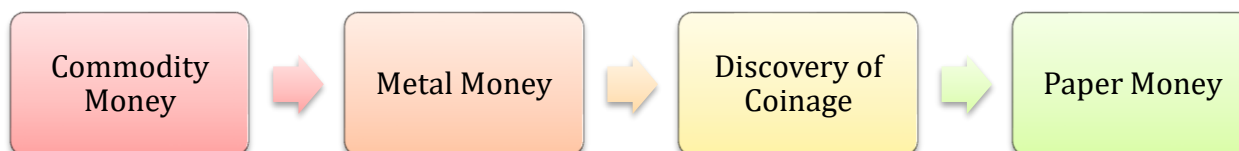
- **Balance Sheet / Financial Analysis:** It contains information on assets and liabilities of the farmer.
- **Income Statement:** It contains information on cash receipts and cash expenses.
- **Cash Flow Analysis:** It contains information on cash inflows (income) and cash outflows (expenses).

Vicious Circle of Poverty: When the perpetuating forces such as low production which lead to low income; low income which in turn lead to low saving; low saving led to low investment and low investment lead to low capital formation and low capital formation ultimately lead to again low production. If such a situation exists with or happens with an individual or in the economy, we call it as individual is trap under the vicious circle of poverty. In other words, perpetuating

forces which attract an individual towards the centre and it is difficult for him to come out from that circle, we call it as the individual is trap under the vicious circle of poverty.

Money: Money is that money does. According to Keynes by money is to be understood “that by delivery of which debt-contract and price-contracts are discharged and in the shape of which a store of general purchasing power is held”.

Origin of Money: Money is originated at four stages and these are:



Commodity money Metal Money Discovery of Coinage Paper Money

Black Money: Money that is earned from illegal transaction is called black money.

Barter System: The act of direct exchange of one commodity for another without the mediation of money is known as barter system

Deferred Payment: Payments which are to be paid later on is called deferred payment. For example, credit payments.

Fiduciary Money: Any form of money which has a greater value in exchange than its intrinsic value is called fiduciary money.

Hot Money: The money or the currency which everybody is anxious to drop for fear of a fall in its exchange – rate.

Bank-rate: Bank rate is the minimum rate at which the central bank of a country provides financial accommodation to commercial banks. It is also known as discount –rate.

Hard Currency: Foreign exchange difficult to earn U.S.A. is a hard currency country for India.

Monetized Sector: Monetized sector is one in which there is no barter transaction i.e. where transaction are taking place in terms of money.

Face Value and Intrinsic of the Money: Face value is the actual value which is actually written on the face of money. For example, Rupee 1, its face value is 1Re. while, Intrinsic value is the actual value of the money by virtue of its metallic worth. For example, one rupee gold coin, its face value is one rupee but its intrinsic value is Rs. 20,000. Second, 100 rupee note, its face value is Rs.100 but its intrinsic value is 50 paisa due to printing only.

Time Deposit: Deposits that is not transferable by means of cheques. This is also known as fixed deposits or term deposits.

Demand Deposit: Checking accounts at commercial banks are called demand deposit. For example, cheques. These are the claim of depositors against the commercial bank and can transfer from one part to another by means of cheques.

Over Draft: An overdraft happens when you spend or withdraw more money than you have in your bank account, making your balance drop below zero. The bank covers the extra cost for you, but it treats the amount as a short-term loan that you must pay back. In Over draft banks charge rate of interest more than the normal rate of interest.

Laissez faire: A principle of non- interference in the economic field.

Rationalisation: It is a process of making the whole industry or enterprise more efficient and economical by modernisation of plant etc.

Growth Strategy: The measure taken by the government to reduce inflation rate, unemployment and poverty. In more elaborated way The measures which are being or have been taken by the government to tackle the various problems such as how to deal with the problem of unemployment; how to eradicate poverty; how to handle/curb the problem of inflation; how to address the difficulties in infrastructural development such as education, health sectors and other infrastructure like roads; how to solve the issues of climate change which has a growing concern and which has attracting the attention of the researchers, policy makers and the international community at large and which has been proliferating across the globe in a very big way. Additionally, and above all how to solve any form of dispute related to any emerging issue/issues among the communities in the developing world which ultimately causes to create unrest situation in the country? To address/deal all these problems collectively/jointly, may be called it as growth strategies/ development strategies.

Structural Transformation: Structural transformation is the growth process of the economy. It means the transition of economic dependence from primary to tertiary sectors of the economy.

Dynamic Approach: Dynamic approach is one in which we consider both preceding and succeeding events

Budget: Expression of farm plan in monetary terms by estimation of receipts, expenses and net income is called budgeting. As an economy as a whole budget means allocation of money or funds to different sectors of the economy. There are two types of budgeting viz., partial budgeting and complete budgeting.

Partial Budgeting: It refers to an advance estimate of costs and returns of a part of business or any one activity like wheat, or jawar or poultry with taking into account other enterprises.

Complete Budgeting: Advance estimate of costs and returns on the whole farm.

Deficit Financing: When the current expenditure of the government is more than its current receipts, it is known as deficit financing. Thus, the deficit financing represent the gap between the current expenditure and current income of the government and when this gap is filled by obtaining funds by means other than taxation then, it is known as deficit spending or deficit financing.

The funds for meeting the budget deficit can be obtained either by:

- Borrowing from central bank
- Borrowing from commercial banks
- Issue of new currency
- Withdrawal of cash balances.

Various concepts of Deficit:

- Revenue deficit= Revenue expenditure---Revenue receipt

- Budget deficit= Total expenditure---- Total receipts
- Fiscal deficit= Budget deficit+ Borrowings
- Primary deficit= Fiscal deficit--- Interest payments

How we can interpret the Primary deficit

Country is rich in resources but, the government is poor. This is reflected by working out the primary deficit. Primary deficit is worked out by subtracting the interest payments from the fiscal deficit. If the primary deficit is found out to be negative that shows our economy is not a healthy one or otherwise i.e. if it's figured out to be positive which shows a state of affair is a healthy one.

Balanced Budget: is one in which revenues are equal to expenditure. Thus, neither a budget deficit nor a budget surplus exists. More generally, it is a budget that has no budget deficit, but could possibly have a budget surplus.

Planned Expenditure: means that the expenditure which is created for new employment, new schemes, new roads, new hospitals etc. for new generation.

Non-planned Expenditure: means the expenditure which is for the maintenance of existing infra-structure such as payment to old staff, maintenance of roads, hospitals etc.

Balance of Payment: Difference between export and import is called of payment. If $\text{Import} > \text{Export}$, this is known as unfavourable balance of payment. India is suffered from unfavourable balance of payment with developed countries. This is also known as trade deficit. This is balanced through accommodating capital. On the other hand, if $\text{Import} < \text{Export}$, this is called favourable balance of payment position or trade surplus. If $\text{Import} = \text{Export}$, this is called trade balance. It means zero accommodating capital is required.

Bonds: Long term debt instruments.

Solvency: Ability of a firm to meet its obligation when they become due.

Dividends: Share of profit allotted to each share in a company.

Trade Credit: Credit obtained through purchases on credit.

Bank: Bank is defined as an institution for the custody of money which it pays out on customers order.

Banking System: It is defined as the process of lending and borrowing of funds from the public.

Commercial Bank: Commercial banks are defined as an institution which accepts deposits and make loan and advancing.

Schedule Bank: Schedule banks are the banks which have a paid-up capital of Rs. 5 lakh or more and are put on the schedule of RBI.

Non-schedules Bank: All those banks with paid-up-capital of less than Rs. 5 lakhs.

Bank Nationalisation: Banks which has been nationalized by the government of India and their loaning policy is controlled by the reserve bank.

Surety: Surety is a person who makes himself liable for the debt of another. Sometime, he is called endorser or guarantor.

Repaying Capacity: Repaying capacity is the portion of the amount that a farm family will earn from a year operation which shall be available for the repayment of loan. It includes anticipatory income from all resources during the year.

Genuine Defaulter: One who cannot repay the loan due to failure of farm business, natural calamity, personal illness and poor condition?

Wilful Defaulter: One who is not repaying the loan in spite of his repaying capacity?

Bank Note: It is the promissory note of a bank payable to the bearer on demand.

Exchange –Rate: It is the value of one nation currency in terms of other.

Exchange Bank: Exchange banks are that bank which deals with foreign exchange. India dealing in foreign exchange is conducted by foreign exchange banks as well as Indian commercial banks.

SWOT Analysis: SWOT analysis is the pre requisite for starting any new business. It is a combination of favourable and unfavourable factors which help in deciding the degree of success in any new business. Here, S stands for strength; W stands for weakness; O stands for opportunity and T stands for threats.

Capital Outlay: Capital outlay is nothing but the sum of revenue expenditure (RE) and capital expenditure (CE).

Symbolically,

$$\text{Capital Outlay} = \text{Revenue Expenditure (RE)} + \text{Capital Expenditure (CE)}$$

Revenue expenditure is the expenditure on the amount of interest paid on loan taken, subsidies, expenditure on salaries and pension, while the capital expenditure is nothing but the expenditure on infra-structure. Out of the total capital outlay, government spends 60% of their share on revenue expenditure and 40% of the share on capital expenditure.

Compounding and Discounting: Compounding and discounting are the fundamental financial concepts used to analyze the time value of money. Compounding calculates the future value of an investment, while discounting determines the present value of future cash flows. Both are crucial for financial decision making, especially in investment analysis and capital budgeting. Compounding demonstrates how an investment grows over time due to reinvestment of profits, leading to exponential growth. Discounting on the other hand, is the process of determining the present value of a future sum of money or a series of cash flows. Discounting reflects the idea that money today is worth more than the same amount of money in the future due to the potential of earning return.

Compounding is calculated as under:

$$\text{Future Value (FV)} = \text{Present Value (PV)} \times (1+r)^t$$

Where “r” is interest rate and “t” is the time period or the number of periods.

Discounting is worked out by the formula as given below:

$$\text{Present Value (PV)} = \text{Future Value (FV)} / (1+r)^t$$

Where, r = discount rate and t is the time period or the number of periods.

Interest: interest is the cost of borrowing money or the reward for saving or investing it, expressed as a percentage of the principal amount over a given period. For borrowers, it's an additional charge added to the original loan amount, while for savers, it's the earnings on their deposit or investment. For example, if you borrow money, you pay the lender interest; if you deposit money in a savings account, the bank pays you interest.

Simple and compound Interest: Simple interest is the product of principle, the time period in year and the annual interest rate while, in compound interest, interest is periodically converted into principle i.e. annually, biannually, monthly and fortnightly.

साधारण ब्याज मूलधन, वर्ष में समयावधि तथा वार्षिक ब्याज दर का गुणनफल होता है, जबकि चक्रवृद्धि ब्याज में ब्याज को समय-समय पर मूलधन में परिवर्तित किया जाता है।

Current account and saving account: Savings Accounts are for saving and growing money, while Current Accounts are for daily transactions. Current Accounts allow more frequent transactions than Savings Accounts. Savings Accounts can earn interest, but Current Accounts typically don't offer this feature.

Size of Economy: The size of an economy is the total monetary value of all goods and services produced within a country over a specific period, most commonly measured as Gross Domestic Product.

Solvency: The ability of a firm to meet its long term debts and other financial obligations when they become due.

Insolvency: It means those company/ companies which are sick. (Hindi meaning- Bimaru compania)

Bankruptcy: Those firms who cannot pay of their financial obligations due to huge debts then, the company is declared as Bankrupt. In such a situation, the company's/firm owner has to sell all its assets in order to pay out the outstanding liabilities before it gets closed legally. (Hindi Meaning- Dewalia Nikalna)

Unaccounted Money/ Black Money: Money which is earned from illegal transactions. In other word, the money for which no account is made, we can call it as black money or unaccounted money.

Transportation Charges: means freight charges.

Financial Products: Tax and non-tax revenues.

Revenue: Income of the state or the central government.

Tax: It is levying compulsory for imposed on goods and services of domestic and international industry/products. In more concrete terms, Tax is a compulsory payment by a person on whom it is levied irrespective of any corresponding returns of goods and services of the authorities concerned.

Tax Revenue: Tax revenue is the revenue derived by the government by taxes its citizen. E.g. Individual income taxes, payroll taxes, and corporate income tax are the primary income streams for the federal govt. Excise duty, estate tax and other taxes and fees are sources of tax collection.

Non-tax revenue: It is the periodic income government receives from sources other than taxes. They are the tax revenues that do not come from taxing the general public. Profit from state-owned enterprises, proceeds from bonds issues, custom duty, railways, post and telegraph are the sources of non-tax revenue.

Direct Tax: Tax which is impacted on one person and incidence falls upon other individual. E.g. Income tax

Indirect Tax: Indirect tax is one in which impact and incidence falls upon the same person. E.g. Sale tax

Tax Rate: The rates at which the taxes on various goods and services are increasing during the year.

Flat Tax Rate: A flat tax rate is a system where everyone pays the exact same percentage of tax, regardless of how much money they earn.

Economizing: means to make the most of what we have.

Recession: Temporary economic phenomenon when there is more production than demand.

Insurance: Insurance is nothing but the long-term financial risk management strategy adopted by the individual, businesses or organization to combat the situation at the time of adversity.

बीमा और कुछ नहीं बल्कि विपत्ति के समय स्थिति से निपटने के लिए व्यक्ति, व्यवसाय या संगठन द्वारा अपनाई गई दीर्घकालिक वित्तीय जोखिम प्रबंधन रणनीति है।

Supply Chain Management:

Supply chain is nothing but the path or route through which agricultural produce moves from producer to consumers. Supply chain management means the management of the supply chain in such a way that it can ensure reasonable/ fair price of the produce to all those marketing functionaries who are involved in the marketing process.

Case Study: it means to investigate everything about something rather than to investigate something about everything as in the case of statistical method.

Contingency plan: The plan which is adopted at the time of adverse situation. Other names given to contingency plan are the casual planning, accidental planning; incidental planning, emergent planning

Turn-over: means how much business does a particular firm do in a year.

CHAPTER 3

TYPES OF AGRICULTURAL LOANS

Classification of Credit: Credit is broadly classified based on various criteria.

1. **Based on Time:** This classification is based on the repayment period of the loan. It is sub-divided into three types:
 - a. **Short-term loans:** These loans are generally advanced for meeting annually recurring purchases such as seeds, fertilizers, labour expenses, storage of crops, small tools. The loan plus interest is to be paid from the income received from the enterprise in which it was invested. The usual time limit is 3 months to 15 months. Short-term loan is also called as crop loan.
 - b. **Medium –term loans:** The medium –term loans are advanced for comparatively longer life lifted assets such as tube-well, purchase of livestock, machinery and equipments, tractor and its allied equipments and other capital assets where returns accruing from an increase in farm asset is spread over more than one production period. The usual repayment period for this type of loan is 15 months to Five-Years.
 - c. **Long-term loans:** Long lifted assets such as heavy machinery, land and land reclamations require large sums of money for initial investment. The benefits generated by this type of assets are spread over the entire life span of the asst. It would normally be very difficult to accumulate sufficient funds to repay the initial loan plus interest from the income generated through this type of assets is less than Five-Years. The normal repayment period of such types of loans is 5 years to 15 years. In some cases, it may be extended up to 30 years.
2. **Based on Purpose:** Based on purpose, credit is sub-divided into two types.
 - a. **Production loans:** Loan which is borrowed for the purpose of purchasing productive assets. It includes livestock loan and crop loan. The production loan can be short, medium and long-terms loans based on the length of the repayment period.
 - b. **Consumption Loans:** In a country like India, where per capita income is low in relation to other parts of the world and where very large segments of population is near a subsistence level, consumption needs of a farm household gets a first priority. Therefore, consumption credit needs cannot be divorced from the production credit needs in the financial analysis of a farm. Even if credit is advanced for production needs, a farm family divert a part or whole amount of these funds to meet social obligations. Therefore, consumption credit should also be provided to the poor families. But, unfortunately, the lending agencies by enlarge are indifferent to this type of credit. Therefore, consumption credit is borrowed only to purchase luxuries goods and other commodities which are directly consumed by the borrowers.

3. Based on Security: The loan transactions between lender and borrower are governed by confidence and this assumption is confined to private lending to some extent. But, the institutional financial agencies do have their own procedural formalities on credit transactions. Therefore, it is essential to classify the loans under this category into two sub-categories viz., secured loans and unsecured loans.

a. Secured loans: Secured loans are those which are extended some security. There are two types of security. One is tangible personal property and the other is intangible personal property. Tangible personal property includes store grain, machinery, land etc. whereas, intangible personal property includes life-insurance policy, warehouse receipts and stocks. Mortgage and hypothecated loans are the example of secured loan. Various forms of securities are offered in obtaining loans and they are of following type:

- i. Personal Security:** Under this, borrower himself stands as the guarantor. Loan is advanced on the farmer's promissory note. Third party guarantee may or may not be insisted upon (i.e. based on the understanding between the lender and the borrower).
- ii. Collateral Security:** Here the property is pledged to secure a loan. The movable properties of the individuals like LIC bonds, fixed deposit bonds, warehouse receipts, machinery, livestock etc. are offered as security.
- iii. Chattel loans:** Here credit is obtained from pawn-brokers by pledging movable properties such as jewellery, utensils made of various metals etc.
- iv. Mortgage loans:** As against to collateral security, immovable properties are presented for security purpose. For example, land, farm building etc. When the legal mortgage of some property such as land in favour of lending agencies. The loan for intangible property like land improvement, irrigation, dairy shed etc. are generally offered against mortgage. Mortgages are of two types:
 - **Simple Mortgage:** When the mortgaged property is ancestrally inherited property of borrower then simple mortgage holds good. Here, the farmer borrower has to register his property in the name of banking institution as a security for the loan he obtains. The registration charges are to be borne by the borrower.
 - **Equitable Mortgage:** When the mortgaged property is self –acquired property of the borrower, then equitable mortgage is applicable. In this, no such registration is required, because the ownership rights are clearly specified in the title deeds in the name of farmer-borrower.
- v. Hypothecated loans:** The legal ownership of the assets remained with the financing agencies through the physical possession is with the borrower. The loan for tangible property like shops, vehicles, machinery is generally hypothecated loan. Under such loans, the borrower will not have any right to sell the equipment until the loan is cleared

off. The borrower is allowed to use the purchased machinery or equipment so as to enable him to pay the loan instalments regularly. Hypothecated loans again are of two types' viz., key loans and open loans.

- **Key loans:** The agricultural produce of the farmer-borrower will be kept under the control of lending institutions and the loan is advanced to the farmer. This helps the farmer from not resorting to distress sales.
 - **Open loans:** Here only the physical possession of the purchased machinery rests with the borrower, but the legal ownership remains with the lending institution till the loan is repaid.
 - a. **Non-secured loan:** These loans are advanced without any security. However, borrower makes some pledge with the lender to repay the loan in time. Such loans are also known as clean loan. For example, crop loan.
4. **Based on Liquidity:** Credit can be classified into two types based on liquidity.
- b. **Self-liquidating loans:** The amount of loan that absorbed in the production process in one year or in one production period. So, such loans are also included in short-term loans. For example, crop loan.
 - c. **Non-liquidating loans:** The resources or the assets acquired from non-liquidating loans or partial liquidating loan are not directly consumed in one production period. These loans can be consumed either in over a number of production period. Therefore, non-liquidating loans are also known as medium and long-term loans. For example, tractor.
5. **Lender's Classification:** Credit is also classified on the basis of lender such as institutional credit and non-institutional credit.
- a. **Institutional Credit:** Here, the loans are advanced by the institutional agencies like cooperatives, commercial bank. For example, co-operative loans and commercial bank loans.
 - b. **Non-institutional Credit:** Here, the individual persons will lend the loans. For example, Loans given by professional and agricultural money lenders, traders, commission agents, relatives, friends etc.
6. **Based on Approach:** Under this, credit can be sub-classified into three categories viz., Individual approach, Area approach, and Differential Interest Rate (DIR) approach.
- a. **Individual Approach:** The loans advanced to individuals for different purposes will fall under this category.
 - b. **Area Based Approach:** In this approach, the loans given to the persons falling under given area for specific purpose will be categorized under this approach. For example, Drought Prone Area Programme (DPAP) loans, etc.
 - c. **Differential Interest Rate (DIR) Approach:** Under this approach, loans will be given to the weaker sections @ 4% per annum.

7. Based on Contact: Based on contact, loans can be categorized into direct loans and indirect loans.

a. Direct Loans: Loans extended to the farmers directly are called direct loans. For example, crop loans

b. Indirect Loans: Loans given to the agro-based firms like fertilizer and pesticide industries, which are indirectly beneficial to the farmers are called indirect loans.

8. Borrower's Classification: The credit is also classified on the basis of type of borrower. This classification has equity considerations.

a. Based on the business activity like farmers, dairy farmers, poultry farmers, viticulture farmers, rural artisans etc.

b. Based on the Size of Farm: Agricultural labourers, marginal farmers, small farmers, medium farmers, large farmers.

c. Based on Location: For example, hill farmers, tribal farmers.

Sources of Loans: There are two agencies which are involved for the disbursement of loans to the farmers who are willing to take the loans for specific purposes and these are:

(i) Institutional Agencies.

(ii) Non-institutional Agencies.

(i) Institutional Agencies:

- Commercial Banks
- Cooperatives
- Government loans

(ii) Non-institutional Agencies:

- Money lenders
- Land-lord
- Traders
- Commission Agents
- Relatives/ Friends

CHAPTER 4

BASIC ECONOMIC PRINCIPLES OF AGRICULTURAL FINANCE

Basic Principles of Credit Management: There are three basic considerations which must be taken into account before a lending agency decides to advance a loan. The borrower decides to borrow and extension agencies advocate (recommend) the loan. These principles are:

1. Return from the Investment
2. Repaying Capacity
3. Risk-bearing Ability

These are known as 3R's of credit. Every loan when it is decided to be advanced or used, three basic questions must be answered in affirmative.

- a. Will the additional return from the use of borrowed money sufficiently cover the additional cost of fund?
- b. Will it be possible for the borrower to repay the loan when it is due?
- c. Has the borrower sufficient risk bearing ability to meet the probable financial losses.

If the answer to all these questions is positive, there is a strong case of advancing the loan.

I. Returns: This is the **first test of soundness of credit**. It is a pre-requisite to analyse the additional return viz. a –viz. to additional cost in utilizing borrowed funds. It involves maximisation of RFFR (Return from Fixed Farm Resources) including the borrowed capital resources. This is basically the question of what to produce, how much to produce, how to produce, when to sell and where to sell. The important consideration for estimation of returns is:

- Estimate of return should be made on the basis of resources including the borrowed fund.
- Estimation of return and cost should be made at the margin and not on an average.
- While, Marginal Cost (MC) = Marginal Revenue (MR) must be kept in view, but also the law of equi-marginal return is important when funds are limited.
- The level of other resources which are limited on the farm should also be considered before deciding upon the amount of working capital including borrowed funds.
- Due care should be taken that more than the required amount is not advanced/ borrowed whereas inadequate amount will not be of any use.
- The money needed for consumption purpose should also be included.

Law of Equi-marginal Return in Agricultural Finance: This law is concerned with the allocation of the limited amount of resource among different enterprises. The law of equi-marginal return in agricultural finance states that money should be invested in such a way that marginal returns (MR) from each enterprise on the farm are same. Symbolically,

$$MVP_1/M_1 = MVP_2/M_2 = MVP_n/M_n = 1 \text{ (Unlimited Capital)}$$

$$MVP_1/M_1 = MVP_2/M_2 = MVP_n/M_n > 1 \text{ (limited Capital)}$$

In other words, this law suggests that the limited available resources should be invested keeping in view that how much marginal (added) returns we are getting from that enterprise and not how much we are getting average returns. This has been illustrated with the help of following example.

Example: A farmer has Rs. 3000 and wants to grow sugarcane, wheat and cotton that are suitable for his farm situation. What amount of money should be spent on each enterprise to obtain highest profit?

Table: Addition to Income from the Marginal (added) amount of Rs. 500

Amount of Money Spent or Investment	Marginal Return or Added Return (Rs.) From		
	Sugarcane	Wheat	Cotton
500	800 ¹	750 ²	650 ⁴
500	700 ³	650 ⁶	560
500	650 ⁵	580	550
500	640	540	510
500	630	520	505
500	605	510	500
Total Money Spent or Total capital = Rs. 3000			
Total Returns (Rs.)	4025	3550	3275
Net Profit = (Total Returns – Total money spent)	1025	550	275
Average Returns / Rs. at Rs.3000	4025 / 3000=1.34	3550 /300- =1.18	3275/3000=1.09

From the above table it is found that the investment of Rs. 3000 yields maximum average returns from sugarcane enterprise (1.34). But if a farmer is investing his amount of Rs. 3000 keeping in view the added returns or marginal returns, the profit he can earn as indicated below:

Stage	Amount of money spent on	Added Returns (Rs.) from
1 st	Sugarcane-500	800
2 nd	Wheat-500	750
3 rd	Sugarcane-500	700
4 th	Cotton-500	650
5 th	Sugarcane-500	650
6 th	Wheat-500	650
Total	3000	4200
Net Profit		4200-3000 =1200

Thus, the investment keeping in view the added return would be:

I st	Rs. 1500 on Sugarcane	Added Returns= Rs. 2150
II nd	Rs. 1000 on wheat	Added Return = Rs. 1400
III rd	Rs. 500 on Cotton	Added Returns=Rs.650
Total	3000	Rs. 4200

Thus, the total returns and net profits Rs. 4200 and Rs. 1200 respectively are greater than the returns and net profit Rs. 4025 and Rs.1025 respectively. Hence, for maximization of returns resource allocation should be done in view of added returns rather than that of average returns.

Additional Information of the Law: This principle i.e. law of equi marginal return does not hold good in land allocation problems because in land allocation, seasons are also taken into account. If the added returns or marginal returns from two or three enterprises are equal or there is a tie among all the three enterprises (sugarcane, wheat, cotton) then it is the farmer to decide which one to chose first and which one to chose second and third.

While, deciding upon the amount of total credit to be obtained including working capital as already mentioned, the availability of other resources should also be considered. If some resources are limited and they may be enhanced by making a provision to the borrowed funds.

Example: Suppose a farmer has a farm land of 5 hectare which is unirrigated. He wants to install an irrigation pump costing Rs. 10,000 to enhance irrigation capacity to 10 hectares. He has to hire in 100 man days for his new plan. The plan of bullock has become surplus. He disposes for Rs. 5000. The additional returns and additional costs are given as under:

Sr. No	Particular	Additional Returns (Rs.)	S.No.	Particular	Added Costs (Rs.)
1.	Existing level	5000.00	1.	Labour =100 man days @Rs20 /day	2000.00
2.	With installation of irrigation pump	9000.00	2.	Depreciation of pump set @10 %	500.00
3.	Additional Returns (2-1)	4000.00	3.	Interest @ 10 % on borrowed funds	500.00
4.	Saving in fodder for glut	1000.00	4.	Expenses on fuel, electricity etc.	500.00
5.	Labour Saving	400.00			
	Total (3+4+5)	5400.00		Total	3500.00

Net Marginal Gain = 5400.00-3500.00 = Rs. 1900.00

It means it is profitable to install a irrigation pump and hence it is worthwhile to go for a loan.

Note: Investment is a part of Repaying Capacity and not of Return.

Estimation of returns needs complete or partial budgeting. Estimation of return should be made after the borrowed funds are included in the farm resources. This means estimation of existing return and return after borrowing the funds and working out the differences to obtain the additional return. The estimation of two returns at two levels should be made as under:

1. Estimate the physical production of different enterprises in the production plan. It is preferred to estimate the production on conservative line.
2. Make estimation of the prices of different product over the period on conservative basis.
3. Estimate the return by multiplying (1.) with (2.).
4. Estimate the working expenses preferably on the higher side.
5. Adjustment should be made for the change in inventory.
6. Estimate net cash income if difference between the additional income and additional cost due to borrowed fund is positive, go for borrowing otherwise not.

Practical Utility of the Law: This law guides the farmer to plan his budget for the preparation of his cropping scheme. It also provides guidance to the adoption of diversified or specialized farming. It also enables to determine the enterprise relationship complementary or competitive.

II. Repaying Capacity- 2nd Test of Soundness of Credit:

Although, very necessary, it is not sufficient only to analyse the productivity or additional return that would accrue to the borrowed fund. A loan may be productive, but it may not generate sufficient income to enable it possible to repay the loan when it falls due. For instance, a credit of Rs. 50,000 for a tractor may generate additional income of Rs. 3,000 per year. But, it may not be sufficient to repay the instalment of loan. It is, therefore, essential to assess the Repaying Capacity of the borrower.

Repaying Capacity is the portion of amount that a farm family will earn from a year operation which shall be available for the repayment of loan. It includes anticipatory income from all resources during the year. There are two approaches viz. conventional and modern approach for assessing the repaying capacity.

Conventional Approach: In this, the repaying capacity was considered as 1/3rd of the gross income including off-farm income. This limit was used to fix the Maximum Credit Limit (MCL) of the borrower as it was presumed that 2/3^d of the money is used for domestic consumption.

This system has following defects:

- a. As the average yield of the area were used which did not account for differences in area, crop rotation, type of soil, size of farm and the managerial skill etc.
- b. Historical yield rather than the anticipatory yield was considered and thus did not account for the improved technology and the impact of borrowed fund.
- c. Prices from historical average were considered ant the projected future prices.

- d. Small and large farm differ in marketable surplus, consumption and other expenses.
However, this fact was not taken care-off in this approach.

Modern Approach: In modern approach, the credit is based on the actual production plan. It has the following advantages:

- a. The need for credit is individual and varies with the production plan.
- b. It recognises the differences in the production potential of each individual and thus more scientific.
- c. Gross income is worked out on the basis of expected yield and expected prices.
- d. Farm production plan are the real basis of credit need.
- e. Returns and Repaying capacity in this approach are taken care of all such factors as size of farm, intensity of cropping, technology etc.
- f. Product prices are adjusted for price trends.
- g. Repaying capacity is worked out as a residual after meeting the requirement of family consumption, repayment of other debt and other repayment due.

Repaying Capacity for Self-liquidating loan and non-liquidating loan: For self- liquidating loan (for example, crop loans) in which resources required with the borrowed funds is consumed-up in the production process become a part of the working expenses. In case of non-liquidating loan, the resources required with the funds are not directly consumed but are consumed over a number of years. They do not become a part of the first year. Cost and return is spread over a number of years.

Hypothetical Example: Repaying Capacity for Self-liquidating loans:

Repaying Capacity = Gross return (Gross income) -- [Working expenses (not including the borrowed fund) + Living expenses + Taxes + Other loans due]

Sr. No.	Particular	Without Credit	With Credit of Rs. 1,400
1.	Gross return	5,000.00	7,000.00
2.	Working expenses	1,500.00	1,500.00
3.	Return over cash expenses (1-2)	3,500.00	5,500.00
4.	Living expenses	2,500.00	2,500.00
5.	Other loans due	500.00	500.00
Repaying Capacity		500.00	2,500.00

Hypothetical Example: Repaying Capacity for Non-liquidating loan:

Repaying Capacity = Gross return (Farm +Non-farm income)) -- [Working expenses (including seasonal or short term loans) + Living expenses + Taxes + Other loans due]

Sr. No.	Particular	Without Credit	With Credit of Rs. 5,000(medium-term) & Rs. 1,400 (short-term)
1.	Gross return	5,000.00	8,000.00
2.	Working expenses	1,500.00	2,900.00 (1500+1400)
3.	Return over cash expenses (1-2)	3,500.00	5,100.00
4.	Living expenses	2,500.00	2,500.00
5.	Other debts due	500.00	500.00
Repaying Capacity		500.00	2,100.00

How to Work out Maximum Credit Limit (MCL) out of Repaying Capacity: Fixing of Maximum Credit Limit is based on repaying capacity is of great important. In example quoted above, we can work out the MCL for both the short and the medium-term loans.

MCL: Short term = 1,400.00

Medium term = 2,100.00 x 5 = 10,500.00 (as the loan is advanced for Five-Years in case of medium-term loans)

Therefore, Yearly Loan = 1,400.00 + 2,100.00 = 3,500.00

Therefore, MCL = Rs. 3,500.00 per year

How to Increase the Repaying Capacity of a Farmer? Repaying capacity of a farmer is increased in the following manners:

1. It can be increased through equity i.e. through higher saving, investment and earning from outside.
2. By removing the resource imbalances.
3. By adjusting the time-period of loan repayment.
4. By adjustment in the type of loan. For example, self-liquidating loans requires higher repaying capacity.
5. By improving input-output efficiency through resource use planning, reduce cost and by avoiding wastage etc.
6. Repaying capacity can be increased by the introduction of new and more profitable enterprises and adoption of modern technology.
7. By proper marketing.
8. And by improving the managerial skill.

III. Risk Bearing Ability- 3rd Test of Soundness of Credit:

It is again not sufficient that the credit to be used should be productive and generate sufficient repaying capacity. It is also essential that borrower should be able to withstand the shocks of probable financial losses which are known as Risk Bearing Ability. Agricultural business is

subject to vagaries of nature and expose to many other hazards such as pests, diseases, floods, hailstorm etc. There are other factor like yield uncertainty, price uncertainty etc. which increase the quantum of risk in farming. Therefore, it becomes imperative (important) to account for the risk in farm business while working out the repaying capacity of a farmer.

Example: Return Variability in Different Crops in Himachal Pradesh: (from 1970-71 to 1989-90):

Crops	Mean Return per Ha. Rs./Ha)	S.E. of Mean Return (Rs./ Ha)	Cropping Pattern (Area in Ha)	Total Return (Rs.) (2) x (4)	Total Standard Error 1 (SE)	2 (SE)	3 (SE)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Maize	4,000	300	0.8	3200	240	480	720
Paddy	5,000	400	0.3	1500	120	240	360
Wheat	4,500	550	0.9	4050	495	990	1485
Barley	4,000	350	0.1	400	35	70	105
Pulses	3,500	200	0.1	350	20	40	60
Potato	10,000	800	0.1	1000	80	160	240
Vegetables	15,000	1000	0.05	750	50	100	150
Fallow land	-	-	0.05	-	-	-	-
			Total Cultivated Area= 2.4 Ha	Total Return =11,250	1,040	2,080	3,120

$$\bar{x} \pm \sigma = 67\%$$

$$\bar{x} \pm 2\sigma = 95\%$$

$$\bar{x} \pm 3\sigma = 99\%$$

Here, $\bar{x}$ is the mean and σ is the standard deviation. Now, we work out the variability at 99% level of confidence (1% level of significance), 95% Level of confidence (5% level of significance), and 67% level of confidence. To work out the variability, the following formula is used:

Coefficient of Variation (CV) = [Standard Deviation / Mean] x 100

At 99% level of confidence (CV) = [3,120/ 11,250] X 100 = 27.7% = 28%

At 95% level of confidence (CV) = [2,080 /11,250] X100 = 18.5%=18.5%

At 67 % Level of confidence (CV) = [1,040 / 11,250] X100 = 9.1%= 91%

How we shall work out the Repaying Capacity at 99%, 95%, & 67% level of confidence one by one.

(i) At 99% level of confidence, the Repaying Capacity is worked out as under:

Sr. No.	Particular	At 99% level of confidence
1.	Gross return	$[6,000 \times 72] / 100 = 4,320$
2.	Working expenses	2,400
3.	Return over cash expenses (1-2)	1,920
4.	Living expenses	2,000
5.	Other loans due	400
Repaying Capacity		--480

(ii) At 95% level of confidence, the Repaying Capacity is worked out as under:

Sr. No.	Particular	At 95% level of confidence
1.	Gross return	$[6,000 \times 81.50] / 100 = 4,890$
2.	Working expenses	2,400
3.	Return over cash expenses (1-2)	2,490
4.	Living expenses	2,000
5.	Other loans due	400
Repaying Capacity		90

(iii) At 67% level of confidence, the Repaying Capacity is worked out as under:

Sr. No.	Particular	At 67% level of confidence
1.	Gross return	$[6,000 \times 91] / 100 = 5,460$
2.	Working expenses	2,400
3.	Return over cash expenses (1-2)	3,060
4.	Living expenses	2,000
5.	Other loans due	400
Repaying Capacity		660

Factors Affecting the Risk Bearing Ability of a Farmer: There are many factors which determine the risk bearing ability of a farmer and these are:

- Ability and willingness to save on living expenses.
- Ability to borrow in bad time.
- Equity and net worth of the farmer.
- Ability to adjust and withstand adverse condition.

Steps to Increase the Risk Bearing Ability:

- Taking up less risky and more stable enterprises.

- b. Diversification of production.
- c. Flexible production programme and processes.
- d. Better plant protection and other practices which would reduce losses and increase return.
- e. Crop insurance and other insurances.
- f. Forward contracts and hedging.
- g. Building up personal credit through fair dealing.
- h. Practicing saving and reduction of expenses and building up equity (net-worth).

CHAPTER 5

BUSINESS PRINCIPLES IN FINANCING AGRICULTURAL ENTERPRISES

Assessment of Borrower: Financing agriculture has two aspects i.e wise extension of finance and use of finance. The use of finance depends upon the lender initiative, supervision, management and control. The rule that should govern the wise extension of finance should precede the rules that should follow the wise use of finance. The institutional lender is interested in assessment of the borrower to make sure that credit is secure. He is interested in following consideration:

1. Financing those enterprises which are most promising and profitable.
2. Getting the rate of return favourable to his investment.
3. Obtaining proper security to safe guard the recovery of loan.
4. Making available adequate finance so that funds could be invested in proper manner.
5. Keeping the cost of management to minimum.

In extending finance to agricultural enterprises, institutional lender must make use of some general principle require to assess the borrower. These are as follows:

- i. Credit Worthiness
- ii. Financial Soundness
- iii. Nature of Security
- iv. Ability to Repay
- v. Surety or Endorser or Guarantor

i. Credit Worthiness (Hindi mai credit yogyata): Loan is extended mostly on the basis of credit worthiness of the borrower. But, sometimes, this factor is overlooked. A borrower may require good reputation by timely repaying the loan and this may have more credibility and intimacy with the financial institution. However, sometimes, the lender is not fully aware of the credit worthiness and personal character of the borrower. Therefore, the credit worthiness may become necessary to finance the enterprise.

ii. Financial Soundness (Hindi mai vittiya mazbooti): This is judged by financial statement showing assets and liabilities. For this purpose, simple but complete form provided by the lender along with loan application should be filled-in by the borrower. The financial statement contains the following components:

- a. Net worth (Assets- liabilities)
- b. Cash Availability which includes current assets and current liabilities. Current liabilities means short term loan taken by the borrower.
- c. Cash Income and Fixed liabilities. Fixed liabilities mean instalments of the long term loan to be paid.

d. Nature of indebtedness

iii. Nature of Security: Taking off the mortgaged of some tangible property or pledge of warehouse or processing plant, receipt is considered desirable in secured loan. Lender requires specific security for the following reason:

- a. If that is not paid on maturity or the borrower becomes defaulter, the lender can take the possession of the property.
- b. Those collaterals (security) which are of self paying nature yield saleable products. For example, livestock, taxi, poultry.
- c. The lender is safe-guarded against the borrower building-up access debt by taking loan on same security from other institution.
- d. The lender is in a better position to safeguard him if the business operation does not work successfully on account of crop failure.

iv. Ability to Repay: Ability to repay is always in the mind of sensitive lender and intelligent borrower. Ability to repay is judged by accounting for the living and other expenses in the total farm income. More the repaying capacity more will be the credit worthiness.

v. Surety or Endorser or Guarantor: Surety is a person who makes himself liable for the debt of another. Sometimes, he is called by endorser or guarantor and his act is known as endorsement and guarantee. The lender expect surety or guarantee of a person who have good reputation and own sufficient property so that he could repay the debt if borrower does not. It may be regarded as the special form of collateral (गिरवी रखी जाने वाली संपत्ति). The endorser may compel or persuade the borrower to repay the loan.

Finally, the institutional lender must make use of these principles in extending the finance to agricultural enterprises.

Lender's Analysis of Loan: Lender's analysis of a loan is a comprehensive evaluation process used by financial institutions to determine a borrower's creditworthiness, assess risk, and decide whether to approve a loan application. The borrower should also assess all these before taking the loan so that he could earn goodwill in his business.

i. Analysis of Return Produce: The amounts of return produce compared to the cost involved determine the level to which the credit can be extended. The analysis involves three considerations:

- a. The manner in which high income generating enterprises are chosen.
- b. Manner in which most economical production practices are followed.
- c. The manner in which most economical size of enterprise selected.

ii. Analysis of Repaying Capacity for Self-liquidating loan: The repaying capacity is worked out by including the loan in the working expenses. The short-term crop loan remains self paying provided the crops do not fail. The intermediate loans (sheep loan) if schedule properly may also

become self paying through generating additional income. However, if the loan recovery is at faster rate, it may not become self paying and the repayment may become difficult thereby reducing the earning capacity of the project.

iii. Analysis of Repaying Capacity for Non-liquidating loan: In case of non-liquidating loan which is not self paying is incurred for use or investment which will not produce funds to repay the loan. These loans contribute indirectly in enhancing the gross income of the farmer. Therefore, such loan has to be paid from family cash income by deducting the family living expenses. One can get the idea regarding the level of such loan. The repaying capacity of the farmer can be strengthened by building more net-worth, use of self-paying loan, and efficient organization of business, proper planning and payment.

iv. Analysis of Risk Bearing Ability: The lender is interested to know the risk bearing ability of a farmer so that he may not lose his credit owing to unexpected losses. An entrepreneur can withstand the risk provided he has the ability to earn money, ability to borrow in bad year, control income fluctuation through diversification and other means and control family expenses in bad year.

In addition to these principles, there are other principles which are popularly known as 5C's and 7P's of credit. These are discussed below:

5C's of Credit: Next to 3R's of returns, the other important test applied to study the economic feasibility of the proposed investment activity are 5 C's of credit viz., character, capacity, capital, condition and commonsense. These are discussed below:

- i. Character:** The basis for any credit is trust. Even though the bank insists up on security while lending a loan, an element of trust by the banker also play a major role. Thus, the institutional agency wants to know what is the moral character of the farmer or borrowers such as honesty, integrity, commitment, hard work, promptness etc. before advancing loan.
- ii. Capacity of the borrower or farmer:** It means capacity of an individual borrower or farmer to repay the loan when they fall due. It largely depends upon the income obtained from the farm.
- iii. Capital:** Capital indicates the availability of money with the farmer-borrower. When his character and capacity are proved to be inadequate, the capital will be considered. It represents the net-worth of the farmer. It is related to the repaying capacity and risk bearing ability of the farmer.
- iv. Condition:** It refers to the conditions needed for obtaining loan from the financial institutions i.e. procedure to be followed while advancing a loan. The lender also wants to know what is the condition of the farm of the household or borrower. What is the living condition of the household before advancing a loan?

- v. **Commonsense:** It relates to the perfect understanding between the lender and the borrower in credit transaction. This is essentially (in fact) *prima facie* requirement in obtaining credit by the borrower.

7P's of Farm Credit: The 7 P's of farm credit are core guidelines used by lenders to evaluate, disburse, and manage agricultural loans effectively. They ensure that credit is safe, productive, and tailored to the unique economic realities of farming.

The Seven Principles

1. **Productive Purpose:** Loans must be used exclusively for income-generating farm activities rather than personal consumption. The lender must know what is the purpose for which the credit is taken whether productive or non-productive?
2. **Personality:** The lenders must know what type of person for whom we are extending the credit i.e. Lenders evaluate the borrower's character, honesty, and willingness to repay.
3. **Productivity Planning:** Credit should increase the overall farm production and operational efficiency. The lender or the institutional agency evaluates whether the household or the borrower is planning his operation so that the labor is not idle. He has maintained the stock.
4. **Phased Disbursement:** The lender disburses the funds in stages based on actual field requirements to prevent fund diversion.
5. **Proper Utilization:** Borrowers must use the money strictly for the specific objective stated in the loan application.
6. **Payment:** Repayment schedules are structured according to the farmer's crop harvest and income cycles.
7. **Protection:** The lender will be very-2 interested in the protection of his funds. Whether the proper security has been taken. Protection is important in the eye of the lender. Risk reduction measures—such as crop insurance, guarantees, or warehouse receipts—safeguard against unforeseen losses.

CHAPTER 6

METHODS AND MECHANICS OF PROCESSING LOAN APPLICATION

Procedure for Advancing Agricultural Loan: An institutional lender whether a commercial bank, cooperative banks or government agency is interested in financing agricultural enterprises, follows a definite set of procedure for advancing loan. They make available the printed loan forms along with rules for the wise use of loan. They are to be duly understood and filled before sanctioning a loan. This application form *inter alia* (among other things) contains information for the wise use of loan, the amount of loan required, its purpose, duration, nature of security offered and repayment plan. The institutional lender also requires certain related information along with application in the form of basic documents. These include:

1. Financial Statement or net-worth statement containing information on assets and liabilities.
2. Income statement showing profit or loss account or record of past performance.
3. Particulars of fixed and working assets own.
4. Particulars of all old loan or debts outstanding.
5. The future crop plan or allied activity, technical and economic potentiality.

The loan application is the initial documents involved in the loan transaction. It usually shows the date, name, address of the applicant as well as the amount of loan required, the purpose, the particulars of input, equipments to be purchased from the loan and the security with the guarantor. The other documents required are:

- a. Financial or net-worth Statement:** It should contain information previous to the year of loan application. It carries the information on current assets (cash in hands, cash in banks), fixed assets (land, building), working assets (machinery, equipment, automobile). The sum of all these three will be the total assets. Similarly, the details of liabilities like current liability include outstanding liability, amount in cash or kind, unpaid taxes, wages, hurdles checks payable. Other liability includes mortgaged loan and other loan. The excess of total assets over total liability is term as the net-worth of the debtor.
- b. Income Statement:** An income statement is a record of receipts and gain during a specific period less the expenses and losses during the same period with a net income or net loss as a result. It is the measurement of input and output inter terms of value. It is, thus, a statement of all the crops, livestock production, with a total value of the produce less cost incurred in the production. This information, if available may be complied for two to three years to know the past performance of the firm or farmer and economic potentialities.
- c. Future Crop Plan, Technical and Economic Potentialities:** This will include the proposed crop or enterprise plan after borrowing the credit. Whether the borrower have the technical

training for running the business or not. If he taking a credit for tube-well, then whether ground water and electricity he has or not.

Rules for the Wise use of Loan:

There are certain rules which must be taken care of and read by the borrower before taking a loan. These are:

- i. Obtain a loan for running a profitable enterprise.
- ii. Keep loan at the lowest point.
- iii. Take into account the past price level before committing the installment repayment.
- iv. To confine the use of loan for income generating purposes.
- v. Check-out a definite repayment plan.
- vi. Loan repayment should not surpass the loan. Otherwise, we will be defaulting of loan.
- vii. Loan amount should not surpass the capital.
- viii. Gain confidence of the lender to go up-to in bad year.
- ix. Behave in a businesslike manner.
- x. Get insurable items insured.

These rules should be carefully read by the borrower before taking a loan.

Criteria for Advancing Loan: When all the paper described above reached the bank manager, they need to confirmed or scrutinized by the technical expert. Agricultural field officer along with paper documents pays visit ti the farm or place of enterprise for verification, collection of additional information and preparing few documents and notes so as to assess the borrower application and to arrive at the decision whether to sanction the loan or not. This is known as the Confidential Report (CR) report of the borrower. The information collected is as follows:

- i. Verification of financial statement by the field officer.
- ii. Report on the assessment of past performance.
- iii. Appraisal report on the feasibility of proposed production plan. This will include the technical feasibility.
- iv. Appraisal report on the techno feasibility of the project.
- v. Analysis of loan limit.
- vi. Security required which include whether the loan is required mortgage or not.
- vii. Documents to be taken and handing over loan amount.
- viii. Finalization of procedure for the advancement of loan and repayment of loan.
- ix. Repayment plan -- whether monthly yearly etc.
- x. Finalization of the procedure for the supervision of loan.
- xi. Final recommendation and decision—whether the loan application should be rejected or accepted.

Cost of Credit: The following costs are involved in getting agricultural credit. These are:

- a. Rate of interest is one cost. the other costs are
- b. Number of visit and days spent by the farmers in getting credit.
- c. Transaction cost. It includes stamp paper, affidavit, revenue stamp, typing charges, photographs, travelling expenses, incidental expenses, tea, gifts, and sweets.
- d. Illegal Gratification (Hindi mai Rishvat): - Government official,
 - Non –official includes Pradhan, Consultant
 - Granter.
- e. Feed back or Supervision cost: It Includes the following:
 - Registered letter
 - Incidental charges
 - Penalty
 - Panel interest
 - Legal & court fee.

The Problems in Getting Agricultural Credit: The following are the problems in getting agricultural credit and these are as given here under:

1. High rate of interest.
2. Low cash income generation from the project / assets which has been financed.
3. Lot of formalities and red-tapism.
4. The farmers are ignorant about the credit facility.
5. Non availability of institution like market for input and sale of output.
6. Lack of technical staff and guidance with respect to project finance.
7. Inadequate credit.
8. High incidental charges like insurance etc.
9. Complicated procedure and security requirement.
10. Leakages of credit and illegal gratification.
11. Faulty implementation of government programs me.
12. And faulty identification of beneficiaries.

CHAPTER 7

LOAN REPAYMENT PLANS

Repayment Plan: A borrower may have good repaying capacity but defective repayment plan proposed by the lender would render him to become defaulter. Therefore, it is essential to check-out well repayment schedule/ plan. The most commonly known repayment plans for repaying the medium and long-term loans are:

1. Straight-end Repayment Plan or Single Repayment plan or Lump sum Repayment Plan
2. Partial Amortized Loan Repayment
3. Amortized Even Repayment Plan
4. Amortized Decreasing Repayment Plan
5. Flexible or Variable Repayment Plan
6. Optional Repayment Plan
7. Reserve Repayment Plan or Future Repayment Plan

Partially Amortized Loan Repayment: An “Amortized loan” is one which is repaid in a series of installments/ payments to cover both interest and principal amount. The term “amortization” means “Killing by Degree” i.e. repayment of principal loan in a series of installments.

The partially amortized loan involves small principal payments every year of the repayment term and remaining unpaid principal balance become due at the end as a lump sum or balloon repayment.

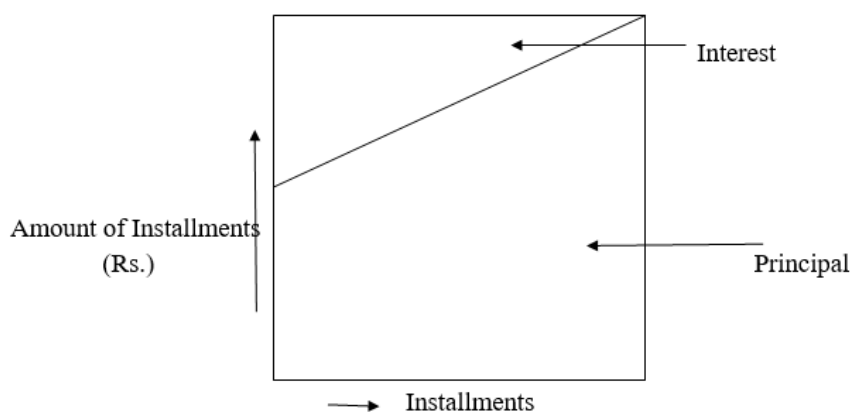
Amortized Even Repayment Plan: In this method, the equal total payments are made each year i.e. a larger proportion of each succeeding principal amount / installments and a smaller amount representing the interest. This method of repayment is more suitable where income flow is constant over the entire period of assets for example, tractor or pump set. The following equation is used to calculate the annual repayment installment on even level repayment basis.

$$P = B \cdot [1 / a_{ni}]$$

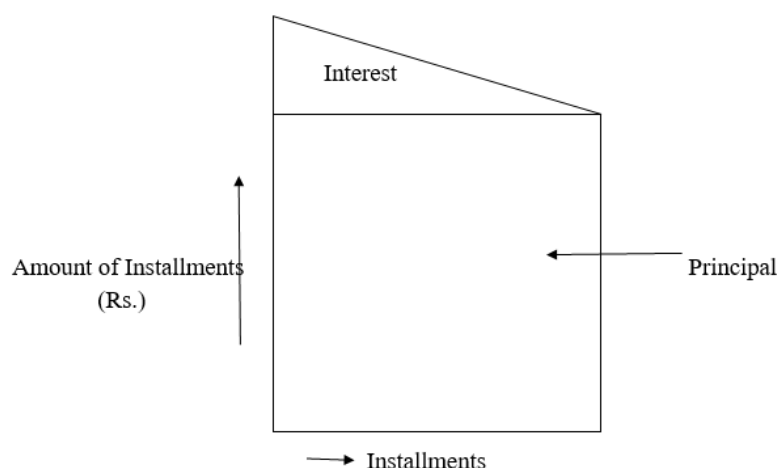
Where, P = Amount of annual installment i.e. Principal + Interest

B = Face value of loan; n = the number of year for which the loan has been given; i = Annual interest rate.

$[1 / a_{ni}]$ is read as “1 divided by a sub n at rate “i” and represent the annuity that “1” will purchase for n years with an annual interest rate “i”.



Amortized Decreasing Repayment Plan: This method involves the constant principal payment and declining interest payment on outstanding balance. The decreasing repayment plan is appropriate when borrower is able to pay the higher initial investment. This plan is well suited for farm machinery and equipments.



Straight-end Repayment Plan or Lump sum Repayment Plan: Lump sum repayment plan assume that good years will balance out bad years and, in the end, sufficient repaying capacity will be available to pay-off the loan in one lot.

Amortized repayments on an even payment or decreasing payment basis has an advantage over the lump sum repayments plan in that it makes it easier for the borrower to pay-off the loan as the income accrues to him. Amortized repayment is preferred in general because interest costs are lower in this case as compare to lump sum repayment plan.

Variable Repayment Plan: As the name indicates, various levels of installments are paid by the borrower over the loan period. At times of good harvest, a larger installment is paid and at times of poor harvest, smaller amount of installments is paid by the borrower. Hence, according to the convenience of the borrower, the amount of installments varies here in this method. This method is not found in lending of institutional financial agencies.

Optional Repayment Plan: Here in this method, an option is given for the borrower to make payment towards the principal amount in addition to the regular interest.

Reserve Repayment Plan or Future Repayment Plan: This type of repayment is seen with the borrowers in areas where there is variability in farm income. In such areas, the farmers are haunted by the fear of not paying regular loan installments. To avoid such situations, the farmers make advance payment of loan from the savings of previous year. This type of repayment is advantageous to both the banker and the borrower. The bankers need not worry regarding the loan recovery even at times of crop failure and on the other hand borrower also gains, as he keeps up his integrity and credibility.

Simple Interest: Simple interest is the product of principle, the time in years and the annual rate of interest.

Compound Interest: In this, the interest is periodically converted in the principle i.e. annually, biannually, quarterly etc.

Numerical Example: A farmer has taken a loan of Rs. 10,000 at 12 per cent rate of interest for six years. Work out different repayment plan.

Solution:

a. Partial Repayment Plan:

- In this, the farmer is expected to settle the entire loan amount in quarterly, half or annual installments (Principal + Interest).
- It implies that repayment of loan will be done partially over the year.
- Usually, the installment amount will be decreasing as the year pass by except in the maturity year (final year) during which the investment generated sufficient revenue for liquidation.

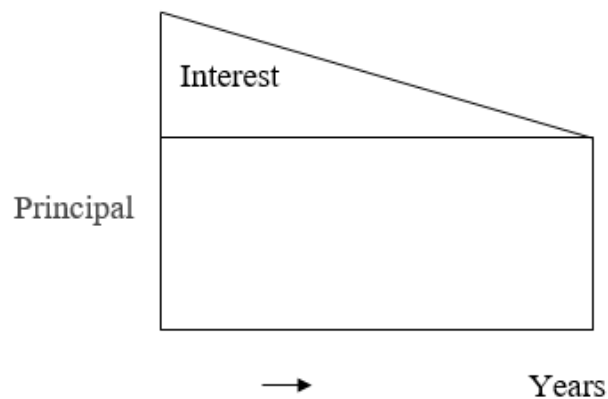
Year	Principal (in Rs.)	Interest (in Rs.)	Installment (in Rs.)	Balance Amount (in Rs.)
1	1000	1200	2200	9000
2	1000	1080	2080	8000
3	1000	960	1960	7000
4	1000	840	1840	6000
5	1000	720	1720	5000
6	5000	600	5600	-
Total	10,000	5,400	15,400	-

b. Amortized Decreasing Repayment Plan:

- In this repayment plan, the principal component remains constant over the entire repayment period, while interest rate part decreasing continuously.
- With the principal amount remaining fixed and interest amount decreasing, the annual installment amount decreases over the year.

- The advance made for the purchase of machinery is one of the suitable examples under this category.

Year	Principal (in Rs.)	Interest (in Rs.)	Installment (in Rs.)	Balance Amount (in Rs.)
1	1666.67	1200	2866.67	8333.33
2	1666.67	999.99	2866.67	6666.67
3	1666.67	799.99	2666.66	5000.00
4	1666.67	600.00	2466.66	3333.33
5	1666.67	399.99	2266.67	1666.67
6	1666.67	199.99	2066.67	-
Total	10,000	4199.96	1866.67	-



c. Amortized Even Repayment Plan:

- This is called equated installment method since the annual installments over the entire loan period remains the same in this method.
- The principal portion of the installment increases continuously, while the interest rate declines gradually.
- This method is mostly adopted for term loans. The loans granted for farm development, dairy, poultry etc.
- The annual installments is arrived at through the formula given below:

$$I = B \left[\frac{i}{1 - (1+i)^{-n}} \right]$$

Where, I = Annual installments in Rs.

B = Principal amount borrowed in Rs.

n = Loan period in years

i = Annual interest rate in fraction.

Example: Given that Loan amount = Rs. 10,000; Time period = 6years; and Rate of interest = 12%

Since Annual Installment, $I = B [i / [1 - (1+i)^{-n}]]$

By putting the values in the above formula, we get:

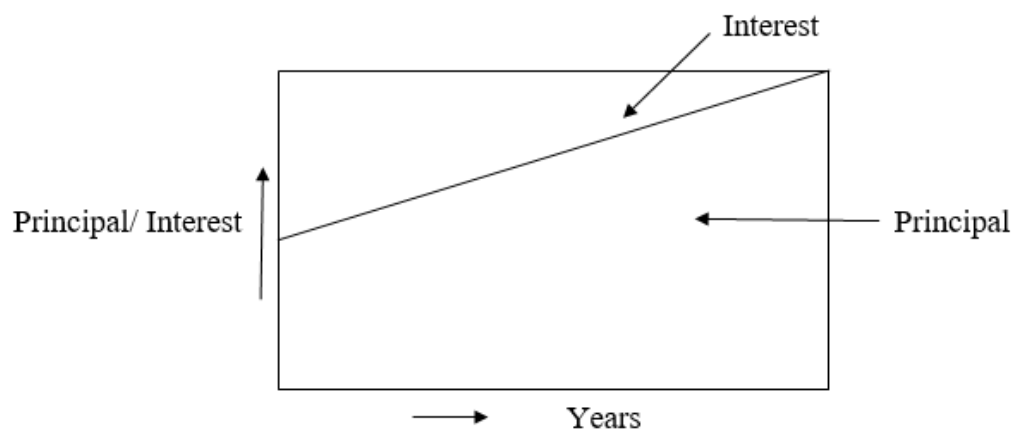
$$I = 10,000. [0.12 / [1 - (1 + 0.12)^{-6}]]$$

By simplification, we get:

$$I = 10,000 \times [0.12 / [1 - (1.12)^{-6}]]$$

$$= 10,000 \times 0.24322 = \text{Rs. } 2432.25$$

Year	Principal (in Rs.)	Interest (in Rs.)	Installment (in Rs.)	Balance Amount (in Rs.)
1	1232.25	1200.00	2432.25	8767.75
2	1380.12	1052.13	2432.25	7387.63
3	1545.73	886.52	2432.25	5841.90
4	1731.22	701.03	2432.25	4110.68
5	1938.97	439.28	2432.25	2171.71
6	2171.67	260.61	2432.25	-
Total	9999.93	4593.57	14593.50	-



CHAPTER 8

TOOLS OF FARM FINANCIAL MANAGEMENT

There are three tools of farm financial management and these are:

1. Balance-sheet Analysis
2. Income Statement
3. Cash –flow Analysis

Balance –Sheet Analysis: It refers to a particular point of time and indicates a financial condition of farmers. It includes all assets and liabilities of a farmer at a particular point of time. If there is an excess of assets over liabilities, it shows profit or net-worth otherwise loss.

Example: Balance –sheet of Mr. ‘X’ as on 30th June, 1992

Liabilities	Rs.	Assets	Rs.
Loan from village co-operative bank	1,000	a. Cash in hand	1,000
Term loan from Commercial bank	5,000	b. Cash in bank	3,000
Amount Payable to Mr. ‘Y’	500	a. Crop in stock	8,000
Mortgage	5,0000	c. Fertilizer in stock	500
		d. Cow	2,000
		e. Bullock	4,000
		f. Implements & machinery	10,000
		g. Land & buildings	50,000
Total	11,500	Total	79,000

Therefore, Net worth = Assets – Liabilities = 79,000 – 11,500 = 67,500

Income Statement: It is a record of receipts and gains during a specified period less the expenses and losses during the same period usually a year. Thus, it is a measurement of input and output in terms of value.

Example: Income Statement of Mr. ‘X’ for different years from 1990-91-1992-93.

Sr. No.	Particulars	1990-91	1991-92	1992-93
I	Cash Receipts			
	Sale of rabi crop	3,000	4,000	5,000
	Sale of kharif crop	2,000	3,000	6,000
	Sale of milk	1,000	1,500	2,000
	Sale of vegetables	-	-	1,000
	Sale of eggs	500	500	-
	Miscellaneous	500	500	1,000
	Total Receipts	7,000	10,000	15,000

II	Cash Expenses			
	Labour for rabi crop	1,000	700	900
	Labour for kharif	1,500	1,000	1,100
	Purchase of Seed	500	800	1,000
	Purchase of Fertilizers	500	1,000	2,000
	Land revenue & other taxes	500	500	500
	Purchase of livestock	-	500	1,000
	Miscellaneous	100	200	200
	Total Expenses	4,100	4,700	6,700
III	Net Cash Income (I –II)	2,900	5,300	8,300
IV	Inventory Changes (±) [‘+’ means appreciation in inventory and ‘ – ‘ means depreciation in inventory]	200	500	1,000
V	Family Consumption	2,000	3,000	4,000
VI	Gross Farm Income or Gross Family Earnings on the Farm (III + IV +V)	5,100	8,800	13,300
VII	Operator Family Labour or Interest on operator Capital	2,000	2,500	3,000
VIII	Return to Management (VI – VII)	3,000	6,300	10,300

Cash Flow Analysis: It refers to the statement of cash receipts and cash expenses during a particular period. If cash inflow (income) is more than cash outflow (expenses), net cash income results.

Example -1: A simple cash flow analysis for a one-acre wheat farm shows net cash loss of \$100 after earning \$800 in total crop sales against \$900 in total cash expenses over a six-month season.

Cash Inflow (Revenue)

- **Wheat sales:** \$800 from selling 40 bushels at \$20 each.

Cash Outflow (Expenses)

- **Seed:** \$150
- **Fertilizer:** \$200
- **Fuel and machinery:** \$250
- **Labor:** \$300

Net Cash Flow Summary

- **Total cash inflow:** \$800

- **Total cash outflow:** \$900
- **Net cash flow:** -\$100 (Negative cash flow requiring short-term operating funds)

Example -2: A cash flow analysis breaks financial activities down into three core sections: operating (day-to-day business), investing (buying or selling assets), and financing (loans and owner funds). For a company with a net cash increase of \$15,000, operations generated \$25,000; investments used \$12,000, and financing provided \$2,000.

Cash Flow Activity	Amount (\$)
1. Operating Activities	
Cash received from customers	\$50,000
Cash paid to suppliers and workers	(\$25,000)
Net Cash from Operating (A)	\$25,000
2. Investing Activities	
Cash paid to buy new equipment	(\$12,000)
Net Cash from Investing (B)	(\$12,000)
3. Financing Activities	
Cash received from bank loan	\$5,000
Cash paid for dividends	(\$3,000)
Net Cash from Financing (C)	\$2,000
Net Increase in Cash (A + B + C)	\$15,000
Plus: Opening Cash Balance at start of year	\$10,000
Closing Cash Balance at end of year	\$25,000

Trading Account: It is the total performance of the firm during the year.

Example: Prepare a Trading account, Balance-sheet; and Profit and Loss account for Lohaul potato Society for 1987-88 & 1988-89.

Trading Account: Trading account of Lohaul Potato Growers Co-operative Marketing Society Ltd., 1987-88 to 1988-89(000'Rs.)

Purchases/ Stock	1987-88	1988-89
To Opening Stock		
Consumer call	1814.12	2713.92
Gunny bags	374.30	298.89
Fertilizer	2.31	-
Foundation Seeds	88.93	63.06
Building material	52.98	9.40
Tiers, tubes, diesel & repair parts	115.88	213.99
Apple material	-	58.50

To Purchase		
Consumer call	8114.23	7175.02
Gunny bags	1288.17	2029.26
Fertilizers	-	-
Foundation seed	70.43	582.01
Building material	113.09	97.38
Tiers, tubes, diesel & repair parts	361.81	737.77
Apple material	59.59	5.45
Others including Peas	-	480.61
Gross Profit	241.67	294.94
Total	12,698.21	14760.20
Sales/ Stock	1987-88	1988-89
By Sales		
Consumer call	7432.02	8751.21
Gunny bags	1391.69	2268.46
Fertilizers	-	-
Foundation seed	96.30	463.18
Building material	156.62	98.56
Tiers, tubes, diesel & repair parts	262.72	830.67
Apple material	1.10	8.85
Others including Peas	-	414.09
By Closing Stock		
Consumer call	2713.92	1332.52
Gunny bags	298.89	157.22
Fertilizers	-	-
Foundation seed	63.06	181.89
Building material	9.40	7.99
Tiers, tubes, diesel & repair parts	213.94	190.07
Apple material	58.50	55.48
Total	12698.21	14760.20

Balance sheet of Lohaul Potato Grower Cooperative Marketing Society Ltd., 1987-88 to 1988-89.

Sr. No.	Liabilities	1987-88	1988-89	S.No.	Assets	1987-88	1988-89
I	Share Capital			I	Fixed Cost		
	a. Individual	803.30	812.50		Gross block	5014.27	5702.12
	b. Govt.	8766.00	9816.00		Less depreciation	1085.88	1454.48
	Total	9569.30	10628.50		Balance	3928.39	4247.70
II	Funds & Surpluses				Investment	3272.25	3277.97
	a. Reserve funds	25.96	25.96		Libraray	1.16	1.16
	b. Other funds	2951.17	3170.27	II	Total Fixed Assets		
	c. Total	2977.13	3196.23		Current assets	7201.80	7526.83
III	Loan	5907.59	8990.46		Interest recoverable	105.41	506.54
iv	Government Subsidies	1100.00	1315.00		Stock in hand	3357.76	1951.56
V	Current Liability	1836.99	41996.34		Sundry debt	6729.31	23576.84
VI	Provision	638.01	1518.70		Cash in bank	2369.64	3488.36
	Grand Total	22029.02	67645.23		Total Current assets	12562.12	29523.30
				III	Loan & advances	2265.10	30595.10
					Grand Total	22029.02	67645.23

It is clear from the above table that the balance sheet of Lohaul Potato Grower Cooperative Society Ltd. shows no profit no loss situation for the years 1987-88 & 1988-89 as assets are equal to liabilities for both the years.

Profit and Loss Account of Lohaul Potato Grower Cooperative Marketing Society Ltd. during the year 1987-88 & 1988-89.

Particulars	Expenditure		Particulars	Income	
	1987-88	1988-89		1987-88	1988-89
Establishment	665.20	662.78	Gross profit	241.67	294.94
Revenue expenses	373.34	460.02	Membership fees	2.06	3.62
Co-op. Bhawan expenses	45.22	71.47	Co-operative Bhawan receipt	71.51	98.89
Transport call expenses	871.86	1110.05	Transport call receipt	901.21	1127.69
marketing expenses	1.05	9.73	Commission	1379.89	2273.99
Interest Charges	289.99	574.39	Dividend	3.00	44.40
Income tax	257.99	89.48	Interest receipts	486.27	687.40
Bad & doubtful debt	158.97	800	Other receipts	-	-
Bonus/ Gratuity	40.00	128.21	Revolving fund	253.20	0.00
Depreciation	278.75	380.69	Total	3342.81	4530.93
Revolving fund	343.58	202.14			
Other provision	-	25.00			
Net profit	17.65	16.97			
Total	3342.81	4530.93			

Since income is equal to expenditure, the Lahaul Potato Grower Cooperative Marketing Society Ltd. is at no profit and no loss situation in both the years.

Difference between Economic Analysis and Financial Analysis:

Sr. No.	Economic Analysis	Financial Analysis
1.	Economic analysis is complementary to financial analysis.	Financial analysis is complementary to economic analysis.
2.	Economic appraisal is for society as a whole.	The financial analysis is for private entities.
3.	Economic analysis uses economic prices that are converted from the market price by excluding tax, profit, subsidy etc. to measure the legitimacy of using national resources to certain projects.	The financial analysis uses market prices to check the balance of investment and sustainability of a project.
4.	Interest on capital is deducted from the gross return analysis because it is a part of the total return to the capital available to society as a whole	Interest paid to external supplier of money is deducted to drive the benefits streams available to the owners of the projects.

CHAPTER 9

FINANCIAL INSTITUTIONS: STRUCTURE AND FUNCTIONS

Bank is defined as an institution for the custody of money which it pays out on customers order. Banking system we mean the process of lending and borrowing of funds from the public. Earlier times, this business was carried out by the rich people like traders, lenders and land –lord's tec. This system of banking is known as indigenous banking institution. The main advantage of these indigenous bank institutions was that firstly funds are readily available in an adequate amount and at the proper time. These types of banking institution continued their business and were dominated the process of borrowing and lending upon the public.

In countries like India where there is an absence of net banking branches especially in the rural areas, these institutions are the most important banking institutions. The most important pitfall of these institutions was that of first they discharge very high interest rate; second, these institutions were interested in keeping their funds busy and they did not encourage the farmers to repay back their loan; and lastly, with the operation of these institutions, the farmers had been reduced to landless labourers.

Structure of Indian Banking System: There are two sectors:

1. Organised Sector
2. Un-organised Sector

1. Organised Sector: It consists of

- i. Commercial Bank
- ii. Reserve Bank of India (apex body of General Banking)
- iii. NABARD (apex body of Agricultural Banking)
- iv. iv) Cooperative credit/ banking system:

2. Un-Organised Sectors: It is of two categories, one which is operated in town and city and is known as Indigenous bankers and the other which is operated in villages by the money lenders.

Commercial Banking in India: Commercial banking in India is classified into schedule and non-scheduled banks. Schedule banks are those banks which have a paid-up capital (actual amount of capital that share holders have subscribe) of Rs. Five lacs or more and are put on the schedule of reserve bank. It is of two types viz. nationalised banks and non-nationalised bank. Nationalised banks are those banks which have been nationalised by the Government of India and their loaning policy is controlled by the reserve bank while, all those banks which are owned privately and are in private hands are called non-nationalised banks. On the other hand, all those banks which have a paid –up capital of less than Rs. Five lacs are called non-scheduled bank. Commercial banks are the most common and important types of banking institutions. They carry on the general banking business of accepting deposits and advancing loans. Commercial banks

may be owned by the government or they may be run in the private sector. For instance, twenty major commercial banks were nationalised with effect from March, 1980 in India. Other private sector banks were organised on the lines of Joint Stock Company. The important functions of commercial banks are given here under:

- To mobilize the saving in the economy.
- To open branches in the potential areas of the country and divert the funds for productive purposes.
- To lend the money at cheaper rate to agriculture, industries and other economic activities.
- It helps the government in adopting successful monetary and fiscal policy.
- To create credit and help the government in overall economic development.
- These institutions promote the banking habits among the rural people by opening more and more branches.

Nationalised Banks in India: In the wake of our nation's independence, a multitude of banks emerged with the primary aim of addressing the economic aspirations and needs of our citizens. These banks, in their pivotal role within our economy, are entrusted with the crucial responsibility of managing our finances. They not only provide a vital guarantee for safeguarding our money but also offer interest on our deposits. Additionally, banks play a pivotal role in extending financial support to individuals, institutions, and businesses for a diverse range of personal and commercial activities. As a result, banks exert a direct and substantial influence on various facets of our lives.

Motive of Bank Nationalisation: The main aim behind bank nationalisation are to prevent the concentration of wealth which the banking sector has been promoting in the past; to ensure adequate flow of credit to the neglected and weaker section of the society; to provide adequate banking facilities particularly in the rural areas; and to reduce regional imbalances and economic disparity in the country.

In July 19, 1969, fourteen major banks were nationalised by the then Government of India. These were as under:

- i. Allahabad Bank (Calcutta)
- ii. Baroda Bank (Baroda)
- iii. Bank of India (Bombay)
- iv. Bank of Maharashtra (Puna)
- v. Canara Bank (Bangalore)
- vi. Central Bank of India (Bombay)
- vii. Dena Bank
- viii. Indian Bank (Madras)
- ix. Indian Over-seas Bank (Madras)

- x. Punjab National Bank (New Delhi)
- xi. Syndicate Bank (Karnataka)
- xii. Union Bank of India (Bombay)
- xiii. United Bank of India (Calcutta)
- xiv. United Commercial Bank (Calcutta)

In addition to these nationalised banks, six more banks were nationalised by the Government of India with effect from 14th March, 1980. These were

- i. Andhra Bank (Hyderabad)
- ii. Corporation Bank (Mangalore)
- iii. New Bank of India (New Delhi)
- iv. Punjab and Sindh Bank (New Delhi)
- v. Oriental Bank of Commerce (New Delhi)
- vi. Vijay Bank (Bangalore)

At the present juncture and with the formation of Modi's Government in May, 2014 at the centre, since then it has been of late, there are only twelve government banks or public sector banks as Modi government took initiative to merge some of 20 nationalised banks as per the present days need. Government banks also called public sector banks (PSBs) are the financial institutions in which the Government of India holds the majority of shares, typically more than 51 per cent. While they are not under the direct control of the government, the government is the primary stakeholder in these banks. Here is the list of these 12 Nationalised banks:

- i. Bank of Baroda
- ii. Bank of India
- iii. Bank of Maharashtra
- iv. Canara Bank (With merger of Syndicate Bank)
- v. Central Bank of India
- vi. Indian Bank (With merger of Allahabad Bank)
- vii. Indian Overseas Bank
- viii. Punjab & Sindh Bank
- ix. Punjab National Bank (With the merger of Oriental Bank of Commerce and United Bank of India)
- x. State Bank of India
- xi. UCO Bank
- xii. Union Bank of India (With the merger of Andhra Bank and Corporation Bank)

State Bank of India: State Bank of India was earlier known as imperial bank of India which was set up in 1921, with the collaboration of three presidency banks of Bombay, Madras and Calcutta. It was nationalised on July 1st, 1955 and was renamed as State Bank of India. The head

quarter of SBI is located at Bombay. In the recent past, SBI had seven subsidiary banks namely, State Bank of Bikaner and Jaipur; State Bank of Hyderabad; State Bank of Mysore; State Bank of Patiala; State Bank of Saundra; State Bank of Travancore; and State Bank of Indore. In addition to RBI, there are about 1227 share holders who hold about 8 per cent of the paid-up capital of State Bank. The important functions of State Bank of India are as under:

- i. Branch expansion in the country.
- ii. Lending to priority sector like agriculture and rural industry.
- iii. It gives aid to cooperative institutions
- iv. It finances for foreign trade.
- v. It is an agent to RBI.
- vi. It controls over the business of other banks.

Industrial Banks: Industrial banks refer to those financial institutions which provide finance to industry on a long-term basis. Indian Finance Corporation (IFC) or an Investment Corporation of India (ICI) is the examples of Industrial banks in our country.

Agricultural Banks: These banks give loan for agricultural purposes such as for the purchase of seed, fertilizers, implements etc. They charge concessional rate of interest. In India, we have cooperative banks and land mortgage banks for this purpose. In the recent past, Regional Rural Banks have been set up to help agricultural development through an adequate supply of finance. NABARD (National Bank for Agriculture and Rural Development) is the apex body of the agricultural banks which was set up in 1982 with its head quarter at Bombay.

Exchange Banks: Exchange banks are that bank which deals in foreign exchange. India dealing in foreign exchange is conducted by foreign exchange bank as well as Indian commercial banks. Exchange rate is the value of one nation currency in terms of others.

Saving Banks: The major aim of these institutions is to promote saving of the middle-income group of the society. In India, Postal Saving Banks are the good example of such banks.

Reserve Bank of India/ Central Bank: A central bank is central to the whole banking system. It is an apex institution and generally there is a central bank in every country. The main function of central bank is to regulate and supervise the whole banking system. It controls and regulates the currency and perform the other essential functions to achieve a rapid rate of development.

At present, there is no country in the world which has not set up a central bank of its own. A central bank is so called because it occupies a central pivotal position in the monetary and banking system of the country and is the highest financial authority.

The RBI which is the central bank of the country was established on 1st April, 1935. The bank was nationalised in 1949. The management of RBI vests with a central board of director of twenty members. The Governor; four Deputy Governors and 15 others are nominated by the

government. RBI is the leader of the banking system and it control all the banking and financial operations in the country. The important functions of RBI's are given here under:

- i. Bank of issue.
- ii. Bankers, agent and advisor to the government.
- iii. As a custodian of cash reserve of the commercial bank.
- iv. As a custodian of nation's reserve of international currency.
- v. Bank of rediscount and lenders of last resort.
- vi. As a bank of central clearance, settlement and transfer.
- vii. As a controller of credit.

Apart from these functions, the central bank also maintain relationship among international banks such as International Monetary Fund's (IMF), World Bank (IBRD), Asian Development Banks (ADB) and other international financial institutions when the needs arise.

Difference between Central Bank and Commercial Bank:

- i. Commercial bank is run for profit but, the central bank is set up for public services rather than saving.
- ii. The central bank does not compete with commercial banks. But, on the other hand, it acts as a banker's bank and the lender of last resort.
- iii. Unlike the commercial banks, the central bank does not directly deal with the public. Normally, it does not accept deposits from the public nor does it pay interest on such deposits.
- iv. A central bank is normally a state an institution whereas, commercial banks are generally privately owned.
- v. A central bank acts as the custodian on the cash reserve of commercial banks.
- vi. A central bank acts as a custodian of nation's reserve of international currency.

Lead Bank Scheme: This scheme was introduced in 1969 by RBI on the recommendation of National Credit Council under the chairmanship of Prof. D.R. Gadgil. The specific function of lead bank scheme is as under:

- i. To serve the resource and potential for banking development in various district of the country.
- ii. To serve the number of industrial, commercial and other establishments.
- iii. To examine the market facilities, storage, and warehousing etc.
- iv. To serve the facilities for storing fertilizers and other agricultural inputs.
- v. To assist the primary lending agency.
- vi. To maintain contact and liaison with the government agencies for economic development.

Under lead bank scheme, for each district a lead bank is identified which coordinate the banking operation and prepare a credit plan and norms to finance various activities. For example, Lead bank for Chamba is SBI and lead bank for Kangra is PNB.

Taccavi Loan: These are the loan given by the government at the time of flood, distress particularly during famine, drought or natural calamity. These loans can be of kind or cash, implicit or explicit. These are the long-term loan. The recovery is very simple and easy which is paid in instalment over a long period of time. Rate of interest is very-very low.

Difference between Nationalised and Private Banks:

Parameter	Nationalised Banks	Private Banks
Ownership	Majority stake owned by GOI	Majority stake owned by private entities or individuals
Objective	Serve public interest, financial inclusion, and economic development	Focus on profitability, customer experience, and innovation
Customer Trust	High level of trust due to government backing	Gaining trust through service quality and efficiency
Interest Rates	Generally, offer lower interest rates on loans and higher rates on deposits	May offer competitive rates based on market strategy
Service & Technology	Slower adoption of new technology, though improving	Faster in adopting latest technologies and digital banking
Loan Approval Process	Slower due to extensive documentation and strict verification	Faster processing with streamlined procedures
Job Security for Employees	High, with most employees considered government staff	Comparatively lower job security
Branch Network	Extensive presence in rural and semi-urban areas	Strong presence in urban and metro cities
Example Banks	Punjab National Bank, SBI, Bank of Baroda, Canara Bank	HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra Bank

Note: ICICI: Industrial, Credit, and Investment Corporation of India; HDFC: Hindustan Development Finance Corporation; SBI: State Bank of India.

Regional Rural Bank: Regional Rural Bank in Himachal Pradesh is commonly known as “Garmin Bank”. Full concept of RRB’s came into being from 1976. Objectives of RRB are to extend credit to the weaker section in rural areas. These banks were developed in remote areas of the country to mobilise deposits and finance viable and productive projects in the area in order to carry out the overall economic development. During 1989, there were 196 RRB’s with a branch net work of about 14,000 in the country. In Himachal, there were two RRB’s. “Gramin Bank” in Kangra, Kullu, and Mandi while, “Parvatia Gramin Bank” in Chamba district. 90 per cent of the

credit is given to priority sector for productive purposes. RRB's enjoy certain concessions given by the NABARD or state government. These concessions are:

- i. They can give 0.5 % higher rate of deposits than commercial banks.
- ii. They get interest free cash overdue from the sponsoring banks.
- iii. They are exempted from maintaining SLR/CDR.
- iv. Cash Reserve Ratio (CRR) is very low.
- v. NABARD or sponsoring bank accepts the deposit from RRB's and gives interest on their deposits.

The finance or the capital is met by central government, state government and sponsoring bank in the ratio of 50: 15:35. "Parvatia Gramin Bank" is sponsored by SBI in Chamba district.

National Bank for Agricultural and Rural Development (NABARD):

Agricultural Refinance and Development Corporation (ARDC) was instituted in 1963 as an affiliated body of RRB to watch the agricultural credit in the country. It was responsible for providing refinance to the financial institution and to provide loan to create infra-structure in the area.

NABARD came into being in 12th July, 1980. Its head quarter is at Bombay. This body is parallel to RRB's. NABARD is still under the control of RRB's and central government. It is managed by the board of director and there is a chairman who is appointed by the Government of India. The important functions of NABARD are given here under:

- i. To serve as refinancing institution for all types of loan in agriculture, small scale industries and rural artisans/handicraft etc.
- ii. To provide long term credit to state government to enable them to subscribe share capital in the cooperative.
- iii. To provide short-, medium- and long-term loans to state cooperative banks, RRB's, Land Development Banks (LDB's) and other financial institutions.
- iv. It has the responsibility of co-ordinating the activities of central/ state government, planning commission entrusted with the task of rural development.
- v. It advises the government to frame financial policy for agricultural development. It issues guidelines and direction to financial institutions regarding loaning policy in agriculture and enforces their implementation.
- vi. It has the responsibility to inspect and supervise RRB's and other cooperative banks.
- vii. It maintains research and development funds (R&D) to promote research in agriculture and rural development.

Sources of Funds for NABARD: NABARD gets funds through the following:

- i. Bonds and debenture.
- ii. Borrowing from RRB.

- iii. Borrowing from central government.
- iv. Excepting the deposits of RRB's; cooperatives; state government; and other financial institutions.
- v. Gift benefit and other benefications received from central government or USAID etc.

Board of Directors of NABARD: There is a chairman appointed by the Government of India for the term of Five-Years; director; and managing director.

- Two directors are appointed who are expert in agriculture and rural development.
- Two directors will be nominated by the state government.
- Three directors are appointed who have a vast experience of working in co-operative banks (2) and commercial bank (1).
- Three directors are appointed out of the directors of RBI.
- Three directors are appointed by the government which will be the official of the government.

International Financial Institutions

International Monetary Fund (IMF): IMF was established in 1944 at Breetton Woods conference along with World Bank (WB) both known as Breetton Woods Twins. Its head quarter is at Washington, D.C. IMF established for promoting international economic stability by promoting and helping the expansion of international trade. The fund is a pool of central bank reserves and national currencies which are made available to member countries with certain condition.

Purpose of IMF:

The primary goal of the International Monetary Fund (IMF) is to ensure the stability of the international monetary system—the system of exchange rates and international payments that enables countries to buy goods and services from one another. Established in 1944, it aims to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world.

Key Objectives and Functions:

Monetary Cooperation: To provide a permanent institution for consultation and collaboration on international monetary problems.

Exchange Rate Stability:

To promote exchange stability and maintain orderly exchange arrangements among members.

Facilitating Trade: To facilitate the expansion and balanced growth of international trade, contributing to high levels of employment and real income.

Balance of Payments Assistance: To help member countries experiencing temporary balance-of-payments problems by providing financial assistance, allowing them to correct adjustments without resorting to measures that harm national or international prosperity.

Technical Assistance: To provide policy advice and training to help nations build sustainable economies.

The IMF was created to prevent a repeat of the competitive exchange rate devaluations that contributed to the Great Depression of the 1930s. Today, it focuses on economic surveillance and crisis prevention in its 191 member countries.

International Bank for Reconstruction and Development (IBRD) also known as World Bank (WB): The World Bank was born at the same time when IMF was born in 1944 during world war-II. Its head quarter is at Washington, D.C. The economics of all the countries were shattered while the need was recognized to reconstruct the war damages. The need was then felt to develop the economics of these countries. Hence, IBRD was born. Its main aim is to help the member nations in reconstruction and development of their economy.

The World Bank is an international financial institution providing loans, grants, and technical assistance to developing nations to reduce poverty, fund infrastructure (dams, roads), and foster economic growth. Established in 1944, it also offers policy advice and aids in crises. Key criticisms include the imposition of stringent neoliberal structural adjustment programs (SAPs), disproportionate influence of wealthy nations in governance, and financing projects with severe environmental or social drawbacks.

Core Functions of the World Bank Group

- **Financial Assistance:** Provides low-interest or interest-free loans (IDA) and grants to low-income countries, and loans to middle-income countries (IBRD).
- **Infrastructure & Development Projects:** Finances large-scale projects like irrigation, energy, education, and health to boost economic development.
- **Technical Assistance & Policy Advice:** Offers expertise to help governments improve governance, economic policy, and sector-specific strategies.
- **Private Sector Development:** Through the International Finance Corporation (IFC) and MIGA, the bank supports private enterprise growth and manages investment risk in developing nations.

Key Criticisms and Challenges

- **Governance Structure:** Critics argue the institution is dominated by wealthy nations (particularly the U.S.), limiting the voice and decision-making power of developing nations.

- **Structural Adjustment Programs (SAPs):** Loans in the 1980s/90s were often tied to conditions like privatization and subsidy cuts, which were blamed for increasing poverty and harming social welfare.
- **Environmental & Social Impact:** The bank has been criticized for funding large "mega-projects" (e.g., dams) that cause significant environmental damage or displace local communities.
- **Focus on Growth Models:** Some argue its focus on a growth-based model overlooks long-term sustainability, including the financing of some fossil fuel projects, although it is increasingly pivoting toward climate-friendly investments.

Key Institution Involved:

The World Bank Group consists of five institutions:

1. **International Bank for Reconstruction and Development (IBRD):** Loans to middle-income governments.
2. **International Development Association (IDA):** It gives loans/grants to poorest countries. IDA was set up in 1959 with the proposal of World Bank & USA. IDA is affiliated to World Bank and has been set up to give loans on liberal terms to underdeveloped countries. It was set up in 1960. The main function of IDA is to provide development finance to developing and underdeveloped countries on concessional term and thereby help these countries in achieving higher level of per capita income. The main sector benefitted from this credit has been agriculture and irrigation.
3. **International Finance Corporation (IFC):** Private sector investment. This is also affiliated to World Bank. IFC is also open to all countries which are the members of World Bank.
4. **Multilateral Investment Guarantee Agency (MIGA):** Risk insurance. The Multilateral Investment Guarantee Agency (MIGA) is an international financial institution which offers political risk insurance and credit enhancement guarantees. Such guarantees help investors to protect foreign direct investment against political and non-commercial risks in developing countries. MIGA is a member of the World Bank Group and its head quartered in Washington, D.C. (U.S.A.). It was established in 1988 as an investment insurance facility to encourage confident investment in developing countries. MIGA's stated mission is "to promote foreign direct investment into developing countries to support economic growth, reduce poverty, and improve people's lives".
5. **International Centre for Settlement of Investment Disputes (ICSID):** Dispute arbitration. The International Centre for Settlement of Investment Disputes (ICSID) is an international arbitration institution which facilitates legal dispute resolution and conciliation between international investors. The ICSID is a member of the World Bank

Group, from which it receives funding, and is headquartered in Washington, D.C., in the United States. It was established in 1966 as an autonomous, multilateral specialized institution to encourage international flow of investment and mitigate non- commercial risks by a treaty drafted by the IBRD's directors and signed by the member countries.

Asian Development Bank (ADB): The Asian Development Bank started its operation in December, 1966 at Manila (Philippines). It is a regional institution which aims at fostering the economic development of the countries of Asia and Far East.

New Development Bank (NDB): New Development Bank (NDB) formerly referred to as the BRICS Development Bank, is a multilateral development bank established by the states (Brazil, Russia, India, China and South Africa). According to the Agreement on the NDB, "the Bank shall support public or private projects through loans, guarantees, equity participation and other financial instruments." Moreover, the NDB "shall cooperate with international organization and other financial entities, and provide technical assistance for projects to be supported by the Bank". NDB is currently headquartered in Shanghai, China. The first regional office of the NDB is in Johannesburg, South Africa.

CHAPTER 10

CO-OPERATIVE INSTITUTIONS: STRUCTURE AND FUNCTIONS

Cooperative Credit/Banking Structure in India: it consists of two types:

1. Agricultural credit society: these are further of two types:

A. Short- and medium-term society- it has three tier structures

(a) State Cooperative Bank

(b) Central Cooperative Bank – it is again divided into two parts:

- Primary Agricultural Cooperative Society (PACS)
- Grain Bank

B. Long-term Society- it has two tier structures

(a) Central Land Mortgage Bank

(b) Primary Land Development Bank

2. Non-agricultural Credit Society: these are also of two types:

A. Cooperative Bank – it has three tier structures

(a) State Cooperative Bank

(b) Central Cooperative Bank

(c) Primary Non-agricultural Credit Society- it is again divided into two parts:

- Employers cooperative Credit Society
- Urban Cooperative bank

B. Industrial Cooperative Units: it has two tier structures:

(a) State Industrial Cooperative Bank

(b) Central Industrial Banks

Agricultural Credit Society: This has a three-tier structure with state cooperative bank as the apex body followed by central cooperative bank and at the grass-root level there is primary agricultural credit society.

Primary Agricultural Credit Society: These constitute the largest number. They have a restricted area of operation, unlimited liabilities and permanent indivisible reserve fund. The important functions of such societies are given below:

- i. To associate with the programme of agricultural production.
- ii. To lend the adequate amount of credit to members for agriculture as well as for consumption.
- iii. Maximum credit limit (MCL) depends upon the capacity with the cooperative society.
- iv. To borrow from central cooperative bank.
- v. To mobilise local saving.
- vi. To distribute fertilizers, seeds, pesticides, and agricultural implements on own behalf or on the behalf of the government or some agent.
- vii. To supervise the use of loan.

- viii. To supply common consumer goods.
- ix. To collect and store the produce on behalf of the marketing societies and government.
- x. To associate with the programme of economic and social welfare in the village.

Loaning Policy: They extend short- and medium-term loans to its members. The short- term loan should be given on personal security and medium –term loan on statutory charge on land. The rate of interest depends on the loaning policy contemplated by the NABARD.

In the recent past, there were about 92,000 PACS in the country with a total credit of Rs. 3340 crores. However, there are certain problems in PACS and these are:

- Uneven and unplanned progress.
- Misuse of loan.
- Inadequate deposits due to poverty in rural areas.
- High over -dues.
- Inadequate credit.
- Large number of dormant and unviable societies.

In order to improve its functioning, there is a need for:

- Recapitalisation or liquidation of parasitic societies.
- Better credit recovery system.
- Training to members.
- Proper coordination and supervision.

Grain Bank: These are the special types of credit societies found in Andhra Pradesh, Maharashtra, Orissa, and Bihar. The objective is to provide kind loan to the members at the time of low production. The recovery is very simple. After one year, sawai is charged along with the original quantity of grains. In the recent past, there were about 10,000 grain banks in the country.

Central Cooperative Bank: This is the middle tier structure of the co-operative credit structure and act as a connecting link or intermediary between PACS and state cooperative bank and money market. The important functions are as under:

- i. To meet the credit requirement of PACS.
- ii. To undertake ordinary commercial banking.
- iii. Act as a balancing centre for PACS.
- iv. To undertake non-credit activity like supply of seed, raw material and consumer goods.
- v. To provide leadership to PACS.
- vi. Supervise and inspect and a safe place for the investment of sources of PACS.

Area of Operation: Area of operation is a district or a taluka or a town.

Loaning Policy: Loan is generally advanced to PACS for financing agricultural activity. Central cooperative bank generally vested with the board of director consisting of 12-15 members to supervise the PACS. Generally, one supervisor is after 20 PACS and one senior supervisor is after 80 supervisors. In the recent past, there were about 350 central cooperative banks in the country.

State Cooperative Bank: This is an apex body at the state level which works as a final link in the chain between the small and scattered PACS and central cooperative banks and apex national bank on the other hand. Followings are the functions of State Cooperative Bank.:

- i. Act as a banker's bank to CCB's in the district.
- ii. Co-ordinate their own policy with the national co-operative movement of the government.
- iii. Form as a connecting link between the co-operative credit society and the commercial banks and RBI.
- iv. Formulate and execute uniform credit policy.
- v. Act as a clearing house (to clear the bills) for CCB's, LDB, and PACS.

Area of Operation: The area of operation is generally a whole state. The sources of funds are the deposits from the public or CCB's or PACS and borrowing from RBI and SBI.

Loaning Policy: Agricultural credit is given top priority. The loans are provided to PACS through CCB's or directly.

Land Development Bank: Land development bank is the institution which provide long term finance to farmers and provide finance for the repayment of old debt, purchase of land, and for land improvement. The period of loan may be for 10-20 years. It has a two-tier structure with a central land mortgage bank as the apex body and primary land development bank. Its functions are as under:

- i. To grant loan to primary land development bank (PLDB).
- ii. To float debenture or share to raise the funds.
- iii. To establish branches of new PLDB.
- iv. To supervise and inspect PLDB.

Area of Operation: Area of operation of Central land development bank is a district or a region and that of PLDB is district or a group of talukas.

Loaning Policy: Central land development bank (CLDB) provides 70 % of their loan for productive purposes. The amount of loan that a member can get varies from 10,000 to 50,000 or even more. The loans are generally given on the mortgage of land.

The land development banks are not making considerable progress. The majority of the farmers may not even to know their existence. In 1983-84, there were only 1,170 LDB's in the country.

Weaknesses:

- High over dues
- Biased towards landlord.
- Inadequate funds.
- Formalities and delay in granting loan.
- Non-viable units.
- Lack of proper management.

CHAPTER 11

FINANCIAL RATIOS AND TIME VALUE OF MONEY

Financial Ratios: Financial Ratios are of following three types:

1. Credit Ratio
2. Income Ratio
3. Investment Ratio

1. Credit Ratio: These are of five types:

- i. Current ratio = Current assets / Current Liabilities.
- ii. This shows the current solvency of farm business. The farm will be more of the sound position if this ratio is more than one.
- iii. Intermediate ratio = (Current + Intermediate assets) / (Current + Intermediate Liabilities)
- iv. This reflects the soundness of the farm.
- v. Net Capital ratio = Total assets / Total Liabilities
- vi. Debt to equity ratio = Total liabilities / Owner equity
- vii. Equity to value ratio = Owner equity / Total assets

2. Income Ratio: These are of following three types:

- i. Operating ratio = Total operating expenses / Gross income
- ii. Lower the ratio, more efficient is the farm.
- iii. Fixed ratio = Total fixed expenses / Gross income
- iv. Gross ratio = Total expenses / Gross income.

Lower this ratio more will be the credit worthiness of firm.

3. Investment Ratio: These are of three types:

- i. Capital turnover ratio: Gross income / Average capital invested during the year Higher this ratio, higher will be the efficiency of the farm.
- ii. Rate of return / Capital ratio = Return to total capital / Average capital investment.
- iii. Rate of return to equity capital = Return to equity / Average net-worth of the firm

Predicting Future Prices: Determining future prices is a matter of judgment. To project future prices one should work out the trend in past and the same trend can also be assumed for the near future. Moreover, due consideration may also be given to the inflationary trend, in case it exists.

(I) Compounding / Future value of present money: It is the procedure to find the future value of a present sum, given the earning power (interest rate) of money and the frequency of compounding. The following formula is used to find out the future value of present sum:

$$A = P [1 + r]^t$$

Where, 'A' is the future value of the present sum invested in the project. 'r' is the interest rate in percentage and 'P' is the principle amount invested in the project and 't' is the number of years or project life in years.

For example, what would be the future value of Rs. 100 @ 10 % interest rate after four year?

Solution: First year = $100 + 10 = 110$

Second year = $110 @ 10 \% \text{ interest rate} = 121$

Third Year = $121 @ 10 \% \text{ interest rate} = 121 + 12.10 = 133.10$

Fourth Year = $133.10 @ 10 \% \text{ interest rate} = 133.10 + 13.31 = 146.41$

Or By Using the above formula, the future value of R100 @ 10% interest rate is calculated as

$$A = P [1 + r]^t = 100 [1 + 0.10]^4 = 100 \times 1.46.41 = 146.40$$

(II) Discounting / Present value of future money: It is the procedure where present value of future income is determined. The following formula is used to work out the present value of future money:

$$PV = P / (1 + i)^n$$

Where, PV is the present value or worth of future money, P is the money value (return) in future, i is the interest rate in percentage and n number of year s or the project life in year.

For Example: What would be the present value of Rs. 5000 to be received after 3 years @ 10 % interest rate?

Solution: Since to work out the present value of future money, we have the following formula:

$$PV = P / (1 + i)^n$$

By substituting the values, we get:

$$PV = 5000 / (1 + 0.10)^3 = 5000 / 1.331 = 3756.57$$

Numerical Example: Compute the Annual Percent Change in Agricultural Credit during the period 2000-01 to 2013-14 w.r.t. production credit for short term (ST) and Medium Term Credit (MT) from the following data. Also compute the Compound Agricultural Growth Rate from the given data for Short –tem (ST).

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Production Credit	16528	18787	19668	22640	27157	34930	38622	43294	40164
Medium –term Credit (MT)	4190	4737	3968	4235	4074	4474	3858	4964	5802

	2009-10	2010-11	2011-12	2012-13	2013-14
Production Credit	56946	64527	81829	102592	113574
Medium –term Credit (MT)	6551	5578	6134	8611	6389

Solution:

(i) Annual Percent Change is worked out by $= (Y_n - Y_1) / Y_1 \times 100 / n$

Production Credit for Short term (ST) :

Here, $Y_n = 113574$; $Y_1 = 16528$; $n = 14$ years

By substituting the values in the above formula, we get:

$$\begin{aligned}\text{Annual Percent Change} &= [113574 - 16528] / 16528 \times [100 / 14] \\ &= [97046 / 16528] \times [100 / 14] = 5.87 \times [100 / 14] \\ &= \mathbf{41.92 \%}\end{aligned}$$

Production Credit for Medium –term (MT) Loan:

Here, $Y_n = 6389$; $Y_1 = 4190$; $n = 14$ years

By substituting the values in the above formula, we get:

$$\begin{aligned}\text{Annual Percent Change} &= [6389 - 4190] / 4190 \times [100 / 14] \\ &= [2199 / 4190] \times [100 / 14] = 0.52 \times [100 / 14] \\ &= \mathbf{3.71\%}\end{aligned}$$

(ii) **Compound Agricultural Growth Rate (CAGR):**

$$A = P [1 + r / 100]^t$$

$$\text{or } A / P = [1 + r / 100]^t$$

$$\text{or } [1 + r / 100] = [A / P]^{1/t}$$

$$\text{or } r / 100 = \{ [A / P]^{1/t} - 1 \}$$

$$\text{or } r (\text{Growth rate}) = \{ [A / P]^{1/t} - 1 \} \times 100$$

By substituting the values, we get:

$$\begin{aligned}r &= \{ [115374 / 16528]^{1/14} - 1 \} \times 100 \\ &= \{ [6.8716]^{0.076} - 1 \} \times 100 = [1.1598 - 1] \times 100 = [0.1598] \times 100 \\ r &= \mathbf{15.98\%}\end{aligned}$$

Custom Hiring or Purchase of a machine:

Numerical Example: A farmer has two alternatives for threshing wheat. First either to purchase a new thresher costing Rs. 5,000 and a electric motor costing Rs. 3,000. The installation charges (means transportation, belt fitting etc.) are Rs. 500 and sale tax @ 7 %. The selavage value of the machine and the motor is Rs. 1,000 after 10 years of its service. The other costs are as follows:

- a. Casual labor six people per day @ Rs. 25 per man day (a day of 8 hours).
- b. One operator/ supervisor @ Rs.40/ day.
- c. Electricity consumption is 8 unit / hours and the charges are Rs. 0.50/ unit.
- d. The annual repair and maintenance charges are Rs. 500.
- e. The machine has a capacity to thresh 4 quintals of wheat / hour

OR

Second, to go for custom hiring @ 7kg of wheat / quintal threshing of wheat is (Price of wheat is Rs.3/ kg).

If a farmer produces 165 quintals of wheat per season help him in selecting a profitable alternative.

Solution: Given that Initial Costs:

Cost price of the thresher = Rs. 5,000

Cost price of motor = Rs. 3,000

Sale tax @7% i.e. Sale tax = $[8,000 \times 7] / 100 = \text{Rs. } 560$

Establishment installation cost = Rs. 500

Total initial cost = $5,000 + 3,000 + 560 + 500 = \text{Rs. } 9,060$

Junk value = Rs. 1,000; Life = 10 years

Annual Fixed Cost of Machine:

Depreciation = $[\text{Initial value} - \text{Salvage value}] / \text{Life}$

By substituting the values, we get:

Depreciation = $[9,060 - 1,000] / 10 = 8060 / 10 = \text{Rs. } 806$

Depreciation @10% = $806 + 100 = \text{Rs. } 906$

Annual maintenance = Rs. 500

Total Annual Fixed Cost = $806 + 906 + 500 = \text{Rs. } 2212$

Variable Cost Per Hour:

Casual labor 6 person @Rs. 25 /day per man day = Rs. 150 /day = $150 / 8 = 18.75$ /hour

Operating charges = Rs.40 /day = $40 / 8 = \text{Rs. } 5.00$ /hour

Electricity 8 unit per hour @ Rs. 0.50per unit = Rs.4.00

Total Variable Cost = $18.75 + 5.00 + 4.00 = \text{Rs. } 27.75$

Total Variable Cost per quintal = $27.75 / 4 = \text{Rs. } 6.94$ /quintal = Rs. 7.00 / quintal (say) is the cost of threshing.

Custom Hiring @ 7kg per quintal @ Rs. 3.00/ quintal

Per quintal custom charges = Rs. 21.00

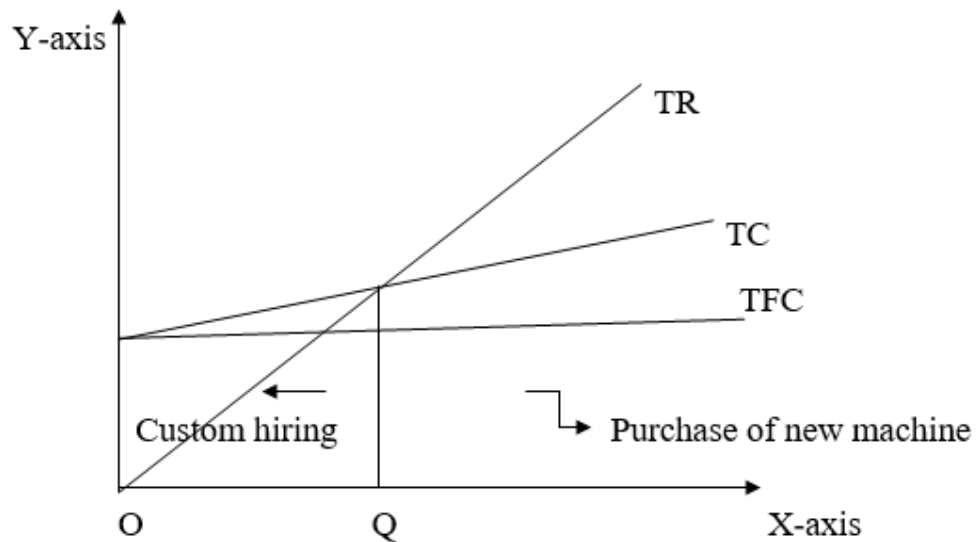
Break-even point or minimum quantity of wheat to be threshed to justify the purchasing of threshing unit =

Annual Fixed Cost

[Custom hiring charges – Variable cost /quintal of wheat]

By substituting the above calculated values, we get:

$= 2212 / [21.00 - 7.00] = 2212 / 14.00 = 158$ quintal



Purchase of Old vs. New machine:

1. New machine cost = Rs.10,000
2. Life = 10 Years
3. Old machine cost =Rs.6,000
4. Useful life =5 Years
5. Rate of interest = 10 %

Solution: Old machine cost Rs.6, 000 and replace after 5 years with similar model. The capital requirement is $6,000 + 6,000 / (1.10)^5 = 6,000 + 3,725 = \text{Rs.} 9, 725$. Thus, we should go for old machine.

If RI = 6%, Then Capital Requirement = $6,000 + 6,000 / (1.06) = 6,000 + 4483 = \text{Rs.} 10,483$.

In this case, the decision is in favor of new machine.

CHAPTER 12

PROJECT APPRAISAL AND EVALUATION

Project Evaluation Techniques: A project under consideration can either accepted or rejected once project cost and benefits are identified, priced and valued. Following discounted/undiscounted measures are applied to evaluate the agricultural project.

1. Undiscounted Measures: These are the methods in which the data are used as these are some with some simple manipulations, without making explicit allowances for taking into account the time element involved rigorously.

- i. Ranking by inspection
- ii. Proceeds per unit of output
- iii. Payback period (PBP)

2. Discounted Measures: These are the methods which rigorously take into account the time element associated with the cost and return streams.

- i. Net Present Value (NPV)
- ii. Benefit Cost Ratio (BCR)
- iii. Internal Rate of Return (IRR)
- iv. Profitability Index

There is no single best technique for estimating the project worth, some are better than other and some are especially deficient. In fact, these financial and economic measures of the project investment are only the tools of decision making. Undiscounted measures like PBP, ranking by inspection, proceeds per unit of outlay, average annual proceeds per unit of outlay and average income on book value of the investment may also be used in assessing the project worth.

1. Undiscounted Measures:

- i. Ranking by Inspection:** It is based on the size of costs and length of the cash-flow stream. Suppose if the two projects are with the same investment and same net value of production, but with difference in the length of the period, then the project with longer duration is preferred to the one with shorter time period. This leads to bias in the choice obviously due to the absence of more elaborate and appropriate analysis.
- ii. Proceeds per Rupee of Outlay:** This is worked out by dividing the total returns with the total amount of investment, and a given project is ranked based on the highest magnitude of the parameter.
- iii. Payback Period (PBP):** The time period which gives the total (present value) flow of return from the investment that is equal to the total cost incurred compounded to the present.

$$\text{Pay Back Period} = \frac{\text{Total initial investment}}{\text{Average NPV flow per annum}}$$

Steps in the computation of PBP:

- i. Compute year wise total cost including initial investment.
- ii. Workout net returns by subtracting total costs from gross benefits (Gross Returns – Total Cost).
- iii. Compute cumulative net returns over the years and identify the year where cumulative net returns turn zero or become just positive.

Example: Let us suppose

		Cumulative Total
NPV1	-400	-400
NPV2	-600	-1000
NPV3	+800	-200
NPV4	+900	+700
Therefore, + 700 is the payback period		

Decision Rule: If there are multiple projects, than chose the one having the shortest Payback period over the others one.

Example: Compute the PBP form the data for following horticultural project.

Year	Initial Cost (Rs.)	Variable Cost (Rs.)	Total Cost (Rs.)	Gross Return (Rs.)	Net Return (Rs.)	Cumulative Net Returns (Rs.)
0	26,000	-	26,000	-	-26,000	-26,000
1		8,000,	8,000,	-	-8,000	-34,000
2		5,000	5,000	-	-5,000	-39000
3		5,000	5,000	24,000	19,000	-20,000
4		5,000	5,000	25,000	20,000	0*
5		5,000	5,000	30,000	25,000	25,000
6		5,000	5,000	31,000	26,000	51,000
7		5,000	5,000	35,000	30,000	81,000
8		7,000	7,000	40,000	33,000	1,14,000
9		8,000	8,000	40,000	32,000	1,46,000
10		9,000	9,000	40,000	31,000	1,77,000

Interpretation: Since Incremental benefits are first equal to the capital investment in 4th year. Therefore, the PBP is 4 years.

1. Discounted Measures:

i. Net Present Value (NPV):

NPV = Discounted benefits – Discounted costs

$$\text{Present value of Benefit } (B_t) = \sum_{t=1}^n \frac{B_t}{(1+i)^t}$$

$$\text{Present value of Cost } (C_t) = \sum_{t=1}^n \frac{C_t}{(1+i)^t}$$

$$NPV = \sum_{t=1}^n \frac{B_t}{(1+i)^t} - \sum_{t=1}^n \frac{C_t}{(1+i)^t}$$

Or

$$NPV = \sum_{t=1}^n \frac{(B_t - C_t)}{(1+i)^t}$$

Where, NPV is the net present value; B_t is the year wise benefits; C_t is the year wise costs; t is the number of years; and r is the discount rate.

Decision making rule: If $NPV > 0$; accept investment, (b) If $NPV < 0$; reject investment, (C) If $NPV = 0$; be indifferent.

For single project, the NPV should be positive and for multiple projects rank the project in descending order according to the values of NPV and implement accordingly depending upon the availability of funds.

ii. Benefit Cost Ratio (BCR):

$$\text{B-C ratio} = \frac{\sum_{t=1}^n \frac{B_t}{(1+i)^t}}{\sum_{t=1}^n \frac{C_t}{(1+i)^t}}$$

Project is viable if this ratio is > 1 . If it is 1.5, It means per rupee invested in the project is given Re1, 50 paise.

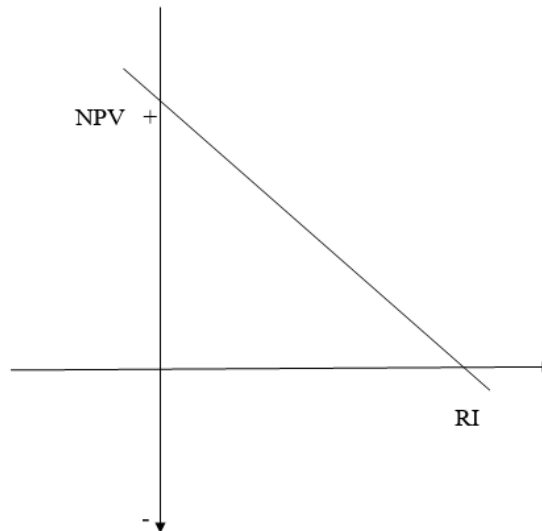
Let us suppose there are two projects. The BCR of 1st project is 1.4 and the BCR of 2nd project is 1.6. In this case second project is preferred because BCR is more in this case.

iii. Internal rate of return (IRR):

$$IRR = NPV = \sum_{t=1}^n \frac{B_t}{(1+i)^t} - \sum_{t=1}^n \frac{C_t}{(1+i)^t} = 0$$

Where, 'i' is the desired rate of return.

In other words, IRR is that at which the NPV of a project is zero. In more concrete terms, at this rate, the present value of returns on investment and the present value of cost incurred are equal with the result that the NPV become zero. It shows the marginal efficiency of capital or returns generating capacity of investment. Higher the interest rate more will be the viability of the project.



iv. Profitability Index: It is defined as the ratio of net present value of the cash flows to the initial capital investment/ expenditure. Here, an attempt is made to relate the NPV of the cash flows of the project to the total capital requirement for a project through “Profitability Index”.

Numerical Example: Compute the Net Present Value (NPV) and Benefit Cost Ratio (BCR) for the data given below (assume $r = 0.8$)

Year	Total Cost in (Rs.) (C_t)	Total Benefit in (Rs.) (B_t)	DF @8% [$1 / (1+r)^t$]	Discounted Costs in Rs. $C_t \times [1/(1+r)^t]$	Discounted Benefits in Rs. $B_t \times [1/(1+r)^t]$
1	1404	2,000	0.9259	1299.96	1851.80
2	500	3,000	0.8573	428.65	2571.90
3	400	4,000	0.7938	317.52	3175.20
4	400	3,000	0.7350	294.00	2205.00
5	300	2,300	0.6806	204.18	1565.38
				$\sum_{t=1}^n \frac{C_t}{(1+i)^t}$ = 2544.31	$\sum_{t=1}^n \frac{B_t}{(1+i)^t}$ = 11369.28

Since, Net Present Value,

$$NPV = \sum_{t=1}^n \frac{B_t}{(1+i)^t} - \sum_{t=1}^n \frac{C_t}{(1+i)^t}$$

By substituting the values from the table, we get:

$$NPV = 11369.28 - 2544.31 = \text{Rs. } 8824.97$$

Since Benefit Cost Ratio (BCR) is calculated by the formula

$$\text{B-C ratio} = \frac{\sum_{t=1}^n \frac{B_t}{(1+i)^t}}{\sum_{t=1}^n \frac{C_t}{(1+i)^t}}$$

By substituting the values from the table, we have:

$$BCR = 11369.28 / 2544.31 = 4.47$$

Numerical Example: The farmer has purchased a jersey cow for Rs. 5,000. The annual cost of production is Rs. 1,000. The annual benefit scheme from the sale of milk is Rs.4, 000. Workout the NPV, BCR, PBP and IRR for this project and interpret the results. The RI in the bank is 10 %.

Year s	Initial Cost (Rs.)	Total cost of Producti on (Ct)	Assume DF @ 10% Ct / (1 + r)t	Benefit (Bt)	Assume DF@10% Bt / (1 + r)t	Rt = (Bt – Ct)	NPV = Rt / (1+ r)t	PBP	BCR = Bt / (1 + r)t Ct / (1 + r)t
0	5,000	5,000	5,000	-	-	- 5000	- 5,000	- 5000	
1		1,000	909.09	4,000	3636.36	3,000	2,727	-2273	
2		1,000	826.45	4,000	3305.78	3,000	2,479	+206*	
3		1,000	751.88	4,000	3007.51	3,000	2,254		
4		1,000	684.93	4,000	2739.72	3,000	2,049		
5		1,000	621.12	4,000	2484.47	3,000	1,863		
6		1,000	564.97	4,000	2259.89	3,000	1,693		
7		1,000	512.82	4,000	2051.28	3,000	1,539		
8		1,000	423.73	4,000	1869.16	3,000	1,400		
			$\sum Ct / (1 + r)t$ = 10294.99		$\sum Bt / (1 + r)t$ = 21354.17		NPV = 11,004		BCR = 2.07

The project is very-very viable because the benefit cost ratio (BCR) is very high.

CHAPTER 13

RISK AND UNCERTAINTY IN AGRICULTURE IN RELATION TO CREDIT

Risk and Uncertainty in Agriculture: There are different types of risk and uncertainty in relation to agriculture. Though risk and uncertainty are taken as synonymous, but academicians regard risk, the phenomenon which can be predicted or certain probability can be made for the phenomenon whereas; uncertainty is regarded as unpredictable and beyond the control of human being. There are five types of risk and uncertainty in agriculture.

Production Uncertainty: Production uncertainty in agriculture is caused by various factors like weather, crop diseases, insect-pests and other biological factors. Uncertainty is more in case of un irrigated farming due to fluctuation in rainfall. Among crops/fruits, orchards and vegetables are more prone to yield variation and hence more risk is involved in their production. Similarly in livestock production, diseases, unfavorable weather and fodder shortage etc may reduce the yield. Non availability of fertilizers and chemicals in time also reduce the yield potential of crops. Thus, natural hazards and other biological factors play a major role in production risk.

Price Uncertainty: There is also great risk in price fluctuation in case of farm products. Low level of production is associated with higher prices and vice-versa. Many forces cause price fluctuation. For example, National prosperity (GNP), production of other farmers, change in consumer taste and government policies. The price changes from day to day, month to month and from year to year. During harvesting seasons, the prices of farm commodity may low and later on increases substantially. Likewise, the glut of farm commodity in a market sometimes lowers the prices significantly and converse is also true.

Casualty Risk: Death of a livestock, loss of machinery, losses due to fires, floods, windstorm, hail storm, landslides also are the part of farm risk.

Technological Uncertainty: Continuous development and adoption of new techniques and methods of production, new crop variety, new brand of fertilizer/ chemicals, feed, model of machine etc are continuously being adopted by the research workers and wise entrepreneurs and industrialists. Therefore, the techniques of production, the machine or the machinery which is economically viable today may become obsolete in the wake of efficient method of production and new model of machine. Another type of technological risk is not adopting the new technology as a result of which a particular farmer may lack behind in efficient production and may lose income.

Uncertainty Caused by Action of Others: With whom the farmer does business, the action of other person may also produce some degree of risk in farming such as labor displacement by farming, borrowing and not knowing the term and conditions, high interest or intentional cheating by some money lenders. Other actions like taking land back by the land-lord from the

tenants, taking –off the land by the government for highways and for other public purposes. Some legislation passed by the government for example strict control of pollution, banning of pesticides, cultivation of certain crops like opium, cannabis. The attraction with other people for example, lawsuit, dispute or litigation with other farmers and relatives. Accidents caused by automobiles or self are the various types of risk included in this category.

Personal Uncertainty: Injury and death in the family, prolonged illness and health expenses etc. are the part of this type of risk.

Risk Management Strategies in Agriculture: There are three main strategies that reduce risk and these are:

- Financial Strategy
- Marketing Strategy
- Production Strategy

Financial Strategy:

- Maintaining reserve cash or saving on the farm.
- Maintaining an equity or net-worth of the farm.
- Reduce borrowing capacity due to good moral character and reputation.
- To follow rational method while calculating the return.
- To account for the possible decrease in income.
- Adequate cash flow.

These are some of the financial strategies which can minimize the risk.

Marketing Strategy: Under this:

Hedging: To establish a price of farm product with the buyers at which they intend to buy or sell on some future date. Hedging eliminates from the possibility to gain from increase in the market prices but in other hand protect the farmers from very low, or possible slump (downfall) in the market prices.

Forward Contract: Forward contract is also other methods of reducing risk or transferring the risk to another person. A farmer may enter with agreements with the contractor to sell standing crop orchard or farm stock. Though, it is less flexible than hedging but is more beneficial to the farmers where the risk of crop failure or natural calamity is higher. Proper specification and other requirement should be thoroughly studied and understood by both the farmers and the contractor to avoid any dispute in the future.

Spreading Sale: Spreading sale can also be used for both farm input and farm products. Long-term purchase agreement for feed, supply of fertilizers etc can reduce the risk due to untimely availability of input. Similarly supply of milk, vegetables, mushrooms and other perishable commodity at for hand agreed prices also reduce the quantum of risk.

Production Strategies:

1. Diversification: The diversification of agriculture is thought of as strategy to minimize risk associated with crop failure where the immediate goal is not to make profit but to stabilize income for survival.
2. Flexibility in Production: Flexibility can be by selecting the short-duration crop which are less risky than the long-duration crops like orchards.
3. Cost Flexibility: Cost flexibility can be provided by keeping the fixed cost very- very low.
4. Production flexibility should be there in the farm.
5. Availability to reduce living expenses.
6. Producing a stable and dependable income by following a sound farm management practice.

CHAPTER 14

MEANING, IMPORTANCE AND PRINCIPLE OF COOPERATION

Cooperation in Agriculture: Cooperation means living, thinking and working together. In its technical sense, it denotes a special method of doing business. However, it can be defined by many scientists.

According to Calvert, cooperation is a form of organization where in person voluntarily associate together as human being on a basis of equality for the promotion of their common economic interest.

According to Herrick, Cooperation is an act of person voluntarily united for utilizing reciprocally their own forces, resources, or both under their common management to their common benefit or loss.

According to Indian Cooperative Society Act, 1904, cooperation as a combination of person which has its objective to promote its economic interest of its member in-accordance with the cooperative principles.

The basic factor to which the movement owes its origin was poverty and economic distress.

Basic Principles of Cooperation: There are seven basic principles of cooperation and these are:

1. Universality.
2. Democratic control.
3. Self help and mutual help.
4. Unity or political or religious neutrality.
5. Principle of liberty.
6. Limited interest on capital and patronage rebate.
7. Principle of publicity.

Universality: The membership of cooperative society is open to all those who are convince of its benefit and who are prepared to share the duties and responsibility in such a membership. Thus, the universal character of membership can and must be obtained provided the member fulfills all the qualification and always act in the interest of the society and is co-member. It thus employs that the right of entrance is universal to all.

Democratic Control: This principle employs that the affairs of the society must be administered by the member themselves. in this respect, all the members are treated equal.

Self Help and Mutual Help: In a cooperative organization, the members work for mutual benefit. It is a organization of people who are financially weak and who cannot enjoy some privileges and advantage which the richer people can. Thus, the benefit of cooperation arises from collective efforts. It is available to all members and therefore, provides strength to economically weak people.

Principle of Publicity: The cooperatives should make sincere efforts to tell their members about the society and all the dealings of the society should be made public.

Characteristics of Cooperation:

- a. It is a association of human beings.
- b. It is a under taking.
- c. It is a voluntary organization.
- d. It is democratic organization.
- e. Its key note is service and not the profit.
- f. It is based on equality.
- g. It is based on proportionality.
- h. It is a socio-economic improvement.

Benefit of Cooperation: There are three types of benefit in cooperation; economic, social and educational benefits.

(1) Economic Benefits: Following are the list of economic advantages of cooperative organization.

- a. The substitution of profit incentive in the business by services to humanity.
- b. The more equitable distribution of wealth.
- c. The breaking up of monopoly and interest which breaks at the expense of the consumer.
- d. The increase of work man purchasing power and real wages by giving him more and better goods for his money.
- e. The reduction in the cost of distribution system through elimination of unnecessary middle man and fraudulent practices.
- f. The more accuations correlation of demand and supply as a result of greater certainty and regularly in consumer market.
- g. Stabilization of employment which will result from the regularity of demand and absence of speculation.

(2) Social Benefits: The social purpose of cooperation is more diverse than the economic purpose. This is so because objective of cooperative is based more on social organization of the people to benefit each other and the community in general. Therefore, the social benefits are:

- a. Cooperative tends to lessen the tension between the consumer, labor and capital etc.
- b. All people are taught to work together as a common group.
- c. It also educates the people about the common problems and how these could be solved by working together.
- d. It develops a self confidence among the member to embark upon the business.

(3) Educational Benefits: The chief educational effect is a consequence of experience gained in the practical work of cooperation. Every attempt on the part of small people to solve

their problem teaches them basic economic truth. The effect on whole country of cooperative in which people learn to work together freely and lonely to work furthering their own business cannot fail to be grade.

Maxims of Cooperation: The founder of Irish cooperative movement Sir Horace Plunkett sums up cooperation in three famous maxims.

- a. **Better Farming:** It means helping the farmer to realize a better production in the farm business through adoption of requisite technology. The farmer's objective of achieving higher production and productivity will be realized only when the resources are available in adequate quantities and at right time. For this necessary capital for the farmer also should be provided by institutional agencies at right time. A well-developed cooperative network helps in meeting this particular requirement of the farmers.
- b. **Better Business:** Farmers should get a better deal in buying the inputs as well as disposing the products. The efforts of the farmer will be fruitful only when an efficient marketing system is accessible to him. Farmers as a group enjoy better bargaining power when compared individually. Hence cooperative should provide inputs needed by the farmers at reasonable rates and arrange for the disposal of produce at favorable prices.
- c. **Better Living:** This implies that the cooperative societies should supply consumer goods to the consumers at reasonable rates. This helps the consumers to pay less than what they pay in open market. A good and successful cooperative help in preventing marketing middlemen (as minimum as possible) especially private traders from taking undue advantage.

Thus, cooperatives help in getting favorable prices to producers for their products and providing the same products for consumers at reasonable prices.

CHAPTER 15

HISTORY OF COOPERATIVE MOVEMENT

The origin and history of cooperative movement in India can be dealt under two eras:

1. Pre- Independence Era
2. Post- Independence Era

1. Pre-Independence Era: The cooperative movement in India during pre-independence era can be divided into five phases viz.,

- a. Early Stage of Development (1904-1911)
- b. Period of Hurried Expansion (1912-1918)
- c. Period of unplanned Expansion (1918-1928)
- d. Period of consolidation and Re-organization (1929-1939)
- e. Period of Recovery (1940-1948)

2. Post – Independence Era:

Period of Planned Development (1951 onwards)

(1) Pre-Independence Era:

- a. **Early Stage of Development (1904-1911):** The cooperative credit society act was passed in 25th March, 1904. Under this act, Primary Cooperative Credit Society can be formed by ten members living in the same village and wants to help each other. These societies were given authority to raise funds and grant loan to its members. The account of every society was to be audited by the registrar of the cooperative.
- b. **Period of Hurried Expansion (1912-1918):** The government realizes the deficiencies in the act of 1904 and passes a comprehensive cooperative society act of 1912. According to this act, any society may be registered which have its objectives. The promotion of economic interest of its members in accordance with the cooperative principle. After 1912, there was a rapid growth not only in the number of cooperative credit society but, also non-agricultural credit society and in their membership. However, the development was not uniform in all provinces or state. A large number of non-agricultural credit societies for the supply of milk and sale of produce were developed.
- c. **Period of Un-planned Expansion (1919-1928):** On the passing of the Government of India Act of 1919, cooperation became a provincial subject and was administered by the provincial government. The act of 1919 gave great stimulus to the movement and the success was measured by its quantity rather than its quality. Therefore, the period was defined as unplanned expansion. During this phase, the birth of Land Mortgage Banks

(LMBs) took place first in Punjab (1924) and subsequently in Madras (1925) and in Bombay (1926).

- d. **Period of Consolidation and Reorganization (1929-1939):** The Royal Commission on Agriculture (1927) and the Central and Provincial banking inquiry Committee (1929), indirectly made recommendation for the improvement of cooperative society. Since then, efforts were directed more to the recapitalization, reconstruction and reorganization of existing societies than to further rapid expansion. Attention was paid to the consolidation of the existing society by developing their resources and making them more competitive. Registration of economically unviable society was cancelled. Because of these measures, the number of societies showed a declining trend.
- e. **Period of Recovery (1940-1948):** The abnormal condition created by the world War-II lead to some far-reaching development in cooperative movement. Between 1938-1939 and 1945-46, the increase in number of societies, number of members and working capital taken place. The growth of consumer's store and marketing societies was stimulated by the war. Many new types of Producer's society like diver society, milk supply and motor transport society, fruit grower and cane growers association were formed during the war period. The Agricultural Finance sub-committee under the chairmanship of Prof. D.R. Gadgil was constituted in 1944 recommended that
 - Adoption of limited liability for cooperative.
 - Assessing the credit worthiness of a farmer based on his repaying capacity.
 - Subsidizing the cost of administration of small cooperative societies.
 - Linking credit with marketing.

(Cooperative Movement started in 1844 Rochdale in England. Cooperative falls under the ministry of Agriculture and Cooperation. At present, 11 members are required to form a cooperative society.)

(2) Post-Independence Era:

Period of Planned Development: The major development in the cooperative field since independence was the appointment of the committee of direction (Rural Credit Survey Committee) by RBI which submitted its report in 1954. The committee concluded that cooperation has failed but cooperation must succeed. The reason for cooperative failure of cooperative credit structure were functional, structural and administrative defects, dearth of suitable person to conduct the affairs of the society, lack of training and lack of storage and other economical requirement. Then committee recommended an integrated scheme of rural credit involving three principles namely,

- State participation at different level.

- Coordination of credit with other economic activities especially processing and marketing.
- Administration through trained and efficient person responsible to the need of rural population.

The entire scheme was based on the view that cooperative organization has little chance of success unless it tackles the problems on comprehensive scale in integration. This necessarily employed that cooperative structure must brought about an increase in cooperative credit for production along with cooperative marketing.

In first five-year plan (1951-1956), cooperation was recognized as the instrument of planned economic action in democracy. The cooperative agencies were recognized as better suited than the state for ensuring proper utilization of credit for productive purposes.

Second five-year plan (1956-1961) was drawn up more or less on the basis of accepted recommendation of All India Rural Credit Survey Committee particularly in respect of credit, marketing and processing. Since then the cooperative movement is a development under five-year plan. Different committees were established to recommend cooperative policy.

National Development Council Resolution, 1959 emphasized the basic objective of cooperative policy as one of rebreeding the rural economy and in particularly in raising agricultural production. Other committees established were:

- Committee on Cooperative Credit, 1960
- Committee on Cooperative Administration, 1963
- Committee on Cooperative Marketing, 1964
- All India Rural Credit Review Committee, 1969.

In the Seventh Five-Year Plan (1985-1990), the cooperative movement was strengthened comparatively in weaker state especially in N-E region. Seventh Five-Year Plan took step to establish consumer cooperative store in rural and urban areas in the field of Public Distribution System (PDS). It was also emphasized during the plan to promote professional management and strengthened effective training facilities for cooperative unit.

Eighth Five-Year Plan (1992-1997) emphasized replication of Anand Pattern of cooperatives for milk and strengthening of processing cooperative.

During Ninth Five-Year Plan (1997-2002) measures have been initiated to revitalize the cooperatives to make them vibrant democratic institutions with economic viability and active involvement of members by the Government. These include the framing of national policy on cooperatives and finalization of a new Multi State Cooperative Societies Bill to replace the existing Multi State Cooperative Societies Act, 1984. During this plan, amendment to the National Cooperative Development Corporation (NCDC) Act was proposed. The main features of the proposed amendments are:

- Expansion of NCDC's scope to include animal husbandry, forestry, horticulture, pisciculture, etc.
- Extension of NCDC's coverage to livestock, industrial goods, handicrafts and the services sector and
- Provision of loan directly to cooperative societies on appropriate security to be furnished by the borrower.

In Tenth Five-Year Plan (2002-2007), the following initiatives were taken with respect to cooperatives and these are:

- To make a special study of the role of cooperatives and challenges to be met in the wake of globalization of Indian economy and also the issues relating to competitive efficiency of cooperatives, constraints and remedial measures for improving the commercial and economic viability of the cooperatives with regard to modernization, diversification technological up gradation, quality improvement, marketability and export promotion etc.
- To study the regional disparity in the development of cooperatives, identify the factors inhibiting the development of cooperatives in the states and suggest suitable programs for encouraging cooperatives in cooperatively underdeveloped states.
- To suggest measures for human resource development in the cooperatives.
- To review the role and functioning of consumer cooperatives and suggest suitable measures for their improvement.

CHAPTER 16

COOPERATIVE CREDIT STRUCTURE

Cooperative Banking System: Cooperative has two types of banking system

1. Cooperative credit for short-term and medium-term loan.
2. Cooperative Credit for long-term loan

(1) Cooperative Credit for Short –term and Medium-term Loan: It has a three-tier structure.

- At state level, State Cooperative Bank
- At district level, Central Cooperative Bank
- At village level, Primary agricultural Cooperative Credit Society.

(2) Cooperative Credit for Long –term Loan: It has a two-tier structure.

- At state or district level, Land Development Bank (mortgage bank)
- Primary Land Development Bank.

Sources of Credit: Credit comes from two sources viz., institutional sources and non-institutional sources.

Institutional Sources:

- a. Cooperative
- b. Government loan
- c. Commercial Banks

Non-institutional Sources:

- a. Money lender
- b. land-lord
- c. Relatives
- d. Friends
- e. Commission Agent/ Traders

Share of cooperative in the total lending in agriculture was highest one in 1951, 93 per cent from non-institutional sources and just 7 per cent from institutional sources. But, with the nationalization of commercial banks, 60-65% of agricultural loans were come from institutional agencies and only 30-35% was come from non-institutional agencies.

Primary Agricultural Credit Societies (PACS):

Primary Agricultural Cooperative Societies functions at the base of cooperative credit system and constitute the major retail outlet of short- and medium-term credit to the rural sector. The recent trends to the large-size service society have included the additional function of procurement and sale of production requisites such as seed, fertilizers, plant protection material and equipment, storage and marketing of farm product and occasionally consumer meet. Some

societies have modified their by-laws to allow them to purchase machinery such as tractor and pumping sets for the use of their members.

Additional Information:

By-laws: Rule and regulation by which the particular society function.

[Short-term loans are advanced for 3 months to 15 months. Medium –term loans are advanced for 15 months to up to Five-Years. Long –term loans are advanced for more than Five-Years or at the maximum of 20 years. Short –term loans are also known as seasonal or crop loan.]

Objectives of PACS:

- i. Creation of funds to be lending to members for useful and necessary purposes.
- ii. The purchase and sale of agricultural implements, seeds and manure.
- iii. The provision of educational assistance to its member.
- iv. To adopt other measure desired to encouraged in the membership spirit and practice of thrift, self help and mutual aid.
- v. To accept saving deposit and other suitable facilities to encourage saving.
- vi. To make arrangement of storage and marketing of agricultural produce of its members.
- vii. To undertake measure to spread the knowledge of cooperative principles and practices.

Membership: Membership in PACS is open to all people belonging to a village. The membership is granted across all caste and creeds. However, certain normal conditions for membership are laid down such as:

- Perspective member be a normal adult.
- He should not have declared bankruptcy so that he has full responsibility for the failure and losses of the society.
- He should bear a good moral character.
- He resides and operates in the general area of the society.
- He should not be a member of any other primary credit or service society.

Sources of Funds: The funds of PACS comes from share capital and deposits of its members; finance through central cooperative bank; and profit from the operation of loan able funds to other business.

Types of Loans:

- i. Short-term loan
- ii. Medium –term loan
- iii. Loan for consumption or social purposes
- iv. Loans for harvesting and marketing.

While extending the loan, personal promise and pledge of other member is taken as security. The interest rate charge on the loan taken is 6%.

Management and Administration: Management of the affairs of the society is strictly based on democratic principle. A society has a general house which elects from his members a president, secretary and a treasurer. The accountant is appointed by the Government.

Central Cooperative Bank:

This frame at the middle level in the three-tier cooperative structure. Under the Comprehensive Cooperative Society Act of 1912, any ten primary societies operating in a close proximity to each other could organize a central bank.

Objectives:

- i. To carry a banking and credit business.
- ii. To provide credit facilities to members society on a convenient and easy term.
- iii. To encourage saving among members by accepting their deposits.
- iv. To make arrangement for the supervision and inspection of affiliated cooperative societies.
- v. Undertake measures, conducive to the spread of cooperative movement.

Membership: There is some variation between states on the subject of membership in the central cooperative bank. However, most states allow only two types of members:

- Cooperative society registered within the area of operation of bank.
- Individual meet certain minimum qualification.

Cooperative society operating in the service area of the bank may be denied membership on the ground of weak financial position and improper management. The societies however, have right to appeal to the state registrar of the cooperative for its membership. The trend of providing membership to the individual is now being discouraged and they are ask to join primary society. Most central banks charged a small admissible fee and require each member to purchase at least one share of stock. However, a limit is placed on the ownership of share so that no more than one fourth of the authorized share can be held by any one member. This is done to avoid influence of a particular member on the function of the bank.

Sources of Funds:

- i. Central bank can issue share to its member society. Government too contributes to the share capital.
- ii. Central bank can borrow funds from cooperative bank.
- iii. It accepts time and saving deposits from members and non-members.
- iv. Central bank can accept direct grant of subsidies from state Government.
- v. Central bank can loan out the retain profit from the operation of previous year.

Types of Loan: Central bank provide both short and medium –term loan to their members whether they are credit societies, primary societies, marketing societies, consumer or industrial societies.

Condition of Loan: Most of the central bank advances what they call clean loan which means no security needs to be pledged by borrower up to Rs, 5,000. Other loan require borrower to pledge some sort of security which is generally based on the amount of share capital the member society hold in the bank. However, it is required that no society get loan more than 15 times of its share in the bank. This amount should be such as not to exceed the maximum Credit Limit set for that society.

Interest Rate: It is generally based on the cost of money to the central bank. The cost is calculated on the basis of weighted average and the bank is allowed 1% interest rate to cover overhead cost.

Additional Information:

{Maximum Credit Limit (MCL) = Total Income – [Consumption or working capital + payments of other loan]}

If one share is of Rs.100 and there are 11 members in a company then the share capital is $11 \times 100 = \text{Rs}1, 100$. For example, if there are three members in a company who hold and buy shares of the company and the value of one share amounting to Rs.100. Let us suppose first member is having three shares of the company; second member is having five shares of the company; and the third member is having four shares of the company. Then, the total amount of share capital in the company is $3 \times 100 + 5 \times 100 + 4 \times 100 = 300 + 500 + 400 = \text{Rs. } 1,200$

Overdue: Overdue is the amount of loan that was due to be recovered at a particular date but has not been recovered by that date. 30% of overdue is very harmful for the country. Overdue is very important so far as the financial aspects are concerned.

Causes of Overdue: Lack of monetary supervision; faulty practices; leakages; miss-utilization; lack of costs generation; and poverty.

Outstanding Loan or finance: It is the total amount that has been lending to the farmer at a particular point of time.}

State Cooperative Bank:

Objectives:

- i. It acts as banker's bank to the central cooperative bank to the district.
- ii. It coordinates its policy with those of the cooperative movement and the Government.
- iii. It promotes the causes of cooperation in general by granted subsidies to the central cooperative bank for the development of cooperative activities.
- iv. It supervises and control activities of central bank through regular inspection.
- v. It also performs general utility function such as ensuing draft, cheque, and letters and thereby helps remittances of funds.
- vi. It collects discount bills with the permission of the registrar.

- vii. It helps the state Government in drawing up cooperative development and other development plan and its implementation.

Area of Operation: Generally, there is only one apex bank in each state. But, some states such as Maharashtra, Punjab and Andhra Pradesh have more than one apex bank.

Membership: Membership of this bank is open to all Central Cooperative Banks and such other societies and federation as may have direct dealing with them.

Management: The main authority of these bank rush in general body. The general body meets once in a year and decides about the following:

- Receives and approves or report of the year work.
- Besides, how surplus is to be utilized.
- Elect the Board of Director.

Sources of Finance: The primary source of capital of these banks is the share capital, reserve funds, deposits from members, borrowing from NABARD and contribution from state Government.

Loaning Policy: State Cooperative Bank provides financing facility to Central Cooperative Bank. Central Cooperative Bank is required to deposit share of the state cooperative bank to the extent of 1 / 20th of its borrowing. This apex State Cooperative bank provides short term loan for financing agricultural operation, marketing and distribution of consumer goods. Medium –term loan are granted for the purchase of cattle, machinery, reclamation of land, sinking and renovation of irrigation bell, construction of farm shed, replacement of machine etc.

Constituents of Board of Director of State Cooperative Bank:

- i. Registrar of Cooperative Society.
- ii. Nominated person by state Government.
- iii. Director elected by General Body of Central Cooperative Banks.
- iv. Representatives of State Land Development Bank.
- v. Director's elected by General Body of Cooperatives other than central cooperative bank.

Causes of Failure of Cooperative Banking System:

- Overdue
- Technical facilities.
- Limited Capital base.
- Apathy of State Government: State Government is very indifferent from cooperative banking system. State Government has not provided any shelter to cooperative bank.
- Lack of trained personnel: Because of this administrative staff is very weak. They don't know the rule and regulation of the cooperative bank.

(2) Cooperative Credit Structure for Long term Loan: It has a two-tier structure with Central Land Development Bank at the state or district level and Primary Land Development Bank. In

some states, there is no central land development bank. But, in their place there are branches of central land development bank. Land development bank first started its operation in Madras in 1929. Here, land is taken as security.

Membership: The share holders (one who possesses shares) are the main members of the land development bank. The lists of members also include nominees from the other cooperative and state Government. Land Development Banks are managed by Board of Director which is partially elected and partially nominated. But the state Government has the right to suspend the Board of Director for qualification reason.

Sources of Finance of Land Development Bank:

- Share capital reserve.
- Deposits.
- Issue of bonds and debentures: Debentures are the long-term deposits which are issued by the Central Land Development Bank earning fixed interest and for fixed period, generally up to 20 years. These debentures are granted by the state Government in respect of payment of interest and repayment of principle.
- Refinancing facilities provided by the NABARD.

Loan Operation of Land Development Bank: Anyone wishing to borrow from a land development bank has to become a member and to purchase share of land development bank. Land development bank provide loan on security of agricultural property and land is the main security in acquiring long term credit. Generally, value of the security is base for lending and a loan to the amount of 50% value of security is provided to the farmer. Land development bank provide credit for a variety of purposes such as redemption of old debts, improvement of land, purchase of costly agricultural equipments and land, construction of well and establishment of pump set

Causes of Failure of Long-term Cooperative Credit Structure:

- Problems of overdue.
- Lack of trained man power.
- Diversification of loan.

Multi-purpose Cooperative Societies: As the name itself indicates these societies offer assistance in many ways like providing credit, supply of farm inputs like seeds, fertilizers (sometimes on subsidized rates), offering marketing facilities, technical guidance etc.

Single Window System: A single-window system in agricultural cooperation integrates short-term and long-term cooperative credit structures into a unified framework to simplify rural credit delivery.

Core Concept of Single Window System:

In agricultural cooperation, “the Single-window system integrates the short-term and long-term cooperative credit structures into a unified system.” Instead of approaching separate agencies for different financial needs, farmers can access all forms of financial support through a single institutional point.

Key Benefits for Farmers:

- **Unified Credit Access:** Farmers can secure both short-term and long-term loans from a single institution, removing the need to visit multiple agencies.
- **Seasonal and Capital Alignment:** Access is provided for immediate seasonal inputs like fertilizers as well as long-term capital investments like irrigation systems.
- **Reduced Bureaucracy:** The framework streamlines administrative functions across primary agricultural credit societies, district cooperative banks, and state cooperative banks.

Major Function of Primary Agricultural Credit Societies (PACS) under Single Window System:

- i. To advance short-, medium- and long-term loans.
- ii. To supply required farm inputs like seeds, fertilizers and pesticides.
- iii. To distribute essential commodities like rice, wheat, sugar, kerosene etc.
- iv. To arrange for marketing of farm produce of the member through District Cooperative Marketing Societies (DCMS).

CHAPTER 17

COOPERATIVE MARKETING

Cooperative marketing is a process of marketing through a process of cooperative association formed to perform one or more of the marketing functions in respect of the produce of its member. It is a voluntary business organization established by its member to marketing farm product collectively for their direct benefits. In more concrete term, cooperative marketing is a process of marketing through cooperative.

Definition of Cooperative Marketing Society: It is an association of cultivators organized on cooperative principle to perform marketing function.

According to FAO Expert, Margaret Dig by, Cooperative marketing is the system by which a group of farmer or market gardener joint together to carry on some or all the processes involve d in bringing goods from producer to consumers.

According to Bakken and Schaars, Cooperation in marketing is a business undertaking available to the economic forces but not to all the traditions, courts and practices which affect private commercial enterprises.

According to RBI, A marketing society can be considered as a cooperative association of cultivators form primarily for the purpose of helping the member to market their produce more profitably than it's possible through private traders.

In general, a cooperative marketing society is an association of cultivators organized on cooperative principles to perform marketing function. For example, IFFCO (Indian Farmer Fertilizer Cooperative limited), HPMC, LPGMSL (Lohal Potato Grower Marketing Society Limited), MARKFED (Marketing Federation), HIMFED (Himachal Marketing Federation), NAFED (National Agricultural Cooperative Marketing Federation.) This is for export and import.

Role of Cooperative Marketing Society: According to the Royal Commission on Agriculture (1928), cooperative must be more efficient having more bargaining power, ensuring better prices to the producer and economies of scale. According to the marketing subcommittee of the policy committee on agriculture, forestry and fisheries (1944), cooperative marketing or collective marketing of agent agricultural producers is necessary not only for the attainment of maximum efficiency but also for improving the economic condition of producers by strengthening the bargaining power. i.e. how much the strength and intensity of the producer to bid for hired produce.

Objectives of Cooperative Marketing: In brief the Dantawala committee has described the major objectives of cooperative marketing which are outlined below:

- i. It strengthens the bargaining capacity of cultivators.

- ii. It secures the members a better price for their produce.
- iii. It eliminates superfluous middle man.
- iv. It provides members the needed finance.
- v. It pursues the farmers to grow better quality of goods.
- vi. It stabilizes prices.
- vii. It develops fair trading practices.
- viii. It provides facilities for grading and transportation.
- ix. It acts as an agent of Government for procurement and implementation of support price policy.
- x. It promotes the economic interest of its members by encouraging self help and better farming among members.
- xi. It acts as a distributive centre for agricultural requisites such as seeds, fertilizers, implements etc.
- xii. It helps in the expansion of cooperative credit program by linking marketing with credit.

The broad aim of cooperative marketing is to rationalize the whole marketing system so that it may be beneficial to the producer. It helps in strengthening the bargaining power of the producer; eliminates superfluous middle men; provides finance; persuades to grow better quality of products and stabilizes prices.

According to J.P. Niyogi, major aim of cooperative marketing is to stabilize marketing condition by means of orderly and regulated supply of commodity. In F.A.O. publication, the aim of cooperative marketing is to sell the members produce directly in the best market and in a state (condition) which attracts the best prices. It helps the members to produce the best product those in most demand. It aims at efficient operation including assembling, grading, standardization, packaging, transportation, storage etc.

Advantages of Cooperative Marketing:

- i. Economic cost of marketing.
- ii. Better prices.
- iii. Stabilize the prices.
- iv. Credit facility.
- v. Supply of quality goods to consumers.
- vi. Helps in growing better crops.
- vii. Division of surplus.
- viii. Educative value.

History and Growth of Cooperative Marketing in India: The beginning of cooperative marketing societies was made in the former Bombay province, when two such societies were formed at Hubli and Gadghar in 1915 and 1917 respectively. The main objective of the

organization was to encourage the cultivation of improved cotton variety introduced by agricultural department and sell it collectively. There are 31 societies in 1920-21 which was increased to 142 in 1942-43.

In 1945, cooperative marketing committee recommended that within ten years, 25 per cent of the total annual marketable surplus should be sold through cooperative marketing. For this purpose, marketing societies should be organized in each of 2,000 mandis @ 1 for a group of 200 villages to undertake grading, pooling, processing etc. The committee also recommended the need for effective link within cooperative credit and marketing and also governmental subsidies to meet their managerial cost.

In 1951, All India Rural Credit Survey Committee found the position with regard to cooperative marketing extremely unsatisfactory. Though, the number of all types of marketing societies registered in 1951-52 was over 10,000 which included 21 states cooperative marketing society, 1,885 marketing union, 8,000 primary societies. But total effect was insignificant. It was found that only one per cent of the produce was sold through them. Private traders dominated the rural India.

After Independence:

Progress during the First Plan: During first plan, cooperative movement was accorded considerable importance. The Dantwalla Committee has stated that cooperative marketing had been more or less neglected field and no special efforts were made to strengthen or expand cooperative marketing even in this plan. The value of agricultural produce marketed by all cooperatives during the year 1955-56 was only Rs. 53 crores as against Rs. 47 crores during 1951-51.

Progress during Second Plan: The second plan plays considerable emphasis on the development of cooperative marketing plan outlay. The organization of 1,800 primary marketing societies in important mandies and an apex marketing societies in each state as a central organization to coordinate the activities of primary societies. The additional financial assistance from the Government by way of share capital and subsidies was also provided.

During second plan, 1869 societies were organized and apex marketing societies was set up in all state of Indian union except Jammu & Kashmir. A National Agricultural Cooperative Marketing Federation (NAFED) was also set-up to promote interstate trade and to coordinate the activities of apex marketing societies and to provide market intelligence to them. By the end of Second Five-Year Plan, there were 24 apex marketing societies, 171 central marketing societies, 3,108 marketing societies. The cooperatives handled agricultural produce worth Rs. 174 at the end of second plan period. Though, by itself the figure may be impressive and represent a substantial increase in the marketing operation of cooperative marketing societies. But the progress cannot

be said to be satisfactory as about 50% of the total value of agricultural produce marketed was that of sugarcane marketed under a legal compulsion.

Progress during the Third Plan: The development of cooperative market was given a special importance in the scheme of Integrated Rural Credit in the third plan as it was regarded as an essential pre-requisite for large scale expansion of cooperative credit and agricultural production. The main task of the plan was to strengthen the marketing structure and to set –up marketing societies in the area not covered in the second plan. The plan envisaged the organization of 544 new marketing societies and fixes a target of marketing agricultural produce worth Rs. 360.

During the third plan, 452 additional primary societies were organized, thus bringing the total number of state partner societies to 2,321 at the end of June, 1966. In addition, there were 900 marketing societies which came-up of the plan progress.

Progress during Fourth Plan: The essential feature of cooperative marketing during the fourth plan was to strengthen the existing marketing societies at the primary level. The efforts were also planned to be taken to introduce grading, pooling and other improved techniques in marketing. The cooperative marketing did not make significant progress in the initial year of the plan. However, in the later years, there was significant progress. The target of handling Rs.900 crores of agricultural produce was exceeded as produce handled was worth Rs. 1,110 crores in 1973-74. Storage capacity of about 1,015 million ton was also created.

Progress during Fifth Plan: The main emphasis in the Fifth Five-Year Plan in the sphere of cooperative agricultural marketing was consolidation and strengthening of existing societies. Additional societies were organized where new secondary market came –up. It was envisaged that cooperative would handle agricultural produce worth Rs. 1,900 crores consisting of foodgrain worth Rs. 800 crores, sugarcane worth Rs. 600 crores and other crops worth Rs. 500 crores. The interstate trade by the cooperative was envisaged to be of Rs. 80 crores annually. The buildup storage capacity with the cooperative would be raised to 6.8 million ton by 1978-79.

By the end of 1976-77, there were 3,370 cooperative marketing societies out of which 2,810 were functioning for the marketing of general commodities and 560 for marketing of special commodities. The membership was 33.94 Lac. The total working capital on June 30, 1977 was Rs. 311 crores. The total value of agricultural produce was Rs. 1,073 crores. In 1976-77, these cooperative societies marketed food grain worth Rs. 1,054 crores.

Structure and Organization of Cooperative Marketing: The federal structure of cooperative marketing societies in India consists of:

- i. National Agricultural Cooperative Marketing Federation (NAFED) at national level;
- ii. The State Marketing Federation at State level; and
- iii. District or Regional Marketing Societies at Intermediate level.

NAFED: The NAFED is a federal organization of state level apex cooperative marketing societies in India. Its main function is to coordinate the activities of state federation and render advice and technical guidance to them. The federation also undertakes import and inter-state trade. It was established in 1958 with its head quarter at New Delhi and with its area covering the entire country.

Failure of Cooperative Marketing: Following are the factors which lead to failure of cooperative marketing in India:

- i. Result of official initiative
- ii. Target hunting
- iii. Un-planned set-up
- iv. No integration of tiers
- v. Weak organization link
- vi. Competition from credit societies
- vii. Bias towards individual membership
- viii. Poor management
- ix. Mal practices
- x. Unregulated market
- xi. Concentration of distribution activities
- xii. Lack of supervision and audit
- xiii. Purchases through private trade.

CHAPTER 18

COOPERATIVE FARMING

Cooperative Farming necessarily employed pooling land and its joint management as per Planning Commission. Prof. M.L. Dantwala has defined cooperative farming in different way. According to him cooperative farming would employ transfer of decision-making authority in regards to all important matter from individual to collective body of all cultivators.

Cooperative Farming Society: Working group on cooperative farming in 1959 has defined cooperative farming society as a voluntary association of cultivators for better utilization of resources including man power and land pooled and in which majority of member participate in farm operation with a view to increase agricultural production, employment and income.

Types of Cooperative Farming: There are four types of cooperative farming and these are:

- i. Cooperative better farming
- ii. Cooperative joint farming
- iii. Cooperative tenant farming
- iv. Cooperative collective farming

Cooperative Better Farming: In Cooperative better farming society, each member cultivates his own field and is the exclusive entitled to the produce of it. In such a society, there is no joint cultivation. Cooperative better farming society advances its members on following aspects:

- Introduction of improved method of cultivation;
- Laid down the plan of cultivation;
- Purchase of seed and manure;
- Joint grading and selling of produce;
- Joint ploughing and harvesting; and
- Joint arrangement of watch and ward.

Cooperative Joint Farming: The distinguish feature of joint farming is the pooling of land by small owner having uneconomic holding. Work is conducted on the basis of approved plan and each member receives wages for his work. However, the ownership of land for each member of the society is maintained. The produce which is raised collectively is disposed-off collectively. Net benefits of the society are distributed among the member after keeping reserve funds according to the proportion of land contributed and labor put. The ordinary functions of the society are:

- i. Planning of a crop program;
- ii. Raising of funds on the security of land, crop and other movable and immovable assets of the society;
- iii. Purchase of machinery and payment of operational expenses;

- iv. Land improvement and all other activities which are required to promote the development of agriculture.

This type of cooperative farming has been recommended for Indian condition keeping the following point in view:

- Farmers join the system voluntarily;
- Right of ownership of land is maintained;
- Farmers get the benefit of large-scale production by pooling their land and labor;
- The farm is maintained by a management committee elected on democratic lines by its members;
- Everyone in the society gets share according to the land and labor contributed

Cooperative Tenant Farming: In this farming, land is owned in free hold or lease hold. But its holding is divided into small holding each of which is leased to an individual cultivator who is the member of the society. The whole area is cultivated in accordance with the plan laid by the society. But, the manner in which the plan is executed is left with the individual tenant. Each tenant pays a fixed rent on land. But, produce of land is owned and entirely at its disposal. The society undertakes the function of:

- Supply of inputs.
- Supply of costly agricultural implements.
- Marketing of produce, if desired.

The profit of the society after meeting all the expenses and providing for reserve funds are distributed among tenant's member in proportion to the rent paid by each.

Cooperative Collective Farming: In this farming, land is either free hold or lease hold. Society of such farming also gets other means of production either his owned or in hired in. The society undertakes the function of:

- Joint cultivation for which all member pools their liable sources.
- Mechanization of cultivation
- Marketing of produce.

The profits are worked out at the end of each year and dividend is distributed after keeping the reserve funds in proportion to the wages earned by each member.

History of Cooperative Farming: The cooperative marketing was first suggested in 1944 by the advisory board of Imperial Council of Agricultural Research in the memorandum on the development of agriculture and animal husbandry in India. In 1946, the Cooperative Planning Committee suggested that for a permanent suggestion of the problem of agricultural production, cooperative farming should be introduced as an experiment in every province. In 1947, Agrarian Reform Committee was appointed on the recommendation of State Revenue Ministers

Conference. It strongly recommended that individual farming should not be allowed in holdings which are smaller than basic holdings. Instead, it suggested that such holdings should be brought under a scheme of cooperative joint farming.

The technical meeting of F.A.O. held in Lucknow in 1949, state among other things that cooperative farming provided an ideal solution for the pooling of resources of cultivators in land, labor and capital and recommended that Government should actively encourage cooperative farming societies with financial aid and technical advice

Cooperative Farming during First Five-Year Plan: The role of cooperative farming in recognizing of rural economy was stressed by the first five-year plan. A small provision of Rs. 50 lakhs provided for promoting cooperative farm was made. By the end of 1956, about 1,000 cooperative farming societies were functioning in different parts of the country.

During Second Five-Year Plan: The main task during second plan was to take such essential steps as will provide sound foundation for the development of cooperative farming. The points raised by the Planning Commission for the development of cooperative farming were:

- i. In each district, a pilot project on cooperative farming should be undertaken with a view to management and organization as far as possible.
- ii. Surplus areas which become available on the position of ceiling on agricultural holding should be cultivated on cooperative lines.
- iii. Farms smaller than the prescribed basic holdings should be brought into cooperative provided their owner agrees to pool their land.
- iv. In tribal areas where ownership is still a common practice, steps should be undertaken to develop agriculture on cooperative lines.

The number of societies in the second plan increased from 1,000 to 6,325 in 1960-61. However, out of 6,325 only 2,332 societies showed profit while the rest incurred losses or did not show any profit.

Progress during Third Five-Year Plan: Following guiding principles in the reorganization of cooperative farming was laid down. These guidelines were issued by the Government of India on the basis of the recommendation put forward by the working group on cooperative farming under the chairmanship of Mr. Nizalin Gappa.

- i. The bulk of members of cooperative farming should be small farmers or landless cultivators.
- ii. Land should be pooled for a minimum period of Five-Years.
- iii. Cultivation on cooperative farms should be done through labor intensive method.

Apart from the pilot project, it was either considered neither necessary nor desirable to lay down targets for number of cooperative farming societies during the third plan.

During Fourth Five-Year Plan: During fourth plan, priority was given to revitalization of existing weak and dormant cooperative farming societies. The conference of state ministers for cooperative held in 1970-71 recommended for greater attention to promote collective farming in land declared surplus through land reform measure

During fifth, sixth, seventh and eighth Five-Year Plan no much progress was made.

Why Cooperative Farming is needed? Cooperative farming is needed because of following reasons:

- It increases agricultural production.
- It reduces the cost of production.
- It provides solution to the problem of under employment.
- It provides solution to the problems of division and fragmentation of land holdings.
- It develops democratic spirit.
- It raises better standard of life
- Availability of service and technological facilities.

CHAPTER 19

DAIRY, FISHERIES AND TEA COOPERATIVES

Dairy Cooperatives

In India, the nutritional requirement of milk is 284gram and the per capita per day consumption of milk is just 140 grams in late seventies. The most of the milk is produced in rural areas in India while, the profitable market for milk and milk products is urban. The cooperative milk supply societies and unions have been organized for ensuring adequate supplies of fresh milk to urban consumers.

Present Position: Out of the total of 190 dairy plants in the country as on 31st December, 1978. 50 dairy plants were in cooperative sector. India leads the world in milk production with an output of 247.87 million tonnes in 2024-25, driven by an expanding network of rural cooperatives and modern processing plants.

India produces about 25% of the total global milk supply, making it the top producer worldwide. Per capita availability has risen to 485 grams per day. *“Total milk production reached 247.87 million tonnes in 2024–25, a 3.58% increase from 239.30 million tonnes in 2023-24.”* The top producing states are Uttar Pradesh, Rajasthan, Madhya Pradesh, Gujarat, and Maharashtra.

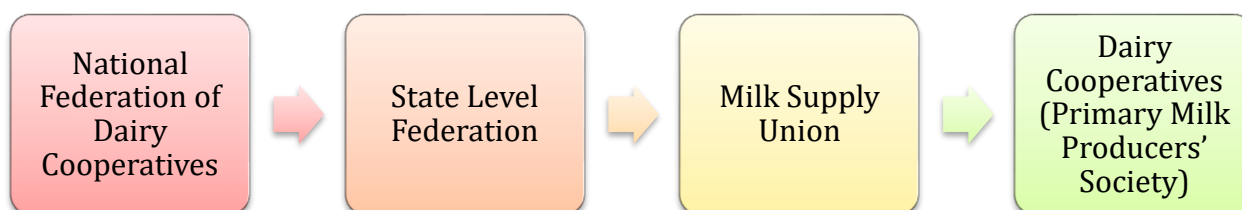
At national level, there is a National Federation of Dairy Cooperatives which was set up in 1970 with its head quarter at Anand. National Federation of Dairy Cooperative (NFDC) is providing financial assistance to dairy cooperatives for establishing units. At village level, there are Primary Milk Supply Cooperatives which are federated into 209 unions. State level federation is functioning in U.P, Gujrat, Maharashtra and Punjab.

Structure of Dairy Cooperative in India:

The primary structure of Dairy Cooperatives consists of:

1. Primary Milk Producer Society
2. Milk Supply Union

At the national level is the National Cooperative Dairy Federation of India Ltd which coordinates dairy cooperatives. Below this are 21 State Cooperative Dairy Federations, 192 District Cooperative Milk Producers' Unions, and over 1 million Primary Milk Producers' Cooperative Societies.



Nearly 50% milk cooperatives are taking profits, 30% incurring losses while the remaining showed neither profit nor loss.

Objectives of Primary Milk Producers' Society: The main objective is to help their members to increase their production of milk and to arrange for the profitable sales of milk products in consuming market through milk supply union.

Progress of Dairy Cooperatives in Five-Year Plans: No specific provision was made in the first plan for dairy development. In the second plan, a provision of Rs. 19 crores were made against which Rs. 10 crores were spent. In the third plan, the policy was to develop dairy projects with emphasis on milk production in rural areas linked with the plans for marketing surplus milk in urban center. It was envisaged that the supply and collection of milk would be undertaken by producers' cooperatives in villages and the processing and distribution of milk products would be organized through plants as far as possible on cooperative lines.

In 1978, there were 27,241 primary milk supply cooperative societies with a membership of 23 lacs. The primary milk supply cooperatives were federated into 209 unions. At the national level, there is a National Cooperatives of Dairy Federation which provides financial assistance to dairy cooperative for establishing processing units.

Milk Cooperatives in Gujrat: Milk cooperatives were first conceived and initiated as early as 1946-47 in Gujrat on the non-well known Anand pattern of milk cooperatives which is as follows:

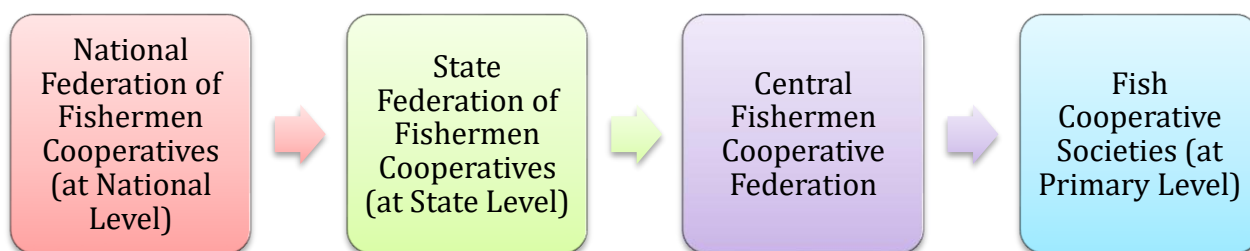
1. Milk Producer's Cooperative Society in different villages.
2. District Cooperative Milk Producer's Union.

The first mil cooperative organized in Gujrat is said to be the Choryasis taluka cooperative milk marketing society which is registered in 21st December, 1959 in Surat district. It collected the surplus milk of the farmers in Choryasis taluka and sold it real form in Surat city.

However, cooperatives rely envied Gujrat Milk Industry with the organization of Kaira District Cooperative Milk Producers Union Ltd. popularly known as "Anand Dairy" at Anand in 1946. Since then, district after district has been following this pattern by organizing more and more cooperatives.

Fisheries Cooperatives

Structure:



National Federation of Fishermen Cooperatives was established in 1980. By that time, it was known as All India Fishermen Cooperative Federation.

The development of fisheries on cooperative basis was first recommended by Royal Commission on Agriculture. The objectives were to increase the production of fish and other marine's products; to provide assistance in credit and kind to the fishermen and to increase the marketing prospects of marine products.

The importance of fisheries cooperative lies in rendering economic assistance to the dispersed and unorganized fishermen. Besides, the permanent structures of fisheries cooperative in different states are:

- i. Fisheries Cooperative Society
- ii. Producer Cooperative Society
- iii. Fish Consumer Society
- iv. Prawn Curers Society

In 1988-89, the number of primary Fisheries Cooperative in India was 8,372 and their total membership stood at 11.30 lacs. The annual business turnover was estimated at Rs. 43.93 crores. In the same year, there was one National Federation of Fishermen Cooperative at national level; there were 15 State Federation of Fishermen Cooperative at state level; and at the district level, there were 78 Centre Fishermen Cooperative Federation.

In Himachal Pradesh in case of Gobind Sagar, there are Fish Cooperative Society at the primary level



In Pong Dam, there are only fish cooperative societies and these societies directly sell their produce to the contractor. They don't have federation.



These societies are guided by the Fisheries officer and deputy director (Fisheries) at district level. The fishermen who become member are provided loan by the department but in return these fisheries societies have to provide royalty to the Government which has been fixed at 15 % of the total turnover of the society.

Tea Cooperatives

There are four Tea Cooperative Factories in Himachal Pradesh. Cooperative Tea Factory Forum is one of the important cooperative processing industries in India. The establishment of

cooperative Tea Factory in each and every place brings a lot of benefits to the tea growers who supply green leaf to the factory on a remunerative price. In addition, a cooperative factory also plays a significant role in boosting up the tea cultivation and its development. As with the establishment of these cooperative, growers find sufficient time which utilize in the improvement of their tea garden. The cooperative factories also provide technical know-how to the tea growers.

There are four Tea Cooperative Factories in Himachal Pradesh namely, Palampur, Baijnath, Beed, and Dharamshala.

Palampur Cooperative Tea Factory Limited: The construction of the factory started in 1970. But the production started on 1st April, 1980. The members of this factory are both i.e. growers and non-growers. The later categories of members are the person involved in tea growing or tea processing at any point of time. In 1970, there were only 26 members. Now the total number of members is above 350 including the one which is Government. The value of each share is Rs. 1,000.

Operational area of the tea factory is Bhawarna and Panchrukhi development block. The objectives are to procure tea leaves, manufacture tea and marketed, Factory also supply fertilizers and technical know-how to the growers. Non members are provided 10% less prices from those of members for their leaves. The production capacity of tea factory is 5 lac kilograms of tea.

Board of Director of the factory consists of 15 members out of whom 9 are elected, 5 are nominated by the government and one is the Government itself.

Beed Cooperative Tea Limited: This factory is the oldest among all cooperative societies in the state. The area of operation of this factory is confined to Beed, Chaugan, Chotra and other nearby areas. The licensed capacity of this factory is 1 lac kilograms of tea per year. Rest is the same for both of these factories

CHAPTER 20

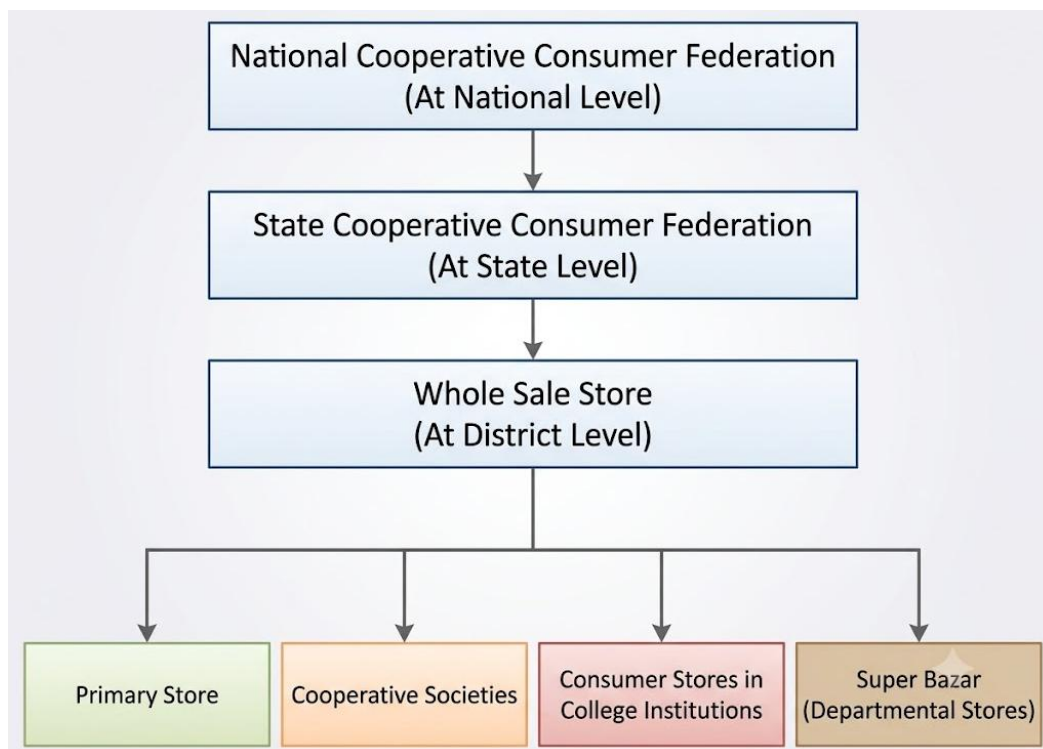
CONSUMER'S AND LABOR COOPERATIVES

Consumer's Cooperatives:

First Consumer's Cooperated started in England, Rockdale Pioneer in 1844.

Structure of Consumer's Cooperatives: There are two types of consumer's organization Structure viz. Federal Pattern and Unitary Pattern.

Federal Pattern: It has a five-tier structure.



National Cooperative Consumer Federation (NCCF): It came into existence in 1965. Its main function is to coordinate the activities of state level federation and other consumer's societies.

Consumer's Cooperative: Consumer's cooperative stores is a voluntary organization of consumer organized to obtain their requirement of consumer's goods and services in terms of greatest advantage to them. Its main objective is to serve its member and consumers with goods required for household consumption. It also provides goods at reasonable prices and protects the interest of its members.

Origin and Development: The development of consumer acceleration as an economic system is well associated with the name of Rockdale Pioneer started in 1844. The movement gradually spread over the other countries on the continent of Europe and laid a significant role in keeping the prices down. In India, Consumer's Cooperative did not make much head way before the First World War. It was during the war period that some consumer stores were started in Madras and Bombay. Even up to the end of Second Five-Year Plan, no target was laid down regarding the development of consumer's cooperative stores. However, in the coming Five-Year Plan, special

attention was paid to make the consumer cooperative movement as an important element. In 1963-64, Government of India, sanction a scheme under which Primary Market Societies and Primary Agricultural Credit Societies (PACS) were expected to open separate section for the distribution of essential consumer goods to the rural people. In India, first Super Bazaar was started in 1966.

Organizational Structure: Consumer's Cooperative are organized either on a Unitary Pattern or on a Federal Pattern.

Unitary Pattern: Under this, a central store with individual membership operates through branches. The unitary store had all advantages of large-scale economy. They work at lower cost. There is greater opportunity to make use of mechanical and therapy efficient service. In a unitary store, there is uniformity in policy, price and staffing pattern.

Federal Pattern:

National Cooperative Consumer's Federation (NCCF): It is an apex organization of all the consumer cooperative of the country. It was registered in 1965. The main functions of this body are:

- i. To assist and facilitate the working of consumer's societies.
- ii. To establish trade connection with suppliers and manufacturers so as to arrange procurement of consumer goods for cooperative stores.
- iii. To import and export of consumer's goods.
- iv. To built up ancillary services for the benefit s of consumer's sores.
- v. To establish and run processing and manufacturer units for consumer goods.
- vi. To hold seminars and conferences to discuss plan and problems of consumer's cooperative.

State Cooperative Consumer's Federation: Its main functions are:

- i. To coordinate the work of consumer store at the state level.
- ii. To obtain direction regarding the sources of supply from NCCF and supply the same to the consumer stores.

In some states, whole sale store does not exist. There is SCCF who performs the function of whole sale store.

Whole Sale Store: Consumer Whole Sale Cooperatives have a net work of branches in big cities and district head quarters.

Departmental Store/ Super Bazaar: The beginning of super bazaar was made in India when on 15th July, 1966 the biggest departmental store was set up in Delhi. The super bazaar is by and large run by whole sale store. In some cases, super bazaars are runs by state federation.

Primary Store: Primary store is located in locality or at village level. These stores have been primarily organized to provide rationed commodity for other necessary members living in the locality. They also perform the function of processing.

Labor Cooperatives:

Labor cooperative society is a form of organization for the employment of a group of workers who associate to work together for a joint reward. The important characteristics of labor cooperatives are:

- i. Workers are able, chose their work mate, select leader and plan the execution of collective work.
- ii. The work is available to under employed and unemployed youths.
- iii. The individual member is free from the responsibility of getting the work.
- iv. They enjoy greater degree of autonomy by virtue of its entering into a direct contact with the employer.
- v. The labor is free from the exploitation tendencies of the businessman.
- vi. A particular society takes the responsibility of completion and correctness of the job.

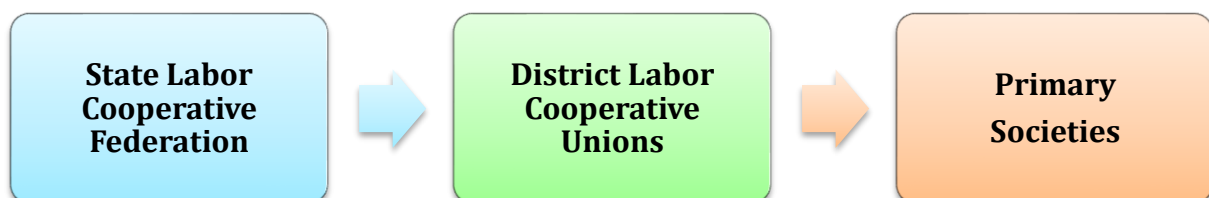
The necessity for labor and construction cooperative in India rose from:

- i. In the present spirit of construction work, the cooperative can provide work to a large number of people who are unemployed otherwise.
- ii. The labors receive adequate wages and are no longer exploited by private contractors.
- iii. The margin at present kept by contractors is available to laborer as wage bonus etc.
- iv. The nature of work is fast changing from unskilled to skilled work. Therefore, different labor cooperatives societies were established which were having different skill to perform particular job efficiently.

The labor cooperatives have been successful in different branches of production including agricultural work.

Growth and Development of Labor Cooperatives: Before independence, a few experiments in the organization of labor and construction societies were tried in Madras and Bombay. Then in Five-Year Plan, consider emphasis has been laid on the promotion of labor contract and construction cooperatives.

National Advisory Board for Labor and Construction Cooperatives in its meeting on July, 1967 follow a pattern of labor cooperative assistance to labor cooperatives.



National Advisory Board at its meeting held in 1974 had recommended that Government should provide necessary policy, budgetary and technical support to labor cooperatives. The state Government was asked to assist these cooperatives in obtaining adequate working capital on favorable terms from cooperatives and commercial banks.

Pilot District for Intensive Development of Labor Cooperatives: To intensify the work of labor cooperatives, a scheme of pilot district had been introduced in selected eleven districts. The main objectives of this scheme were:

- i. To help in funding full employment for the under employed adults in the village.
- ii. To demonstrate in pilot districts how contractor can be dominated and work done through the organization of labor supported by necessary concession and facilities.

Government Assistance: Government should participate in the share capital of primary labor contract and construction societies.

Advisory Body: An advisory body for labor cooperatives at the state level consisting of non-official responsibility of the public works and cooperative development and representative of the cooperative should be set up to advice the Government on matter of weak able rates, reservation of works or other promotional measures.

Training of Personnel: The training to managerial and technical staff is provided by National Cooperatives Union of India.

Weaknesses of Labor Cooperatives: The labor cooperatives in India suffer from the following weaknesses:

- i. The numbers of labor cooperatives are generally poor and they cannot contribute to the share capital in the initial stage.
- ii. Lack of working capital is another difficulty. These societies are not getting adequate funds from the central financing agencies.
- iii. There is no assurance of continuity of work.
- iv. Contractors usually delay in taking measurements and payments of bills.
- v. Sometimes the labor cooperatives become an instrument of exploitation at the hand of some leaders.

CHAPTER 21

COOPERATIVE STORAGE AND WAREHOUSING

With reference to agricultural marketing warehousing implies the provision of facilities for safe storing of the produce of the farmers and raising funds for him so that his holding power is increased and he is made to fetch a good price for his produce by selling it at the appropriate time. The role of cooperatives in this field can hardly be over-emphasized.

Central Warehousing Corporation: It is generally set up at places which have a potential for a capacity of 51,000 ton or more.

State Warehousing Corporation: Small centers are left to it i.e. mandi-level god owns and rural god owns.

Cooperative Societies: These have constructed godowns at mandi level and rural level lower than the capacity of State Warehousing Corporation.

Development of Cooperative Storage and Warehousing: The programs of assisting cooperatives to enable them to construct their own god own for the development of their marketing and supply function was initiated during the Second Plan Period. In 1959, the agricultural produce (development and warehousing) Corporation Act was passed. It provided for the establishment of:

- i. National Cooperative Development.
- ii. The Central Warehousing Corporation
- iii. The State Warehousing Corporation.

In March 1963, the Board was wound up and converted into the National Cooperative Development Corporation with its function peculiarly confined to cooperative development. Their functions relating to the development of warehousing facilities have been taken over by the Government.

Central Warehousing Corporation: The Central Warehousing Corporation was set up with an authorized capital of Rs. 20 crores divided into 2 lac shares of Rs, 1000.00 each. The following are the functions of the corporation:

- i. To acquire and supply god downs and ware houses at suitable places.
- ii. To rent ware houses for the storage of agricultural produce and arrange facilities for it's to and fro such ware houses.
- iii. To subscribe to the shares of State Warehousing Corporation, and
- iv. To act as agents of the Government for the purchase of storage, distribution, purchase and sale of agricultural produce.

The Central Warehousing Corporation generally set up its warehouses at places which offer a potential for a capacity of 5,000 ton or more.

State Warehousing Corporation: The State Warehousing Corporation has been established in the states with an authorized share capital not exceeding Rs. 2.00 crore. 50 per cent of the shares

are subscribed by the Central Warehousing Corporation and 50 per cent by the state Government. The function of this corporation is allowed to raise funds by the issue of debenture and by borrowings from the RBI, SBI and the state Government. The smaller centers are left for the state corporations. In addition to these god downs, cooperatives had constructed god downs at mandi level and rural level.

In the subsequent plans, the main emphasis in warehousing remained either:

- i. To increase the number of godowns.
- ii. To increase the capacity utilization. During their period, the list of commodities which the corporation is permitted to store has been extended to include several non-agricultural commodities.
- iii. Emphasis was given to the development of scientific storage by providing trading agencies in handling large quantities of food grain. It is proposed to establish facilities for research and training in scientific storage.
- iv. The State Government assisted three schemes of cooperative storage which were implemented. These schemes are:
 - Centrally aided State Plan Schemes of Cooperative Development.
 - Centrally sponsored (Crash) Scheme sustained during 1965-67 & 1968-69.
 - Central Sector Scheme for Cooperative Storage.
- v. Help is being provided by the international agencies such as IDA and EEC to enlarge the storage capacity in India.

Cold Storage

The importance of scientific cold storage facility as a pre requisite for maintaining potato and other semi -perishable produce in fresh and nutrition's conditions as also for improving the operational efficiency of their marketing practices has been fully recognized.

A number of measures have been taken to establish scientifically designed cold storages in the cooperative sectors. By and large, cold storage units are established adjoining to the cooperative marketing societies.

IDA has assisted Potato Storage cum Marketing Cooperative Projects to establish cold storage in different states. In respect of IDA aided cooperatives cold storage, debt-equity ratio has been modified to 60:40.

Constraints in Performance of Cold Storage:

- i. Frequent power cut and lack of diesel power generator sets at cold storage has hampered the capacity utilization.
- ii. High capital investment due to steep rise in price has led to increase in charges of storage.
- iii. Wide fluctuation in potato production due to crop failure.

The NCDC provide technical consultancy for cold storage. Besides, the technical feasibility, assistance is provided for its economic viability and smooth running of the plants.

State Warehousing Act: In order to facilitate the setting up of ware houses and to regularize their function, various states have passed Ware Housing Act. Under this act, any person including companies and associations and a body corporate may apply to the state Government for the grant of license for carrying on business of warehouse man. The Government may grant the license after satisfying that:

- A building or other protected structure which is proposed to be used as a ware house is suitable for storing the specified goods.
- The applicant is financially sound.
- He has paid the prescribed fee.

The license is renewed periodically on payment of prescribed fee. The license is authorized to receive specified goods in his ware house and issue receipts in a prescribed form mentioning full particulars of goods. The receipt issued is transferable by endorsement and entitles its holder to receive goods specified is on the same terms as the original depositor can. The ware house man has the following duties:

- i. He shall keep the goods with care and keep his ware house clean and free from rats and other pests.
- ii. Goods shall be kept separately in such a way as may ensure their identity. If goods received are standardized and graded, they may be kept together.
- iii. Goods received shall be insured against damage by fire, rain, floods, theft etc.
- iv. Ware house man shall not discriminate between people desiring to avail of his ware house except in favor of a cooperative society.

The ware house man is not responsible for any deterioration in goods. In case deterioration, he shall give a due notice to the depositor to remove the goods from the ware house. On his failure to do so, the ware house man can sell them by open auction. The licensed weigh man, samplers and graders are attached to each ware house.

The ware house receipt is issued under and is governed by the provisions of the Ware Housing Act. It is an important document and contains:

- The name and location of the ware house.
- The date of issue of receipt and the consecutive number of receipts.
- Description of the commodities including weight and condition.
- The rate of storage charges.
- Whether commodities received will be delivered to the bearer, to specified person or order, and
- The amount for which the ware house man claims lie on the goods.

The warehouse receipt can be negotiable or non-negotiable according to the mark mentioned on it. If nothing is mentioned, the receipt is considered to be negotiable.

CHAPTER 22

COOPERATIVE EDUCATION AND TRAINING

The very important reason for the tardy and inadequate growth of cooperative movement in India was that people associated with the movement were not conversant with the principle and practice of cooperation. There lack of appreciation of cooperative value needs to all kind of undesirable thing in the management of cooperative. It is, therefore, highly desirable at the very first position that members of the society should be well versed with the principles and practices of cooperation. Secondly, the cooperative training and education programs have acquired additional significance in the wake of development of cooperative movement in manifold direction. The need is not only to consolidate the profit but, to provide efficient guidance, spot and efficient management to these institutions. Thirdly, people do not voluntarily join the cooperative society and hence cooperative movement mainly remained the program of the Government. People are often formed reluctant and indifferent to join the cooperative society. The educational benefits and objectives of cooperation will help in this direction to establish strong cooperative system through sincere and delicate members.

As early as in 1915, MacLagan Committee laid the strongest emphasis on the need of education both before and after the registration of society. In 1945, the Cooperation Planning Committee stressed the need to expand education in principle and practices of cooperation. The committee on cooperative administration in 1963 rightly observed that no factor has such great influence as the diffusion among all associated with it of knowledge of principle and practice of cooperation.

Objectives:

- i. The overall objective of cooperative education is admitted to create and sustain faith in cooperation ideology and to inculcate the spirit of self help and self reliance.
- ii. Long range objective is the creation of right type of leadership; possessing vision, foresight, and ability lead the masses on right path.

Educational arrangement in India: Recommendation of the conference of state minister of cooperation held to discuss the suggestion of study team for cooperative training. This training was constituted by GOI in 1960. First effort in providing the cooperative education was made in Madras in 1914 with the organization of provincial union.

- i. Cooperative training and education should be the responsibility of cooperative movement itself both at the national level and state level.
- ii. The administration of the entire junior cooperative training center should be transfer to the state cooperative union. However, the expenditure of the center is to be share between center and state Government.

- iii. Administration of the entire intermediate cooperative training center should also be transfer to the state cooperative union.
- iv. Central organization should run a central institute for training of senior personnel; arranged specialized courses; and should be a in-charge of overall cooperative education and training in the country.
- v. The work at the center should be interested to National Cooperative Union of India which will appoint a special committee/ council for the purpose of managing these institutes.
- vi. Teaching of cooperation may be introduced in primary and secondary school through simple lessons.
- vii. Statutory provision may be made in the cooperative society working at profit to make contribution to the educational funds of state cooperative union.

Cooperative Education Training Structure:



National Cooperative Union of India: It is an apex body of the cooperative movement in the country. Its objectives are:

- i. To promote and develop cooperative movement in the country.
- ii. Educate, guide and assist the people in their effort to build and expand cooperative sectors.
- iii. To serve as an exponent of cooperative opinion.

State Cooperative Union: At the state level, it is in charge of implementation of number of educational programs. The state union prepare cooperative literature such as basic and functional pamphlets, booklets etc.

District Cooperative Union: It has been organized to undertake the educational program through occasional training units under the guidance and supervision of state union.

Training Institution:

- i. **Senior Level:** The training of senior or higher personnel both departmental and institutional on an all-India basis is conducted at VMNICM at Pune. The institute undertakes research and field study program after management consultancy service and organizes cooperative seminars etc. It also award diploma in Cooperative Business Management and also conduct various specialized courses.

- ii. **Intermediate Level:** For intermediate level personnel, training programs are arranged at 18 cooperative training colleges. Diploma courses are also organized for industrial cooperative, cooperative marketing, land development bank etc.
The VMNICM and 18 cooperative training colleges situated at state head quarter are functioning under the administrative and financial control of National Council for Cooperative Training (NCCT) of the National Cooperative Union of India.
- iii. **Junior Level:** the training of junior cooperative personnel is conducted by the state Government and for this purpose, 92 cooperative Training Centers have been opened in different parts of the country.

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ANNEXURE

How to Calculate Income –Tax

Suppose Mr. X is a Professor in Delhi University. During 1993-94, his Gross salary income was Rs. 88,000. His annual saving (i.e. GPF, LIC, NSC, NSS, UTI) under section 88-B will be Rs. 22,000. The HCA and HRA assumption limit were Rs. 2,000 and Rs. 2,500 respectively. Calculate his income-tax liability for the assessment year 1993-94

Procedure:

- a. Gross salary = 88,000 (given)
- b. Less House Rent Allowance, HRA (2,500) = 85,500
- c. Less City Compensatory Allowance, CCA(2,000) = 83,500
- d. Less Standard Deduction, SD (15,000) = 68,500
- e. Taxable Income = Rs. 68,500

Income Tax Calculation:

- Up to Rs. 28,000 = Nil (No tax)
- Rs. (28,000-50,000) i.e. Rs. 22,000 @ 20 % = 4,400
- Rs. (50,000-75,000) i.e. Rs. 18,500 @ 30% = 5,500
- Total Income Tax = 9,550

Tax Rebate:

Total Saving = Rs. 22,000 (given)

Income Tax Rebate @ 20 % of total saving (88.B) = 4,400

Total Tax Payable = Total Income Tax - Rebate = 9,550 – 4,400 = 5,150.

Therefore, the Tax payable for the assessment year 1993-94 = Rs. 5,150

The students must know and write down and submit the following:

- a. Salient features of the union budget 2025-26.
- b. How money comes and how it goes to different sectors in the union budget 2025-26.

Agricultural Finance and Cooperation

(ISBN: 978-81-69967-15-0)

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