



**Course No. : DA 243 (2+1)**  
**Farm Management, Co-operation,**  
**Finance and Marketing**

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## LECTURE 1: FACTORS OF PRODUCTION (LAND, LABOUR, CAPITAL & MANAGEMENT) - Salient Characteristic features

### WHAT IS PRODUCTION?

- Production is generally understood as the **transformation of inputs into outputs**.
- It refers to the creation of those goods and services which have **exchange value**.
- In economics, production means **creation of utilities**.

For example, a carpenter makes a table. He has produced wealth. But he has not produced wood; it was already there. What then, has he really done? He has changed the form of wood and given it to utility which it did not possess before. Conversion of cotton into cloth and sugarcane into sugar are some other examples.

In economics, we are not concerned with the technical process of production. We do not learn the art of making it. For example, we do not study how cloth is actually woven. We are concerned with economic aspect, i.e. cost, price, profit etc. and not the technical aspect.

### FACTORS OF PRODUCTION

- Productive resources required to produce a given products are called **factors of production**.
- In process of production, inputs are converted into an output. These inputs like land, labour, capital, etc. are **collectively called factors of production**.
- Factors of production refer to those **goods and services** which help in the production process.
- The factors of production have been traditionally classified as **Land, Labour, Capital** and **Organizer** or Entrepreneur.

Nowadays most of the things we need are produced in a field or factory. To make them workers gives his labour, the landlord his land, the capitalist his capital, while the businessmen organizes the work of all these. They all get a reward in money.

In a production process, the **labour** earns **wages**, the **landlord** gets **rent**, and the reward to capital is **interest**, while the **entrepreneur's reward** is **profit**.

### LAND

- **Land as a factor of production refers to all those natural resources or gifts of nature which are provided free to man. It includes within itself several things such as land**

**surface, air, water, minerals, forests, rivers, lakes, seas, mountains, climate and weather.**

Thus, 'Land' includes all things that are not made by man.

#### **Characteristics or Peculiarities of land**

- Land is a natural factor.
- Land is imperishable.
- Land is immobile.
- Land is a passive factor of production.
- Supply is inelastic

#### **LABOUR**

- **Labour is the human input into the production process.**
- **Any work, whether manual or mental, which is undertaken for a monetary consideration is called labour in economics.**
- Marshall defines labour as 'the use or exertion of body or mind, partly or wholly, with a view to secure an income apart from the pleasure derived from the work'.

#### **Characteristics of labour**

- Labour is an active factor of production.
- Labour is a natural factor.
- Labour is perishable.
- Labour is mobile.

#### **CAPITAL**

- In the ordinary language, capital means **money**.
- **In Economics, capital is the man made physical goods used to produce other goods and services.** Thus, it is a produced means of production.
- **Money** is regarded as **capital** because it can be used to buy raw materials, tools, implements and machinery for production.
- The terms **capital and wealth are not synonymous**. Capital is that part of wealth which is used for the further production of wealth. **Thus, all wealth is not capital but all capital is wealth.**

#### **Characteristics of capital**

- Capital is a passive factor of production.
- Capital is man-made.

- Capital has the highest mobility.
- Capital lasts over time. Thus, it is perishable.

<b>LAND</b>	<b>LABOUR</b>	<b>CAPITAL</b>
It is a <b>passive</b> factor of production.	It is an <b>active</b> factor of production.	It is a <b>passive</b> factor of proouction.
It is a natural factor.	It is a natural factor.	It is man-made.
It is imperishable.	It is perishable.	It is perishable.
It is immobile.	It is mobile.	It is highly mobile.
Its reward is <b>rent</b> .	Its reward is <b>wages</b> .	Its reward is <b>interest</b> .

### **ORGANIZER OR ENTREPRENEUR**

- An organizer or entrepreneur is a **person who combines the different factors of production** i.e., land, labour and capital in the right proportion and initiates the process of production and also bears the risk involved in it.
- It is managerial and organizational skills needed to produce goods and services in order to gain a profit.

### **Functions of an Organizer or Entrepreneur**

1. He identifies profitable investment opportunities.
2. He decides the location and size of production unit.
3. He identifies the optimum combination of factors of production.
4. He decides the reward payment.
5. He takes risks.
6. He makes innovations.

**LECTURE 2: LAW OF DIMINISHING MARGINAL RETURNS OR LAW OF VARIABLE PROPORTIONS**

**BASIC TERMS**

<p><b>Total Product (TP)</b></p>	<p>It is the <b>sum of output</b> which can be produced by using various units of inputs. It is denoted as Y</p>
<p><b>Marginal Product (MP)</b></p>	<p>It is the <b>additional quantity of output</b>, added by an additional unit of input i.e., the change in output as a result of change in the variable input.</p> $\frac{\text{Change in Total Product}}{\text{Change in Input level}} = \frac{\Delta Y}{\Delta X}$
<p><b>Average Product (AP)</b></p>	<p>It refers to the <b>average productivity</b> of a resource. It is the ratio of total product to the total input used in producing that amount of product.</p> $\frac{\text{Total Product (TP)}}{\text{Total Inputs (X)}} = \frac{Y}{X}$
<p><b>Elasticity of Production (Ep)</b></p>	<p>It is defined as <b>percentage change</b> in output as a result of percentage change in input. It can also be defined as ratio of MP and AP.</p> $\frac{\% \text{ change in Output}}{\% \text{ change in Input}} = \frac{MP}{AP}$ <p><b>Solution:</b></p> $\frac{\Delta Y/Y * 100}{\Delta X/X * 100}$ $= \frac{\Delta Y}{\Delta X} * \frac{X}{Y} =$ <p>We know that <math>\Delta Y/\Delta X = MP</math>, and <math>Y/X = AP</math></p> $\text{Therefore, } Ep = \frac{MP}{AP}$

## DEFINITION

Law of Diminishing Marginal Return or The Law of Variable Proportion states **that as the proportion of one factor in a combination of factors is increased, after a point, first the marginal and then the average product of that factor will diminish.** It is, therefore, known as Law of Diminishing Marginal Return.

## PRODUCTION FUNCTION

$$Y = f(X_1 | X_2, X_3, \dots, X_n).$$

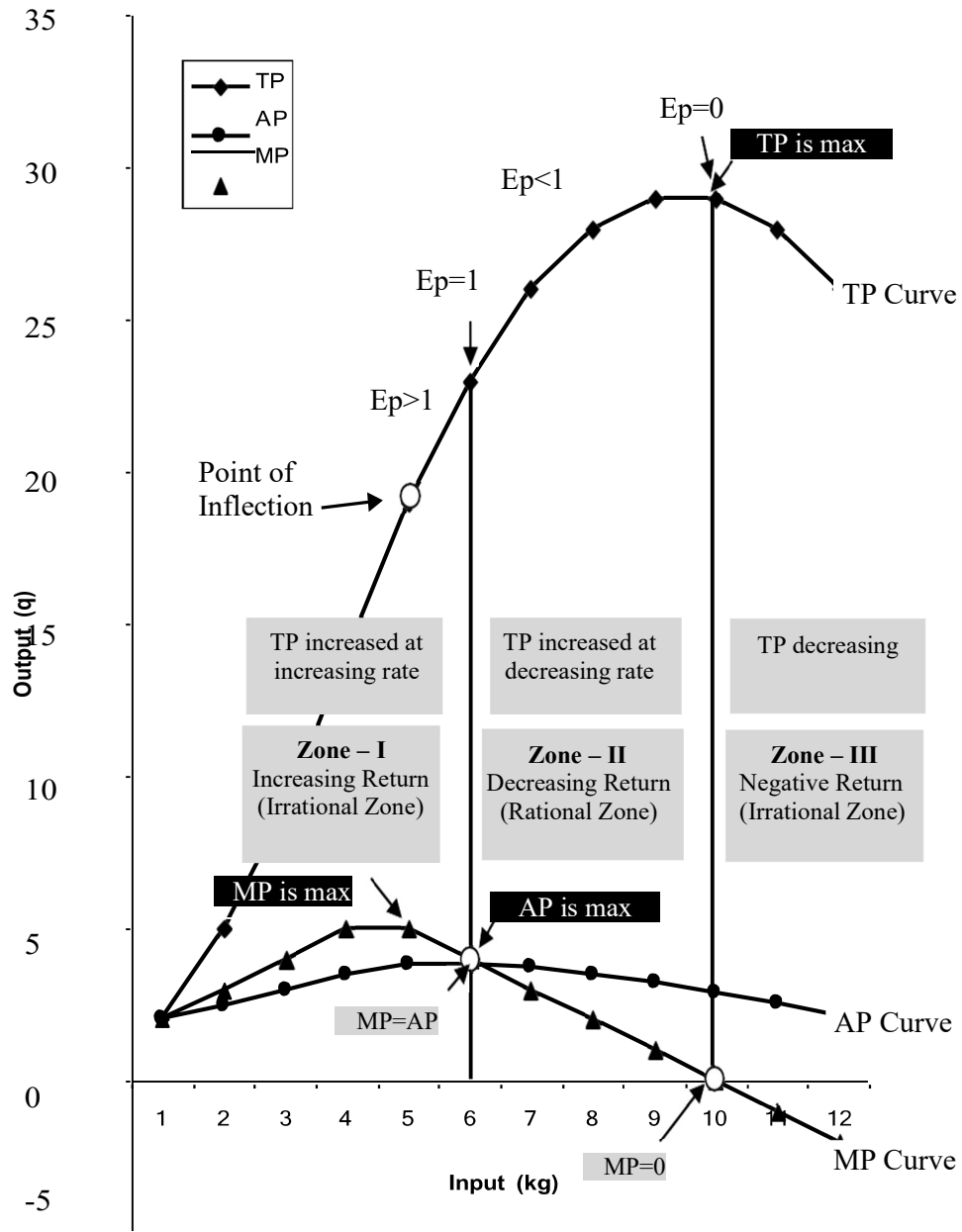
Where, Y = output; X<sub>1</sub> = variable input; X<sub>2</sub>, X<sub>3</sub>, ..., X<sub>n</sub> = fixed inputs.

## OBJECTIVE

- The main objective of this relationship is to find out optimum level of resource use or **resource optimization.**
- The management problem associated with this analysis is **how much to produce?**

## EXAMPLE

Input (X)	Output (TP) (Y)	Marginal Input ( $\Delta X$ )	Marginal Output ( $\Delta Y$ )	AP (Y/X)	MP ( $\Delta Y/\Delta X$ )	Remarks
0	0	-	-	-	-	Increasing at increasing rate
1	2	1	2	2.00	2	
2	5	1	3	2.50	3	
3	9	1	4	3.00	4	
4	14	1	5	3.50	5	Increasing at constant rate
5	19	1	5	3.80	5	
6	23	1	4	3.83	4	Increasing at decreasing rate
7	26	1	3	3.71	3	
8	28	1	2	3.50	2	
9	29	1	1	3.22	1	
10	29	1	0	2.90	0	Decreasing (Negative Returns)}
11	28	1	-1	2.54	-1	
12	26	1	-2	2.16	-2	



**Fig.1: Classical Production Function**

Nature of TP Curve	Nature of MP Curve	Nature of AP Curve
<ul style="list-style-type: none"> <li>• TP increasing at increasing rate</li> <li>• TP increasing at decreasing rate</li> <li>• TP reaches at maximum and remains constant</li> <li>• TP decreasing</li> </ul>	<ul style="list-style-type: none"> <li>• MP increasing</li> <li>• MP attains maximum</li> <li>• MP remains constant</li> <li>• MP decreasing</li> </ul>	<ul style="list-style-type: none"> <li>• AP increasing</li> <li>• AP attains maximum</li> <li>• AP is decreasing</li> </ul>



### Relationship between TP and MP

- When TP increasing at increasing rate, MP also increasing.
- When TP increasing at decreasing rate, MP also decreasing.
- When TP is maximum or remain constant,  $MP=0$
- When TP decreasing, MP becomes negative.
- When TP changes its curvature (from increasing rate to decreasing rate), MP is maximum.

This point is known as point of inflection.

Relationship between MP and TP	Relationship between MP and AP
<ul style="list-style-type: none"> <li>• <math>MP &gt; 0</math>, TP increasing</li> <li>• <math>MP = 0</math>, TP maximum</li> <li>• <math>MP &lt; 0</math>, TP decreasing</li> </ul>	<ul style="list-style-type: none"> <li>• When <math>MP &gt; AP</math>, AP increasing; <math>E_p &gt; 1</math></li> <li>• When <math>MP = AP</math>, AP is maximum; <math>E_p = 1</math></li> <li>• When <math>MP &lt; AP</math>, AP decreasing; <math>E_p &lt; 1</math></li> </ul>

### THREE ZONES OF PRODUCTION FUNCTION

The classical production function can be divided into three zones.

#### Zone-I: Stage of increasing returns

- This region starts from the point of origin and ends where the average product reaches its highest (maximum) or where  $MP=AP$ .
- During this stage, the TP, AP and MP are increasing.
- It is notable that the MP in this stage increases but in a later part it starts declining. Though MP declining, it is greater than the AP.
- AP increases throughout this region indicating that the efficiency of all the variable inputs keeps on increasing.

#### Zone-II: Stage of decreasing returns

- This region starts where 1<sup>st</sup> zone ends. i.e.  $MP=AP$  and extends to the point where  $MP=0$  or TP is maximum.
- In this zone, the TP continues to increase but at a diminishing rate.
- The MP and the AP are declining but are positive.

#### Zone-III: Stage of negative returns

- This region starts when MP crosses zero and becomes negative.
- In this zone the MP becomes negative.
- The TP and the AP are declining.

## **Rational / Irrational Zones**

### **Zone-III**

- This is a **irrational zone** because in this zone the TP is decreasing and MP becomes negative which indicates that additional quantities of inputs reduces the total output.
- So, it is not advisable to operate in this region even if the additional quantities of inputs are available free of cost.
- If a farmer operates in this zone, he will have **double loss**:
  - i.) reduced production and
  - ii) unnecessarily additional cost of inputs.
- For example, many farmers in **canal area** operate in this zone. They use excess water which ultimately reduces the profit.

### **Zone-I**

- This is also **irrational zone** because, the AP increases throughout this zone indicating that the efficiency of all the variable inputs keeps on increasing. So, farmer should not stop in this zone and he must produce up to the level where AP is maximum.
- Input-use should be continued until zone-II. Hence, **it is not reasonable to stop using an input** when its efficiency is increasing. If he stops in this region, some of his resource will remain **unused or underutilized**.
- For example, most of the tribal farmers operate in this region because they don't have sufficient inputs.

### **Zone-II**

- This is a **rational zone**
- In this zone, TP is increasing; MP is decreasing but remains positive.
- Within the boundaries of this region is the area of economic relevance.
- Optimum use of input is somewhere in this zone which, however, can be located only when input and output prices are known.
- This zone represents the range of rational production decisions

## SUMMARY

Zone - I	Zone - II	Zone - III
From origin to AP=MP	From AP=MP to MP=0	From MP=0 to onwards
TP, AP & MP all are increasing	TP is increasing but at a decreasing rate. MP & AP decreasing but are positive.	TP, AP & MP all are decreasing. MP becomes negative.
$E_p > 1$	$E_p < 1$	$E_p < 0$
Stage of <b>increasing return</b>	Stage of <b>decreasing return</b>	Stage of <b>negative return</b>
<b>Irrational zone</b>	<b>Rational zone</b>	<b>Irrational zone</b>
Zone of <b>underutilization</b> of resources	Zone of <b>optimum</b> level of resources	Zone of <b>over utilization</b> of Resources

## OPTIMUM LEVEL OF INPUT USE

Optimum level of input use will be at the stage where the cost of additional input (MC) and the value of additional product (MR) are equal i.e.,  $MC=MR$ . To calculate optimum level, data regarding price of input as well as output will be required. Suppose, price of input is **Rs.5/unit** and price of output is **Rs.4/unit**.

Input (X)	Output(Y)	TotalCost	Total Return	Marginal Cost	Marginal Return	Net Return
0	0	0	0	-	-	0
1	2	5	8	5	8	3
2	5	10	20	5	12	10
3	9	15	36	5	16	21
4	14	20	56	5	20	36
5	19	25	76	5	20	51
6	23	30	92	5	16	62
7	26	35	104	5	12	69
8	28	40	112	5	8	72
9	29	45	116	5	4	71
10	29	50	116	5	0	66
11	28	55	112	5	-4	57
12	26	60	104	5	-8	44

**In this example, the optimum use of resource is somewhere between 8 and 9 unit.**

## APPLICATION OF THE LAW

- The law is widely applicable to **agriculture**.
- Besides, agriculture, it also applies to **mining, fisheries** and also to **building industries** where **the nature has supremacy**.
- It is therefore, often remarked that the part that the **nature** plays in production corresponds to **diminishing returns** and the part which **man** plays conforms to the law of **increasing returns**.
- Thus, we can say that **agriculture**, where nature is supreme, is subject to **diminishing returns**, while **industry**, where man is supreme, is subject to **increasing returns**.

### Reasons why agriculture is subject to the law of diminishing returns

1. Agricultural is related to nature. Man is not a complete master of nature. The operations are likely to be interrupted frequently by rain and other climatic changes.
2. The agricultural operations are spread out over a wide area, and consequently supervision cannot be very effective.
3. Scope for the use of specialized machinery is also very limited.
4. No scope for division of labour.

### Reasons why industry is subject to the law of increasing returns

1. In case of manufacturing industries, **man** has the fullest scope to show his ability.
2. By the introduction of **division of labour** and the use of the most **modern technology**, production can be greatly increased.
3. Concentration of workers under one roof renders **supervision easy and effective**.

But, if the industry is **expanded too much**, supervision will become difficult and the costs will go up. In such situation, **law of diminishing returns will set in**. A prudent industrialist may not allow that stage to come at all.

Hence, the law of diminishing returns has wide applications. In agriculture it sets in earlier, while in industry, it sets in a later stage.

### LECTURE 3: RETURNS TO SCALE

Increasing successive units of a variable factor to a fixed factor will increase output but eventually the addition to output will start to slow down and would eventually become negative. To prevent diminishing returns setting in, **all factors need to be increased**. It is called **returns to scale**. It is also called **long-run production function**. In the long run, all factors can be changed.

#### **DEFINITION**

- Returns to scale studies the changes in output **when all factors are changed**.
- An increase in **scale** means that all inputs or factors are increased **simultaneously** in the **same proportion**.
- In other words, in return to scale, we analyze the effect of **doubling, tripling** and soon of all the inputs used in the production process

#### **THREE PHASES OF RETURNS TO SCALE**

##### **Phase-I: Increasing returns to scale**

If the increase in all factors leads to a more than proportionate increase in output, it is called increasing returns to scale. For example, if all the inputs are increased by 5%, the output increases by more than 5%. In this case the marginal product will be rising.

##### **Phase-II: Constant returns to scale**

If we increase all the factors (i.e. scale) in a given proportion, the output will increase in the same proportion i.e. a 5% increase in all the factors will result in an equal proportion of 5% increase in the output. Here the marginal product is constant.

##### **Phase-III: Decreasing returns to scale**

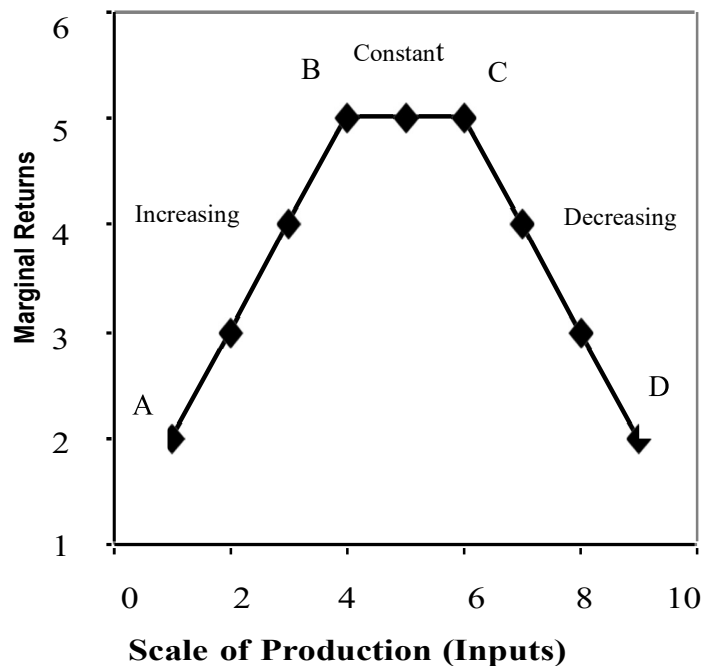
If the increase in all factors leads to a less than proportionate increase in output, it is called decreasing returns to scale i.e. if all the factors are increased by 5%, the output will increase by less than 5%. In this phase marginal product will be decreasing.

#### **EXAMPLE**

<b>Sr. No.</b>	<b>Scale of Production (Inputs)</b>	<b>Total Output / Returns (qtl)</b>	<b>Marginal Return (qtl)</b>	<b>Remarks</b>
1	2W* + 1AL*	2	-	-
2	4W + 2AL	5	3	<b>Stage-I</b> Increasing Return
3	6W + 3AL	9	4	

4	8W + 4AL	14	5	
5	10W + 5AL	19	5	<b>Stage-II</b> Constant Return
6	12W + 6AL	24	5	
7	14W + 7AL	28	4	<b>Stage-III</b> Decreasing Return
8	16W + 8AL	31	3	
9	18W + 9AL	33	2	

\* W = Worker; AL = Acres of Land



**Fig. : Returns to Scale**

In the table, we see that when we employ 2 worker on 1 acres of land, the total product is 2 qtls. Now to increase output, we double the scale, but the total production increases to more than double (to 5 instead of 4) and so on up to certain point. If the scale of production is further increased, the marginal product remains constant to a certain point, and beyond that, it (MP) starts diminishing. The same is explained by the figure where AB, BC and CD indicate increasing, constant and decreasing returns to scale, respectively.

### **IMPORTANCE AND LIMITATIONS**

However, it is very important to state that, in actual life, the scale of production cannot be increased beyond a certain limit. To increase the scale of production means that all the factors being used in production can be increased at will and indefinitely. **But it is not so in practice.**

While land, labour and capital can be increased at will, organization or entrepreneur does not admit for being increased, **since the entrepreneur or organizer remains the same**. In other words, there is at least one factor of production which cannot be varied at will, and, hence when more output is desired, the proportion among the factors of production used must change. Hence, returns to scale are **more theoretical interest** than being relevant to actual life.

#### **DIFFERENCE BETWEEN LAWS OF RETURNS AND RETURNS TO SCALE**

<b>Laws of Returns</b>	<b>Returns to Scale</b>
Short run Production function.	Long run Production function.
Only <b>one factor is varied</b> and all other factors are kept constant.	The Scale changes i.e., all factors are changed simultaneously in the same ratio.
Law does not apply when the factors are used in fixed proportions.	Law does apply when the factors are used in fixed proportions.
Widely applicable.	More of theoretical interest than being relevant to actual life.

## LECTURE 4: COSTS-CLASSIFICATION-SEVEN PRODUCTION COST CURVES

Cost refers to the money value of effort expended or sacrifice made in producing a commodity or rendering a service or achieving a specific objective.

Costs and revenues are the two major factors that a profit maximizing farm firm needs to monitor continuously. It is the level of cost relative to revenue that determines the farm's overall profitability. In order to maximize profits, a farm tries to increase its revenue and lower its cost. The firm's output level is determined by its cost. The purpose of this exercise is to explore cost and its relevance to decision-making.

### CLASSIFICATION OF COSTS :

The manner in which costs are classified or deferred is largely dependent on the purpose for which the cost data are being outlined. There are many different types of costs relevant for decision making under varying situations.

#### **1. Fixed cost and Variable costs**

<b>Fixed Costs</b>	<b>Variable Costs</b>
1. Fixed costs are those costs which do not vary with changes in output	1. Variable costs are those costs which increase with the level of output
2. The costs associated with fixed resources are called fixed costs	2. The costs associated with variable resources are called variable costs
3. Fixed costs are associated with the very existence of a production unit and therefore must be paid even if the output is zero.	3. Variable costs are paid when there is some output
4. Ex.: Interest on borrowed capital, rental payments, portion of depreciation charges on equipment and buildings, salaries of permanent employees and managers, taxes etc	4. Ex : Payments for raw materials, seed, fertilizers, pesticides, charges on fuels and electricity, wages of casual labour and salaries of temporary staff etc.
5. The distinction is only for the short run	5. In long run all costs are variable
6. Fixed costs are not relevant for decision making purpose	6. Variable costs are relevant for decision making purposes

#### **2. Explicit and Implicit costs :**

Explicit costs are those that are recorded in their books as representing an actual transfer of money. These are explicit or nominal costs and often do not represent full economical costs, that should be considered on a given decision. Actual outlay of cash relevant for managers to



exercise control over it. Out of pocket costs Economists use implicit costs or imputed cost in evaluating a decision. Time cost in money terms can be referred as implicit cost. Do not involve actual outlay of cash. Assumed costs or hypothetical costs. Do not affect business funds and costs of operation of farm business. Ex : Interest on owned capital, contribution of family labour and owners, rental charges on owned land.

### **3. Direct costs and indirect costs :**

There are some costs which can be directly attributed to production of a given product. The use of raw materials-seed, fertilizers, labour input and machine-time involved in the production of each unit can easily be determined. There are certain costs like depreciation of machinery and buildings, electricity charges, administrative expenses and stationery charges, that cannot easily and accurately be separated and attributed to individual units of production, except on arbitrary basis. While referring to the separable costs of first category accountants call them direct or prime costs per unit. The joint costs of the second category are referred to as indirect or over-head costs. Direct and indirect costs are not exactly synonymous to what economists refer to as variable costs and fixed costs.

**4. Private costs vs social costs :** Private costs are those that accrue directly to the individuals of firms engaged in relevant activity. External costs, on the other hand are passed on to persons not involved in the activity in any direct way, they are passed on to society at large.

**5. Relevant costs and irrelevant costs :** The relevant costs for decision-making purposes are those costs which are incurred as a result of the decision under consideration. These costs are also referred as incremental costs. There are three main categories of relevant or incremental costs. 1. Present period explicit costs 2. Opportunity costs implicitly involved in the decision 3. Future cost implications that flow from the decision Costs that have been incurred already and costs that will be incurred in future regardless of the present decision are irrelevant costs.

**6. Separable and Common costs :** Costs can also be classified on the basis of their traceability. The costs that can be easily attribute to a product, a division or a process are called separable costs and the rest are called non-separable or common costs. They are also referred as direct and indirect costs. The distinction between direct and indirect costs is of particular significance in a multi product firm for setting up economic prices for different products.

**7. Opportunity costs and Actual costs :** Opportunity cost refers to the value of benefits of a foregone alternative. The cost of using one resource in production of a product is the return that would have been received from the same resources if used in its most profitable alternative use. It is the cost, equivalent to the returns foregone from the next best alternative. Actual costs are the costs actually increased by spending costs.

## **SEVEN PRODUCTION COSTS CURVES**

In short run a firm incurs some costs that are also associated with variable factors and others that result from fixed factors. The seven production costs are ;

1. Total variable costs
2. Total fixed costs
3. Total costs
4. Average variable costs
5. Average fixed costs
6. Average total costs or average cost
7. Marginal cost

**1) Total Costs (TC):** Total costs are the sum of total variable costs and total fixed costs.

**2.) Total Variable Costs (TVC):** These are also called out of pocket costs. The total variable cost represents the sum of expenditure on variable inputs for any level of output. They are short-run costs. Because the farmer has control of all the variable inputs, TVC must be covered in the short-run, or else the farmer will not incur expenditure on these variable inputs.

**3.) Total Fixed Costs (TFC):** Sum of expenditures which will be incurred irrespective of output level. These are relatively long-run costs.

**4. Marginal Costs (MC):** Marginal cost is the additional cost necessary to produce one more unit of output. Marginal cost depends entirely upon the nature of production function and the unit costs of the variable inputs. Marginal cost is comprised entirely of variable costs. No fixed costs are part of marginal costs, because they are neither increased nor decreased by additional production.

**5. Average Variable Costs (AVC):** Average variable cost is worked out by dividing total variable costs by the amount of output. AVC varies with the level of production. AVC is inversely related to average physical product, i.e. when APP (Average physical product) is increasing, AVC is decreasing, when APP is maximum AVC is minimum.

**6. Average Fixed Costs (AFC):** It is worked out by dividing total fixed costs by the amount of output. As output increases, AFC (Average fixed cost) decreases.

**7. Average Total Cost (ATC):** It can be computed by two ways (a) by dividing the total costs by output or (b) by adding AFC and AVC. The shape ATC depends upon the shape of the production function. ATC is often referred as the unit cost of production. ATC decrease as the output increases.

1.  $TC = TFC + TVC$
2.  $ATC = TC + \text{No. of output units (or AFC + AVC)}$
3.  $TFC = \text{Sum of fixed costs}$
4.  $AFC = TFC + \text{No. of output units}$
5.  $TVC = TC - TFC$ , or sum of all variable costs
6.  $AVC = TVC + \text{No. of output units}$
7.  $MC = (TVC \text{ or Change in Total cost}) / MPP$  (marginal physical product)

**Relationship Between Average Fixed Cost, Average Variable Cost, Average Total Cost:**

- As output increases, average fixed cost (AFC) decreases, as shown graphically in Fig.1.1.
- When output is zero,  $AFC = TFC$ , AFC always slopes downwards regardless of production function. As shown graphically in fig.1.1.
- Like AFC, AVC cannot be computed when output is zero.
- AVC is inversely related to the Average fixed product.
- AVC first falls due to economies of large scale production and then rises due to diseconomies of scale in production.
- When AVC is decreasing, the efficiency of the variable input is increasing.
- The efficiency is at maximum when AVC is at minimum.
- ATC decreases as the output increases, attains a minimum and increases thereafter.
- Average fixed cost (AFC) curves will continue to decline and never show upward moment because after maximum product is achieved, inputs beyond this become irrational.
- As the production expands, the AVC keeps on declining. It reaches the lowest point and then bends upwards. At this point APP (average physical product) is highest.
- ATC curve has the same shape as AVC. Difference is that the lowest point in case of AVC reaches earlier as compared to ATC.

**Relationship Between Marginal and Average Cost:**

- Average variable cost continues to decline as long as the marginal cost is below it, but it starts rising at the point where MC crosses AVC.
- MC Cost always rises more sharply than the AVC. Similar relationship holds between marginal cost and average cost. But increase in fixed cost will increase average total cost not to the marginal cost.

- When the MC is less than AC (average cost), average cost is falling and when MC is greater than AC, average cost is rising.
- At the point of intersection, where MC equals AC, average cost curve have just caused to fall, and afterward start to rise. Thus it is the minimum point on the AC curve.

**Relationship of MC to AVC and ATC :**

1. MC cuts both AVC and ATC at their minimum.
2. When both MC and AVC are falling, average cost will fall at a slower rate.
3. When MC and AVC are both rising, MC will rise at a faster rate. As a result MC will attain its minimum before the AVC.
4. MC is less than AVC ( $MC < AVC$ ), AVC will fall. When MC exceeds AVC, ( $MC > AVC$ ) AVC will rise.
5. At the point of intersection whose  $MC = AVC$ , AVC is minimum. AVC has just used to fall and attained its minimum but not yet begin to rise.  $MC = AVC$  at the lowest point of AVC.
6. MC curve cuts the ATC at the latter's minimum point.  $MC = AC$  at the lowest point of AC.
7. AVC and AC curves fall as long as the MC curve is below them and vice versa.

## **LECTURE 5: FARM RECORDS AND REGISTERS**

### **Introduction**

It is always said that Indian cultivator is good producer rather than good business man. He knows how to produce but he does not know how to keep accounts of the farm. Accurate and up-to-date records are essential to good management and successful farming. It is therefore very necessary to have knowledge about farm accountancy in order to handle the farm business efficiently.

Records are essential in any management operation. A good record keeping system will allow managers to monitor and evaluate the performance of their production system. It will help them identify problem area in the production plan, and to make the necessary corrective measures.

### **FARM RECORDS**

Records are statements of fact or data concerning a specific subject which may be specified in physical, monetary, mathematical or statistical terms. Farm records pertain to information recorded on the day-to-day operation of a particular farm.

Farm records can be defined as systematic documentation of all activities taking place in a farm enterprise over a given period of time. It is an act of writing down every activity engaged in on the farm in every production season and at different stages of the production process up to the final disposal of the goods and services to the ultimate consumer.

### **Benefits or importance of Farm Records**

The benefits of maintaining farm records are as under:

#### **1. Means to higher income**

Farm records are the sources to know the present income and net returns of the farm. They help to check the unproductive expenditure and identify profitable enterprise to improve the returns on the farm.

#### **2. Basis for diagnosis and planning**

Farm records provides data for farm planning. Analysis of farm records helps in diagnosing the omissions in current plan.

#### **3. Way to improve managerial ability of the farmer**

Systematic recording of farm business transactions helps the farmer in knowing the strengths and weaknesses of the business. It leads to the improvement in the management of farm. It helps to acquire business habits which can help in taking advantage of changes in the economic environment. The farmer gets a better insight into the working of his business, which helps in

finding out the defects which can be set right by exercising better control and effecting economies. Farmer can avoid mistakes and losses which would otherwise result to dependence only on his memory for guidance.

#### **4. Basic for credit acquisition**

Properly kept records and accounts are authentic records with the help of which the lending agencies can sanction the loans easily.

#### **5. Basic for research in agricultural economics**

Research requires precise and correct data which is possible only if proper records and accounts are maintained on the farms included in the study.

#### **6. Basic for government policies**

The farmers need to continuously feed the facts for state and national farm policies such as land policies price policies and crop insurance. Records and accounts are helpful in obtaining the correct data for examining and developing such policies to be sound.

In general, farm records are essential to:

1. know financial status at a point of time.
2. know gains and losses over time.
3. know better source of income and items of costs.
4. keep a check on unproductive expenditure.
5. examine comparative profitability & costs involved in different enterprises
6. know weak points of farm organization.
7. develop rational short term and long-term production plans.

#### **Limitations in the maintenance of farm records**

1. Illiteracy
2. Small size of holding
3. Fear of taxation
4. Complicated nature of record keeping

### Records maintained on an average farm as well as on commercial dairy farm

Records maintained on an average farm	Records maintained on commercial dairy farm
1. Land use records 2. Farm livestock records 3. Permanent dead stock register 4. Farm labour records 5. Input records 6. Feed records 7. Crop production and disposal records 8. Live stock production and disposal records 9. Input and feed stock register 10. Log book	1. Live stock register 2. Milk production register 3. Milk disposal register 4. Calf feeding register 5. Feeding schedule register 6. Insemination register 7. Calving register 8. Gynecological status register 9. Health and vaccination register 10. Mortality register 11. History sheet 12. Cash book

### 1. Land Use Records

Sr. No	Particulars	Area (ha)
1	<b>Land-use pattern</b>	
	a. Total land holding	
	b. Land leased-in	
	c. Land leased-out	
	d. Cultivated land	
	e. Irrigated land	
	f. Un-irrigated land	
	g. Permanent fallow	
	h. Land under fruits/plantation crops/trees	
	i. Land under building	
	j. Problematic land	

2	Cropping pattern		
	Season	Name of crop	Area (ha)
	<b>Kharif</b>	a.	
		b.	
		c.	
		d.	
		<b>Sub-total</b>	
	<b>Rabi</b>	a.	
		b.	
		c.	
		<b>Sub-total</b>	
	<b>Summer</b>	a.	
		b.	
		<b>Sub-total</b>	
	<b>Grand-total</b>		

## 2. Farm Livestock Records

S No.	Type	Number		Breed	Age	Year of purchase	Purchase value (₹)	Rem
		Home bred	Purchased					
1	<b>Milch animals</b>							
	cows							
	She-buffaloes							
2	<b>Draft animals</b>							
	Bullocks							
	He-buffaloes							
3	<b>Young stock</b>							
	Heifers							
	Calves							
4	<b>Other</b>							
	Sheep							
	Goat							
	Poultry birds							
	Camel							
	Horse							

## 3. Permanent Dead Stock Register

Sr. No.	Particulars	Year of construction/ purchase	No.or Size	Rate(₹)	Constructio npurchase value (₹)	Amount spent on repairs/ maintenance (₹)	Rem.
1	<b>Buildings</b>						
	Farm building						
	Cattle shed						
	Wells / tube wells						
	Pump house						
2	<b>Irrigation equipments</b>						
	Oil engines						
	Electric motors						
	Submersible pump						
	Drip irrigation set						
	Fountain set						
3	<b>Farm machinery / Equipments</b>						
	Tractors						
	Trolley						
	Bullock cart						
	Threshers						
	Sprayers						
	Dusters						





### 7. Crop Production and Disposal Records

Season	Crop	Area(ha)	Date of harvest	Main Product Qty.	By Product Qty.	Household Consumption	
						Qty.	Value(₹)
Kharif	a.						
	b.						
	c.						
Rabi	d.						
	e.						
Summer	f.						
	g.						

Used as Seeds		Kind Payments		Sold		Balance	
Qty.	Value(₹)	Qty.	Value(₹)	Qty.	Value(₹)	Qty.	Value(₹)
a.							
b.							

### 8. Livestock Production and Disposal Records

Date/ Month	Milk						
	Production (lit)	Household Consumption		Conversion to Ghee		Sold	
		Qty.(lit)	Value (₹)	Qty.(lit)	Value(₹)	Qty.(lit)	Value(₹)
Date/ Month	FYM						
	Production (cart-load)	Household Consumption		Sold		Balance	
		Qty. (cart-load)	Value (₹)	Qty. (cart-load)	Value (₹)	Qty. (cartload)	Value (₹)
Date/ Month	Eggs						
	Production Qty. (no.)	Household Consumption		Sold		Balance	
		Qty.(no.)	Value (₹)	Qty.(no.)	Value(₹)	Qty.(no.)	Value(₹)

### 9. Input and Feed Stock Register

Name of Input	Opening Balance Qty.	Receipt		Usage		Balance Qty.	Source of purchase	Details of usage	Cost(₹)
		Date	Qty.	Date	Qty.				
FYM									

Cake									
Seeds									
Urea									
DAP									
SSP									

**10. Log Book**

**Name of Machinery:**

**Date of purchased:**

**Price `:**

Date	Work/operation done	Time (hrs)	Power/fuel consumed		Lubricants		Repairs/maintenance
			Qty	`	Qty.	`	

## **LECTURE 6: FARM PLANNING**

- Farm planning is the foundation of management.
- Farm planning precedes all other managerial functions.
- It is the determination of a course of action to achieve the desired results.
- It is deciding in advance, *viz.*, what to produce?, how to produce?, when to produce?; *how* to borrow?, how much to borrow?, when to borrow?, where to buy and sell?, when to buy and sell?, how to buy and sell?, *etc.*
- Farm planning bridges the gap from where we are to where we want to go.
- It is characterized as the process of thinking before doing.
- It is an intellectual process.
- It governs the survival, progress and prosperity of farm organization in a competitive and dynamic environment.
- It is a continuous and unending process.

### **DEFINITION**

- **Farm Planning** can be defined as the deliberate and conscious effort on the part of the farmer to think about the farm programmes **in advance** and adjust them according to new knowledge on the technological developments, changes in physical and economic situations, price structures, etc.
- **Farm planning** is a process of making decisions regarding the organization and operation of farm business, so that it results in continuous maximum net returns of farm business.

### **WHY FARM PLANNING IS NECESSARY?**

It has been observed on majority of farms that there is **under or over utilization** of existing farm resources. Due to this, farmers fail to get maximum net return. Thus, it is immediate necessity of a farm to reorganize its structure and for the proper allocation of its resources. This requires proper farm planning.

### **IMPORTANCE OF FARM PLANNING**

- To choose different farm activities which are suited to the given farm conditions.
- To look into the future and decide on suitable course of action.
- To select appropriate enterprise combinations that results in the better resources.
- To help the farmers in timing various jobs and operations for smooth conduct of operations without competition.

- To avoid wastages that occurs in the resource use.
- To provide guidance and flexibility to the farmers for ensuring better use and growth of the farm.
- To provide appropriate allocation of resources for producing the requisite products for marketing and household consumption.

### **OBJECTIVES OF FARM PLANNING**

1. Efficient use of scare resources.
2. Selection and combination of different farm enterprises or activities.
3. Utilization of advance technology.
4. Easy and efficient management of farm business.
5. Continuous and maximum net returns of farm business.

### **THE INFORMATION REQUIRED FOR FARM PLANNING**

1. Financial returns of farm
2. Requirements of variable inputs
3. Requirements of fixed resources

### **TYPES OF FARM PLANNING**

- **Simple farm planning:** It implies planning for minor changes or for a particular enterprise. It is adopted either by a part of land for one enterprise or to substitute one resource by another.
- **Complete farm planning:** It envisages farm planning for the whole farm, i.e. for all enterprises on the farm, for a change in the farm structure and organization. Complete farm planning aims for a change in the entire farm structure and organization. It is adopted for the farm as a whole.

### **WHAT IS A FARM PLAN?**

**A farm plan** is a programme of the total farm activity drawn up in advance.

### **CHARACTERISTICS OF GOOD FARM PLAN**

1. It should provide **for efficient use of farm resources** such as land, labour and capital.
2. It should provide **balanced combination** of enterprises.
3. It should provide **appropriate combination** of different crops.
4. It should help to maintain and improve **soil fertility**.
5. It should help to raise and stabilize farm **earnings**.

6. It should avoid excessive **risks**.
7. It should provide **flexibility**.
8. It should utilize the farmer's **knowledge**, training **experience** and take into account of the farmer's **likes and dislikes**.
9. It should provide for all of **up-to-date** modern agricultural methods and practices.
10. It should give considerations to efficient **marketing facilities**.
11. It should provide programme of obtaining, using and repaying the **credit**.

#### **BASIC STEPS OF FARM PLANNING**

1. Statement of objective.
2. Survey of actual conditions of the farm and availability of resources.
3. Analysis / diagnosis of the existing plan.
4. Identification of enterprises to be included.
5. Discussion with the farmers and other specialists to examine the possibilities for improvement through alternative plan operations.
6. Preparation of alternative plans on the basis of existing co-efficient.
7. Identification of risk.
8. Selection of final plan for implementation.

## LECTURE 7: FARM BUDGETING

### WHAT IS FARM BUDGETING?

- The expression of a farm plan in **monetary terms** by estimation of **returns, expenses** and **net income** is called **farm budgeting**.
- Farm planning and farm budgeting **go side by side**.
- It is essentially a presentation of **costs and returns**, accompanied by a statement showing the **physical quantities of inputs and output**.

### OBJECTIVES OF FARM BUDGETING

1. **To estimate the profitability** of a particular pattern of organization
2. **To determine the change in profits** which is likely to follow a particular change.
3. **To compare** different cropping patterns or changes in organization **on a profit basis**.

### TYPES OF FARM BUDGETING

1. Enterprise budget
2. Partial budgeting
3. Complete budgeting

### FARM ENTERPRISE BUDGET

- It is the estimation of expected **income, costs and profit** for an **enterprise**.
- It is prepared **for a unit i.e.**, acre, hectare, for a crop, one head of livestock, *etc.*
- Farm budgets can be developed **for each potential enterprise**.
- This facilitates easy **comparison** between the enterprises

### How to prepare an enterprise budget?

1. It consists of three elements *viz.*, **income, costs and profitability**.
2. **Income** is computed by estimating the expected output and expected price.
3. The estimated **output** is the average yield under normal weather conditions.
4. **Output price** should be the average price expected in future.
5. **Variable costs** should be estimated on the quantity of inputs required and their prices.
6. **Fixed costs** to be included such as land revenue, depreciation, interest on fixed capital and rental value of d land, etc.
7. Finally, **net profit** is to be estimated on bases of estimated income and expenditure.

## PARTIAL BUDGETING

- Partial budgeting is a **statement of anticipated changes** in costs, returns and profitability for a minor modification.
- When a farmer contemplates few **modifications or minor changes** in the existing plan of the farm business, partial budgeting technique is employed.
- It is similar to that of **marginal analysis**, wherein the changes in costs and returns resulting from proposed modifications are alone considered.
- It is prepared in the **form of an account** which consists of **four important elements viz.**, added costs, added returns, reduced returns and reduced costs.
- It is generally used to evaluate the profitability of **input substitution, enterprise substitution and scale of operation.**

### Elements of Partial Budgeting

Debit	Credit
Added costs :	Added returns :
Reduced returns :	Reduced costs :
<b>Total Debit :</b>	<b>Total Credit :</b>
Incremental Income = (Added Returns + Reduced Costs) - (Added Costs + Reduced Returns)	

## COMPLETE BUDGETING

- This method is used to make a budget **for the whole farm.**
- It is used in situations involving **extensive remodeling** of the farm organizations.
- It includes all the individual cost and return items for the farm, so that the overall netreturn can be estimated **from the whole farm.**
- It considers **all aspects** of farm organization **simultaneously.**

### Main steps of complete farm budgeting

1. Listing of available resources.
2. Estimating crop areas and livestock numbers.
3. Estimating physical inputs and outputs.
4. Estimating fixed costs.
5. Estimating factor and product prices.
6. Calculating costs and returns.

### EXAMPLE 1 : PARTIAL BUDGETING

For a farmer growing groundnut, the expenditure on seeds and groundnut yield in existing (local variety) and alternate situation (improved variety) are as under:



Existing situation	Alternate situation
Local variety: 50 kg @ Rs. 30/kg = Rs. 1500	Improved variety: 50 kg @ 50/kg = Rs. 2500
Yield= 600 kg @ Rs. 30/ kg. =Rs.18000	Yield=700 kg @ Rs. 30/kg.= Rs.21000

### The partial budget for proposed modification

Items	Debit	Items	Credit
<b>Added Costs:</b>	Rs. 2500	<b>Added Returns:</b>	Rs. 21000
<b>Reduced Returns:</b>	Rs. 18000	<b>Reduced Costs:</b>	Rs. 1500
<b>Component A</b> (Added Costs + Reduced Returns)	<b>Rs. 20500</b>	<b>Component B</b> (Added Returns + Reduced Costs)	<b>Rs. 22500</b>
<b>Incremental Income = Component B – Component A</b> <b>= Rs. 22500 – Rs. 20500 = Rs. 2000/-</b>			

### EXAMPLE 2: ENTERPRISE BUDGET

#### Enterprise Budget for Cotton per Hectare

Sr.	Particulars	Physical	Rate	Amount Rs.
1	Income			
	Yield	25 q	5500/q	1,37,500
2	Expenditure			
	(a) Fixed Cost			
	Rental value of land	1 ha	30000	30,000
	Interest of fixed capital	-	-	1,000
	Depreciation	-	-	3,000
	Land revenue	-	-	1,000
	Sub-Total			35,000
	(b) Variable cost			
	Labour	200	100	20,000
	Seeds	1.2 kg	2500/kg	3,000
	Bullock labour	20	300	6,000
	Tractor charges	-	-	5,000
	Fertilizers	-	-	10,000
	Irrigation	-	-	6,000
	Plant Protection chemicals	-	-	5,000
	Miscellaneous	-	-	5,000
	Sub-total			60,000
	Total expenditure			95,000
3	Net Profit			42,500

## **LECTURE 8: CO-OPERATION-MEANING- PRINCIPLES OF CO-OPERATION.**

Co-operation refers to the association of persons or businesses for common usually economic benefit.

**Definition:** According to International Co-operative Alliance, A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.

According to Huber Calvert “Co-operation is a form of organization, where in persons voluntarily associate together on the basis of equality for the promotion of common economic interest of themselves”

According to Sir. Horace Plunkett, “Co-operation is self - help made effective by **organization.**”

Co-operation helps in protecting the weak, provides equal justice to all and promotes welfare of the society.

The motto of co-operation is **“Each for all and all for each.”**

Ex: Producer’s cooperatives, Consumer’s cooperatives, Marketing cooperatives, Credit cooperatives, Multi-purpose cooperative societies, etc.

### **PRINCIPLES OF COOPERATION:**

**Rochdale pioneers** were a group of 28 weavers and other artisans in Rochdale region of England formed against the advent of industrial revolution forcing many skilled workers into poverty. Rochdale pioneers were most famous for designing the Rochdale principles i.e. a set of principles of co-operation now followed worldwide. The important principles of co-operation are

#### **1. Principle of open and voluntary association:**

The admission and membership into a co-operative society is open to everybody irrespective of caste, religion, any social and political affiliations. It does not allow any discrimination. The membership is open as well as voluntary. It implies that there is no compulsion exercised on any individual to join or withdraw from the society.

#### **2. Principle of Democratic organization:**

Co-operatives are organized and managed based on the principle of democracy. Each member is given equal right to vote irrespective of his share capital in the society. **“One man one vote”** is the important principle of cooperation. The elected board of management will work based on the acts, rules and laws guiding the matters of co-operation.

### **3. Principle of service:**

Co-operatives main aim is to cater to the needs of its members. Unlike business organizations, the cooperatives are more service - oriented rather than profit - oriented. This spirit of service invokes loyalty among the members.

### **4. Principle of self-help and mutual help:**

The funds of society are contributed by the members who are financially weak. The society can borrow required capital from different financial sources at lower interest rates and offer the same to the members for productive purposes. This may not be possible at individual level. Hence, in co-operatives, the principle of self-help and mutual-help can work for the welfare of the members.

### **5. Principle of distribution of profits and surpluses:**

Co-operatives are not interested in making profits like business organizations. But, they are also required to run on same minimum profits through efficient working. In co-operatives a certain amount of profits i.e. **25 per cent** will be kept back as '**Reserve fund**' and the remaining 75 per cent can be distributed among the members based on their contribution to the share capital.

### **6. Principle of political and religious neutrality:**

The important strength for growth of the cooperatives is the unity among the members and non-interference of political parties. The members of the cooperatives should continuously work for the growth of the society with harmony, integration and un-biasedness towards any religion or political party. The political and religious differences of the members should be kept away for the smooth running of the cooperatives.

### **7. Principle of Education:**

If the members in cooperative society are illiterate, their participation is poor in running the cooperatives. Hence, education to members and training to office bearers and executives is necessary for promoting awareness and efficiency in the operations of cooperatives.

### **8. Principle of thrift:**

The cooperatives must aim at inculcating the habit of thrift i.e. "**Propensity to Save**" among the members. Thrift and service are part and parcel of cooperation. The members who save their money with cooperatives should get incentives. Thrift is very much basis of self-help, but it must precede credit. It implies that in sanctioning of credit, a priority should be given to the members who save.

**9. 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.

**10. Principle of honorary service:**

The honorary personnel will simply supervise and direct operations of cooperatives. But to have efficiency in the society, trained secretaries with salaries are needed. But if the societies are started with poor members, it is better to have honorary office bearers, because such societies cannot afford to pay salaries to such office bearers.

## **LECTURES 9&10: CO-OPERATIVE MOVEMENT IN INDIA- PRE INDEPENDENCE ERA & POST INDEPENDENCE ERA**

Co-operative societies were created with the intention of fair trade services to help workers improve their livelihood. The origin and history of cooperative movement in India can be dealt under two eras.

### ***a) Pre-Independence Era:***

The cooperative movement in India during pre-independence era can be divided in to four phases viz.,

1. Initiation phase (1904-1911)
2. Modification phase (1912-1918)
3. Expansion phase (1919-1929)
4. Restructuring phase (1930-1946)

Rural credit service was dominated by non-institutional financial agencies (i.e. private money lenders) who charged exorbitant interest rates from farmers. In extreme cases, the poor farmers had to sell their belongings to clear their debts. The farmers revolted against private money lenders in parts of Maharashtra that made the Government to passed three acts viz.,

- Deccan Agriculture Relief Act (1879)
- Land Improvement Loan Act ( 1883)
- Agriculturists Loan Act (1884)

During 1892, the Madras Government appointed **Frederick Nicholson** to study the village banks organized on co-operative lines in Germany. On his return he submitted a report and raised a slogan "*Find Raiffeissen*".

Indian Famine Commission in 1901 also supported the idea of Frederick Nicholson for the formation of credit societies on Raiffeissen model. Another committee in 1901 headed by Sir Edward Law also favored the credit societies to be started on Raiffeissen model. These recommendations resulted in the enactment of co-operative credit societies Act of 1904.

### **1. INITIATION PHASE (1904-1911)**

#### **Salient Features of 1904 Act**

1. Rural-urban classification of societies was made. Rural Societies are those having 4/5<sup>th</sup> of farmers, while urban societies are those with 4/5<sup>th</sup> of their members as non- agriculturists.
2. Registrar was supposed to organize and control the societies.
3. Loans could be given to members on personal or real (immovable) security, and,
4. One-man one vote was specified in the Act.

## **MODIFICATION STAGE (1912-1918)**

### Salient Features of 1912 Act

The shortcomings of the Act of 1904 were rectified by enacting another co-operative societies Act of 1912.

1. The new act provided legal protection to all types of co-operatives including central financing agencies and supervising unions. The distinction between rural and urban societies was given a new focus.
2. The liability was limited in the case of primary societies and unlimited for central societies.
3. The act gave provision for the registration of all types of co-operative societies, it led to the emergence of rural co-operatives both on credit front and non-credit front, but this growth was uneven spatially.

As a consequence of this observation in 1914, the Government appointed a committee under the chairmanship of Sir Edward Mac Lagan to probe into the performance of the societies. The report of Mac Lagan committee came out in 1915. The Mac Lagan committee's recommendations and Act of 1912, introduced co-operative planning process in India.

The observations of Mac Lagan committee were,

1. Illiteracy among the members,
2. Misappropriation of funds,
3. Rampant nepotism,
4. Delays in sanction of loans and
5. Irregular repayment of loans.

The observations prompted Mac Lagan to offer the following suggestions for effective functioning of the societies.

1. All members should be made aware of the co-operative principles,
2. Dealings should be strictly confined to the members only.
3. Honesty should be the main criterion for one to take loan,
4. Applications should be carefully scrutinized before advancing loan and there should be careful follow up for effective utilization of loan,
5. Loans should not be given for speculative purposes,
6. Ultimate authority should be with all the members but not with the office bearers
7. Thrift should be encouraged so also building up of reserve fund,
8. One member-one vote should be strictly followed,
9. Capital should be raised as far as possible from the savings of the members only, and
10. Punctual repayment should be insisted.

**EXPANSION STAGE (1919-29)** was acclaimed as Golden Era co-operative movement

Under the Montague-Chelmsford Act of 1919, co-operation became a provincial subject which gave further impetus to the movement. The economic prosperity during the period between 1920-29, contributed to further growth of the movement. The same period also witnessed the birth of co-operative land mortgage banks first in Punjab and subsequently land mortgage banks were registered in Madras (1925) and Bombay (1926).

### **RESTRUCTURING STAGE (1930-46) DEPRESSION PHASE**

The Indian Central Banking Enquiry Committee (1931) also highlighted the glaring lacunae, particularly with reference to undue delays and inadequacy of credit. Meanwhile Madras Co-operative Societies Act of 1932 and Madras Co-operative Land Mortgage Bank Act of 1934 came into force with the former aiming at the growth of co-operative movement, while the latter for developing the long term credit.

The economic depression in early thirties and abnormal fall in prices of agricultural commodities led to the collapse of the co-operative movement. Various enquiry committees viz., Vijayaraghava Charya Committee in Madras, Rehabilitation Enquiry Committees of Travancore and Mysore, Kale Committee in Gwalior, Mehta and Bhansali Committee in Bombay and Wace Committee in Punjab etc., were appointed for examining the possibilities of restructuring and reorganization of societies. The movement picked up momentum during the period of Second World War, when there was a rise in the prices of agricultural commodities. This resulted, in the recovery of over dues of the societies and betterment of financial condition of the co-operative institutions.

Prof. D. R. Gadgil, heading the Agricultural Finance Sub-Committee appointed by the Government of India, recommended in 1944, the adoption of limited liability to the co-operatives, assessing credit-worthiness based on repayment capacity of the farmer, subsidizing the cost of administration of small co-operative societies, linking of credit with marketing, etc. The Co-operative Planning Committee in 1945, under the chairmanship of R.G. Saraiya attributed the limited progress of co-operatives to the laissez-faire policy of the State, the literacy of the people, etc.

### **II Post-Independence Era**

Planning commission set up in March, 1950 prepared the **First Five Year plan (1951-1956)**.

The main objectives with regard to co-operative were follows.

1. Involvement of co-operatives in rural development programmes

2. Development of a well organized credit system
3. Extending co-operatives to the fields of industry, housing, marketing, farming, etc.
4. Training of higher personnel engaged in co-operatives.

The All India Rural Credit Survey Committee (**AIRCSC**) appointed by the Reserve Bank of India in 1951 under the chairmanship of shri **A. D. Gorwala** brought out that the co-operative credit was unevenly distributed, inadequate and mostly lent to the asset-oriented large cultivators. The committee recommended an integrated scheme as a remedy to the existing situation, the salient features of which were

1. State partnership in co-operative institutions at all levels
2. Coordination between co-operative credit, marketing and processing
3. Development of warehousing and
4. Training of co-operative personnel at all levels.

During the **Second Five Year Plan (1956-1961)** the recommendations of All India Rural Credit Survey Committee (AIRCSC) in 1956 led to the establishment of National Co-operative Development and Warehousing Board (**NCDWB**). Setting up of co-operative processing and producer's co-operatives was initiated.

The committee on Co-operative Credit under the chairmanship of **V. L. Mehta** in 1959 observed that the co-operative aspect was important as that of viability. The membership should not be too large or the area too extensive i.e., 3 or 4 miles from the headquarter village. The committee on **Taccavi loans** and co-operatives credit under the chairmanship of **B. P. Patel** in 1961-62 felt that the co-operatives should provide loans to the farmers only under distress conditions for the agricultural operations and land improvements.

During the **Third Five Year plan (1956-1961)**, stress was given to revitalize dormant societies apart from increased emphasis on co-operative credit and co-operative farming. National Co-operative Development Corporation (**NCDC**) was established in 1963.

The All India Rural Credit Review Committee (**AIRCRC**) **1966** under the chairmanship of shri **B. Venkatappaiah**, in its final report submitted in July, 1969 recommended the following:

- Setting up of Small Farmers Development Agency (SFDA), Marginal Farmers and Agricultural Labour Development Agency (MFAL)
- Creation of Rural Electrification Corporation (REC)
- Reorganization of primary societies into viable units,
- Rehabilitation of weak central co-operative banks.
- Active administrative and policy measures to check overdues,
- Greater flexibility in the conversion of short term loans into medium terms loans



- Simplification of application form etc.
- A new concept of transport co-operatives was started

After the third five year plan, during 1966-1968 there were three Annual Plans (Rolling Plans). In the year 1967, Vaikunth Mehta National Institute of Cooperative Management (**VAMNICOM**) was started in Poona.

**Fourth five year plan (1969-1974)**, gave impetus for the rehabilitation and reorganization of District Cooperative Credit Societies for the smooth flow of cooperative credit. During this plan, Indian Farmers Fertilizer Cooperative Limited (**IFFCO**) was established at **Kandla**, Gujarat.

**During Fifth five year plan (1975-1979)** new fertilizer projects were initiated with the success during fourth five year plan.

National Bank for Rural Development (**NABARD**) was established for providing credit to agriculture and allied activities under **Sixth plan (1980-1985)**. The strengthening of dairy cooperatives was also given importance in this period.

**Seventh five year plan (1985-1990)**, stressed up on a) Organizing of special cooperative loan recovery camps b) Strengthening of National and State Consumer Federation (**NSCF**) c) Introduction of single window system of credit in Andhra Pradesh.

**Eighth five year plan (1992-1997)** emphasized replication of Anand Pattern of cooperatives for milk and strengthening of processing cooperatives.

During **Ninth Five Year Plan (1997-2002)** measures have been initiated to revitalize the co-operatives 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 finalisation of a new Multi State Cooperative Societies Bill to replace the existing Multi State Cooperative Societies Act, 1984

#### **Tenth Five Year Plan (2002-2007)**

- The following initiatives were taken with respect of cooperatives during tenth five year plan
  - To make a special study of the role of the cooperatives and challenges to be met in the wake of globalization of Indian economy.
  - To study the regional disparity in the development of cooperatives.
  - 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.

Government of India launched **National Policy on Cooperatives in 2002**

## **LECTURE 11: CO-OPERATIVE CREDIT STRUCTURE**

The Co-operative Institutions registered remarkable progress in the post-independence period. Co-operative structure was delineated into two types, i.e., 3 tier structure and 2 tier structure.

### **State Co-operative Banks: (SCB)**

These are the co-operative credit organizations present at the State level. DCCBs and PACS are the members of these banks. These institutions supervise the activities of the member banks and mobilize and deploy the financial resources among the member banks. They serve as a link between the RBI and PACS. The specific functions of the State co-operative banks are:

- They help to the State Governments in formulating development plans with regard to cooperative institutions.
- They co-ordinate the policies of the co-operatives with the government.
- They formulate & implement uniform credit policies.
- They act as **bankers bank to DCCBs**.
- They grant subsidies to & DCCBs for the smooth functioning of co-operatives.

### **District Central Co-operative Banks: (DCCB)**

It links between state co-operative bank and PACS. Its objective is to lend money to PACS.

Functions:

1. Supervise & inspect the activities of PACS
2. They maintain close and continuous contact and guide the primary societies.
3. They undertake not-credit activities.
4. They accept deposits from the member societies.
5. They undertake non-credit activities like supply of seeds, fertilizers besides sugar, kerosene and other consumer goods.

### **Primary Agricultural Co-operative Credit Society: - (PACS)**

The societies are at the village level and directly meant for the farmers regarding provision of requisite short-term and medium-term loans.

Functions:

1. They borrow adequate & timely funds from DCCB and help the members in financial need.
2. They attract local saving in the form of share capital & deposits from the villages.
3. The distribute fertilizers, insecticides etc., to the needy farmers.
4. Provide machinery on hire basis to the farmers
5. Said economic development of the village.
6. Involve in marketing of farm produce on behalf of the farmers borrowers.

7. They provided storage facilities and marketing finance.
8. They provide consumers goods like rice, wheat, sugar, kerosene, cloth, etc., at fair prices.

Long term Co-operative Loans:

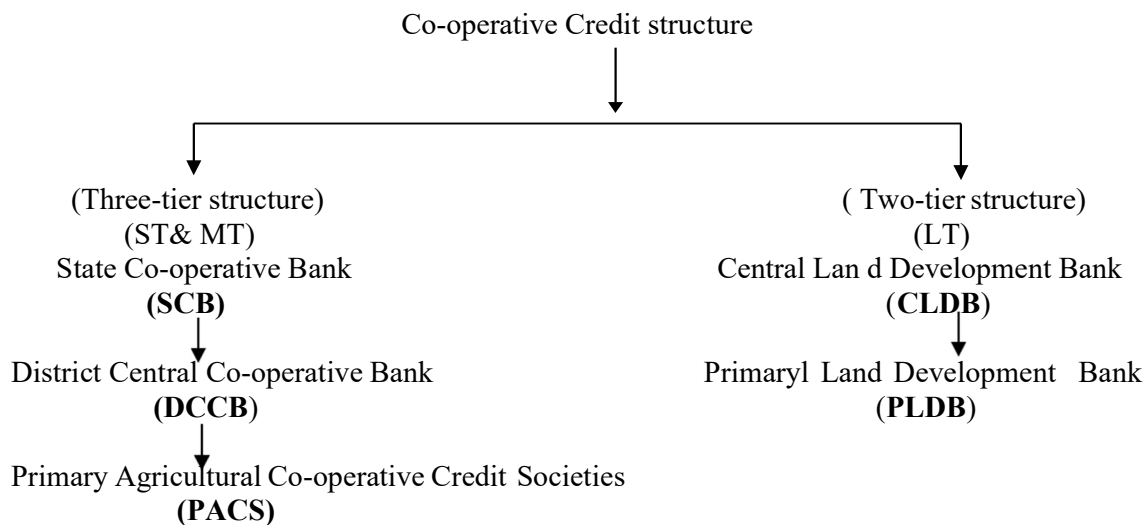
**Central Land Development Bank (CLDB)** As an apex bank in the two tier co-operative credit structure, it provides long-term finance to PLDBs and also to its affiliated branches working in the States. Branches of CLDBs, PLDBs, and individual enterprise are the members of the CLDB. NABARD is the refinancing agency to the CLDBs.

1. It supervises, inspects and guides the PLDBs in their banking operations.
2. It floats debentures for raising the necessary funds.
3. It provides loans to member banks for the redemption of old debts, development of land, purchase of agricultural machinery and equipment, development of minor irrigation, etc.

**Primary Land Development Bank (PLDBs) or Land Mortgage Banks (LMB)** was first established in 1920 in Punjab and later Madras, Mysore, Assam & Bengal during 1920-29.

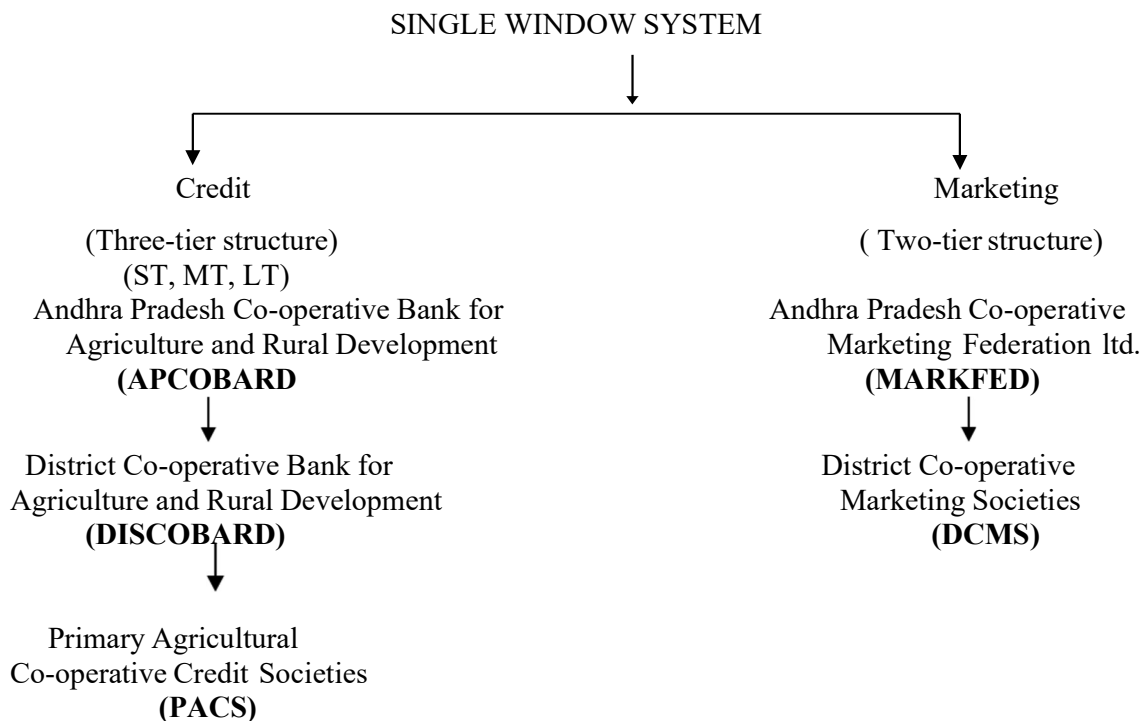
Functions:

1. They provide long term finance to the needy farmers for the development of the land, increasing agricultural production & productivity of the land.
2. Provide loans for miner irrigation & for redemption of old debts & purchase of land.
3. Provide finance in purchasing tractors, machinery and equipment.
4. Provided finance for the construction of farm structure.
5. They mobilize rural savings



## **LECTURE 12: SINGLE WINDOW SYSTEM**

The farmers depended upon on PACS (in three-tier structure) for their short and medium – term credit requirements and on PLDBs (in two-tier system) for long –term credit needs till 1987, Regarding marketing of the farm produce, the farmers faced hardship in getting the services of marketing co-operative societies under three tier systems. The Government of Andhra Pradesh State brought some organizational changes in the working of co-operatives in the state. Accordingly, a committee under the chairmanship of **Shri Mohan Kanda** It recommended for the establishment of ‘Single Window System’ and bill was passed in 1987. The main idea of introducing this system is **to supply all types of agricultural credit** required by the farmers and provide processing and marketing facilities under one roof i.e., through PACS. The single window system is a three-tier structure in co-operative credit and two-tier structure in co-operative marketing. The organizational structure is sketched out below.



Functions of PACS under single window system are:

1. To advance the ST, MT and LT loans;
2. To supply the needed farm inputs;
3. To distribute essential commodities; and
4. To arrange the marketing of farm produce of the farmer members.

### **LECTURE 13: CO-OPERATIVE FARMING:**

Co-operative farming is a voluntary organization in which small farmers and landless labourers increase their income by pooling land resources. According to planning commission, Co-operative farming necessarily implies pooling of land and joint management. The working group on co-operative farming defines a co-operative farming society as “a voluntary association of cultivators for better utilization of resources including manpower and pooled land and in which majority of the members participate in farm operation with a view to increasing agricultural production, employment and income.” A co-operative farming society makes one of the following four forms

1. Co-operative better farming
2. C-operative Joint farming
3. Co-operative tenant farming
4. Co-operative collective farming

1. **Co-operative better farming:** These societies are based on individual ownership and individual operation. Farmers who have small holdings and limited resources join to form a society for some specific purpose eg: use of machinery, sale of product. They are organized with a view to introduce improved methods of agriculture. Each farmer pays for the services which he receives from the society. The earnings of the member from piece of land, after deducting the expenses, his profit.

2. **Co-operative Joint farming:** Under this type, the right of individual ownership is recognized and respected but the small owners pool their land for the purpose of joint cultivation. The ownership is individual but the operations are collective. The management is democratic and is elected by the members of the society. Each member working on the farm receives daily wages for his daily work and profit is distributed according to his share in land.

3. **Co-operative tenant farming:** Such societies are usually organized by landless farmers. In this system usually land belongs to the society. The land is divided into plots which are leased out for cultivation to individual members. The society arranges for agricultural requirements eg: credit, seeds, manures, marketing of the produce etc. Each member is responsible to the society for the payments of rent on his plot. He is at liberty to dispose of his produce in such a manner as he likes.

4. **Co-operative collective farming:** Both ownership and operations under this system are collective. Members do not have any right on land and they cannot take farming decisions independently and are guided by a general body. It undertakes joint cultivation by pooling the members resources. Profit is distributed according to the labour and capitals invested.

## **LECTURE 14: FARMER PRODUCER ORGANISATIONS (FPOS)**

### **1. Introduction**

Farmer Producer Organisation (FPO) is a generic name, which refers to farmer- producers' organization incorporated/ registered for the purpose of leveraging collectives through economies of scale in production and marketing of agricultural and allied sector. The concept behind Farmer Producer Organizations is that farmers, who are the producers of agricultural products, can form groups. To facilitate this process, the Small Farmers' Agribusiness Consortium (SFAC) was mandated by Department of Agriculture and Cooperation, Ministry of Agriculture Government of India, to support the State Governments in the formation of Farmer Producer Organizations (FPOs).

The Government of India has approved and launched a **Central Sector Scheme of "Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)"** to form and promote 10,000 new FPOs till 2027-28. Under the scheme, the formation and promotion of FPO is based on Produce Cluster Area approach and specialized commodity-based approach. While adopting cluster-based approach, formation of FPOs will be focussed on **"One District One Product"** for development of product specialization.

### **2. Need for FPOs**

- Nearly 86 per cent of farmers are small and marginal with average land holdings in the country being less than 1.1 hectare.
- Small, marginal and landless farmers face challenges during agriculture production phase such as access to technology, quality seed, fertilizers and pesticides and requisite finances.
- They face challenges in marketing their produce due to lack of economic strength.
- Members of the FPO will manage their activities together in the organization to get better access to technology, input, finance and market for faster enhancement of their income.

### **3. Objectives of FPOs**

- i. To enhance productivity through efficient, cost-effective and sustainable resource use and realize higher returns through better liquidity and market linkages for their produce and become sustainable through collective action.
- ii. To provide handholding and support to new FPOs up to five years from the year of its creation in all aspects of management of FPO, inputs, production, processing and value addition, market linkages, credit linkages and use of technology etc.

- iii. To provide effective capacity building to FPOs to develop agriculture entrepreneurship skills to become economically viable and self-sustaining beyond the period of support from the government.

#### **4. Implementation of the Scheme**

- Under this scheme, formation & promotion of FPOs are to be done through the Implementing Agencies viz.: Small Farmers Agri-Business Consortium (SFAC); National Cooperative Development Corporation (NCDC); National Bank for Agriculture and Rural Development (NABARD); National Agricultural Cooperative Marketing Federation of India (NAFED); Foundation for Development of Rural Value Chains (FDRVC) Ministry of Rural Development (MoRD) etc-
- Implementing Agencies will engage Cluster Based Business Organizations (CBBOs) to aggregate, register & provide professional support to FPO for a period of 5 years.
- NAFED will provide market and value chain linkages to the FPOs formed by other Implementing Agencies.
- FPOs will be provided financial assistance upto Rs 18.00 lakh per FPO for a period of three years. In addition to this, provision has been made for matching equity grant upto Rs. 2000 per farmer member of FPO with a limit of Rs. 15.00 lakh per FPO and a credit guarantee facility upto Rs. 2.00 crore of project loan per FPO from eligible lending institution to ensure institutional credit accessibility to FPOs.
- Training & skill development modules have been developed to further strengthen the FPOs by Bankers Institute of Rural Development (BIRD), Lucknow and Laxmanrao Inamdar National Academy for Co-operative Research & Development (LINAC), Gurugram.
- Formation & promotion of FPOs is the first step for converting Krishi into Atmanirbhar Krishi. This will enhance cost effective production and productivity and higher net incomes to the member of the FPO. Also improve rural economy and create job opportunities for rural youths in villages itself. This was the major step towards improving farmers' income substantially.

## LECTURE 15: AGRICULTURAL FINANCE AND ITS IMPORTANCE

Agricultural finance generally means studying, examining and analyzing the financial aspects pertaining to farm business, which is the core sector of India. The financial aspects include money matters relating to production of agricultural products and their disposal.

Definition of Agricultural finance: Murray (1953) defined agricultural finance as “an economic study of borrowing funds by farmers, the organization and operation of farm lending agencies and of society’s interest in credit for agriculture.”

Tandon and Dhondyal (1962) defined agricultural finance “as a branch of agricultural economics, which deals with and financial resources related to individual farm units.”

Nature and Scope: Agricultural finance can be dealt at both micro level and macro level.

**Macro finance** deals with different sources of raising funds for agriculture as a whole in the economy. It is also concerned with the lending procedure, rules, regulations, monitoring and controlling of different agricultural credit institutions. Hence macro-finance is related to financing of agriculture at **aggregate level**. **Micro-finance** refers to financial management of **the individual farm business units**. And it is concerned with the study as to how the individual farmer considers various sources of credit, quantum of credit to be borrowed from each source and how he allocates the same among the alternative uses within the farm. It is also concerned with the future use of funds.

Therefore, macro-finance deals with the aspects relating to total credit needs of the agricultural sector, the terms and conditions under which the credit is available and the method of use of total credit for the development of agriculture, while micro-finance refers to the financial management of individual farm business.

### **Significance of Agricultural Finance:**

- 1) Agricultural finance assumes vital and significant importance in the **agro – socio – economic development** of the country both at macro and micro level.
- 2) It plays a catalytic role in strengthening the farm business and **augmenting the productivity of scarce resources**. When newly developed potential seeds are combined with purchased inputs like fertilizers & plant protection chemicals in appropriate / requisite proportions will result in higher productivity.
- 3) Use of new technological inputs purchased through farm finance helps to **increase the agricultural productivity**.
- 4) Accretion to in farm assets and farm supporting infrastructure provided by large scale financial investment activities results in **increased farm income levels** leading to increased



standard of living of rural masses.

- 5) Farm finance can also **reduce the regional economic imbalances** and is equally good at reducing the inter-farm asset and wealth variations.
- 6) Farm finance is like a **lever with both forward and backward linkages** to the economic development at micro and macro level.
- 7) As Indian agriculture is still traditional and subsistence in nature, agricultural finance is needed to create the supporting infrastructure for **adoption of new technology**.
- 8) Massive investment is needed to carry out major and minor irrigation projects, rural electrification, installation of fertilizer and pesticide plants, execution of agricultural promotional programmes and poverty alleviation programmes in the country.

The word “credit” comes from **the Latin word “Credo”** which means **“I believe”**. Hence credit is based up on belief, confidence, trust and faith. Credit is other wise called as **loan**.

Definition: Credit / loan is certain amount of money provided for certain purpose on certain conditions with some interest, which can be repaid sooner (or) later.

According to Professor Galbraith credit is the **“temporary transfer of asset from one who has to other who has not”**

Credit needs in Agriculture: Agricultural credit is one of the most crucial inputs in all agricultural development programmes. For a long time, the major source of agricultural credit was private moneylenders. But this source of credit was inadequate, highly expensive and exploitative. To curtail this, a multi-agency approach consisting of cooperatives, commercial banks and regional rural banks credit has been adopted to provide cheaper, timely and adequate credit to farmers. The financial requirements of the Indian farmers are for,

1. Buying agricultural inputs like seeds, fertilizers, plant protection chemicals, feed and fodder for cattle etc.
2. Supporting their families in those years when the crops have not been good.
3. Buying additional land, to make improvements on the existing land, to clear old debt and purchase costly agricultural machinery.
4. Increasing the farm efficiency as against limiting resources i.e. hiring of irrigation water lifting devices, labor and machinery

## **LECTURE 16: RESERVE BANK OF INDIA (RBI)**

The Reserve Bank of India (RBI) was established in 1935 under the Reserve Bank of India Act, 1934. Its headquarters is located at Mumbai.

The RBI was set up to

- regulate the issue of bank notes
- secure monetary stability in the country
- operate currency and credit system to its advantage

The role of RBI in agricultural credit was found in the establishment of Agricultural Credit Department (ACD).

### **Agricultural Credit Department (ACD) –**

Functions

- a. To coordinate the functions of RBI with other banks and state cooperative banks in respect of agricultural credit
- b. To maintain expert staff to study all the questions of agricultural credit and be available for consultation by central government, state governments, scheduled commercial banks and state cooperative banks.
- c. To provide legislations to check private money lending and checking other malpractices.

All India Rural Credit Survey Committee (AIRCSC) under the chairmanship of Sri. Gorwala in 1954 suggested several recommendations with regard to the activities of RBI in the sphere of rural credit. Based on this, two funds were established after amending RBI act, 1934.

1. **National Agricultural credit (Long-term operations) fund-1955:** It started with an initial capital of Rs.10 crores and annual contribution of Rs.5 crores and later this was increased to Rs. 15 crores. This fund was meant to provide **long-term loans (for a period of 20 years)** to various state governments so as to enable them to contribute to the share capital of different types of cooperative societies including Land Mortgage Banks (LMBs).

2. **National Agricultural credit (Stabilization fund)-1956:** It was started with RBI's initial contribution of Rs. 1 crore and subsequent annual contribution of Rs. 1 crore. This fund is utilized for the purpose of **granting medium-term loans to State Co-operative Banks (SCBs)**, especially during the times of famines, droughts and other natural calamities when they are unable to repay their loans to RBI.

Functions of RBI in the Sphere of Rural Credit:

### 1. Provision of finance

- a. Reserve Bank of India provides necessary **finance** needed by the farmers through the commercial banks, cooperative banks and RRBs on refinance basis.
- b. It **advances long-term loans** to state governments for their contribution to the share capital of the cooperative credit institutions like State Cooperative Banks (**SCBs**) and District Cooperative Central Banks (**DCCBs**).
- c. It advances medium-term loans to State Cooperative Banks.
- d. It extends **refinance** facility to the RRBs only to an extent of 50 per cent of outstanding advances

### 2. Promotional activities

RBI felt that the cooperatives are the major force in the field of agricultural credit and hence following measures were framed for the promotion and strengthening of cooperatives

- a. Reorganization of the state and central cooperative banks on the **principle of one apex bank for each state and one central bank for each district**.
- b. **Rehabilitation of those central cooperative banks**, that are financially weak due to mounting overdues, insufficiency of internal finances, untrained staff, poor management etc.
- c. **Strengthening of PACS** to ensure their financial and operational viability.
- d. Arranging suitable **training programmes for the personnel** of cooperative institutions.

### 3. Regulatory functions:

- a. Reserve bank of India is concerned with efficiency of channels through which credit is distributed.
- b. Banking Regulation Act, 1966 makes the RBI to exercise effective supervision over cooperative banks and commercial banks.
- c. As per the Credit Authorized Scheme (CAS) of 1976, the cooperative banks should get prior authorization from RBI for providing finances beyond a certain limit.
- d. The cash liquidity ratio (CLR) and cash reserve ratio (CRR) are fixed by RBI for cooperatives, farmer's service societies (FSS), regional rural banks (**RRBs**) and agricultural development banks (ADB) at lower levels than those fixed for commercial banks. For these cooperative banks the bank rate was 3 per cent less than that of commercial banks. They are permitted by **RBI to pay 0.5 per cent higher rate of interest on deposits**.

**LECTURE 17& 18: SOCIAL CONTROL AND NATIONALIZATION OF BANKS -  
LEAD BANK SCHEME- ORIGIN-OBJECTIVES-FUNCTIONS -REGIONAL RURAL  
BANKS (RRBS)-ORIGIN-OBJECTIVES-FUNCTIONS**

**SOCIAL CONTROL AND NATIONALIZATION OF BANKS**

The credit needs of agriculture, small– scale industries and also weaker sections such as small traders and artisans continued to be ignored. The bulk of the deposits contributed by the public were being advanced to the industrial and trade sectors ignoring the prime sector of agriculture. In agriculture, the credit scene was dominated by the private money lenders who were charging exorbitant rates of interest. All these situations compelled the imposition of social control over the banks in **1968**. The main aim of **social control was achieving of wider spread of bank credit to the priority sectors thereby reducing the authority of managing directors in advancing the loans**. Social control created the tempo of banks expansion, but did not make dent in increased canalisation of credit to agricultural sector and to the other weaker sections. The directions issued by the Government were also ignored by many of the banks. Under these circumstances, the Government of India on 19th July 1969, promulgated an ordinance called “The Banking companies Ordinance 1969” (Acquisition and Transfer of Undertakings) and **14 commercial banks having deposits of more than Rs. 50 crore each were nationalised**

**Objectives of Nationalisation of banks** (Prime Minister, **Smt. Indira Gandhi**) were

- Removal of control on banking business by a few industrialists.
- Elimination of the use of bank credit for speculative and unproductive purposes.
- Expansion of credit to priority areas which were grossly neglected like agriculture and small scale industries.
- Giving a professional bent to the bank management
- Encouragement of new entrepreneurs
- Provision of adequate training to bank staff.

The success of first spell of nationalisation of banks, **6 more banks in the private sector, having deposits more than Rs.200 crore were nationalised on 15th April 1980.**

**The number of Public Sector banks from April 2020 is Twelve (12 )** as a result of merger of banks. The main objectives of bank merger in India were to improve the overall economy, improve profitability, reduce the Volume of NPA’s, improve efficiency and widen the global reach with an increased branch network.

## LEAD BANK SCHEME

The study group appointed by National Credit Council (NCC) in 1969 under the chairmanship of **Prof. D.R.Gadgil** recommended “**Service Area Approach**” for the development of financial structure. RBI appointed **Sri. F.K.F Nariman committee** to examine the recommendations of Prof. Gadgil’s study group. The Nariman committee also endorsed the views of the Gadgil committee and recommended the formulation of “Lead Bank Scheme”. The RBI accepted the Nariman’s committee recommendations and **Lead bank scheme came into force from 1969.**

Lead bank acts as a consortium leader for coordinating the efforts of all credit institutions in the each allotted district for the development of banking and expansion of credit facilities. The activities of lead bank can be dealt under two important phases.

### **Phase I: Survey of the lead district**

- i.* Surveying the potential areas for banking in the district.
- ii.* Identifying the business establishments which are so far dependent on non – institutional agencies for credit and financing them so as to raise their income
- iii.* Examining the available marketing facilities for agricultural and industrial products and linking credit with marketing.
- iv.* Invoking cooperation among different banks in opening new bank branches.
- v.* Estimating the credit gaps in various sectors of district economy.
- vi.* Developing contacts and maintaining liaison with the Government and other agencies.

### **Phase II-Preparation of credit Plans:**

- i.* Formulate the bankable loaning schemes involving intensive use of labour, so as to generate additional employment.
- ii.* Disburse loans to increase the productivity of land in agriculture and allied activities, so as to increase the income level.
- iii.* Give maximum credit to weaker sections of the society mainly for productive purposes. Therefore lead bank scheme expects the banker to become an important participant in the developmental process in the area of its operation in rural areas, and the service area approach put the banker in the position of implementing the development plans.

## **REGIONAL RURAL BANKS (RRBS)**

The Government of India appointed a working committee under the chairmanship of **Sri. M. Narasimham** to study the financial assistance rendered to the weaker sections in the rural areas. This working committee recommended the setting up of rural based institutional agencies

called “**Regional Rural Banks**” after identifying shortcomings in the functioning of commercial banks and cooperatives. Initially only 5 RRBs were set up on pilot basis with sponsorship of commercial banks on October 2nd, 1975. This ordinance of 1975 was replaced by the Regional Rural Banks Act, 1976.

Objectives of RRBs:

- a. To develop rural economy.
- b. To provide credit for agriculture and allied activities.
- c. To encourage small scale industries, artisans in the villages.
- d. To reduce the dependence of weaker sections (Marginal farmers, small farmers and rural artisans) on private money lenders.
- e. To fill the gap created by the moratorium on borrowings from private money lenders.
- f. To make backward and tribal areas economically better by opening new bank branches.
- g. To help the financially poor people in their consumption needs.

Functions of RRBs:

- Each RRB is being sponsored by a scheduled commercial bank. The operational area of each RRB is one or two districts. Each branch of RRB can serve a population of roughly 20,000 people.
- Authorized share capital of each RRB is Rs. One crore contributed by central Government, State Government and sponsoring commercial bank in the ratio of 50:15:35. Issued capital for each RRB is Rs. 25 lakhs.
- The rate of interest offered by RRBs on deposits is 0.5% higher than the commercial banks.
- RRBs have simplified procedural formalities in giving agricultural finance on recommendations of Sri. Baldev Singh’s working group. RRBs use local languages in their transactions. The cost of operation i.e. user charges are low as compared to that of commercial banks.

## **LECTURE 19: NABARD- AIMS AND OBJECTIVES, ROLE IN AGRICULTURAL SECTOR**

Agricultural Refinance and Development Corporation (ARDC) has not made much work in the field of direct financing and delivery of rural credit against the high credit demand for rural development. As a result, many Committees and Commissions, viz., Banking Commission (1972), National Commission on Agriculture (1976) and Committee to Review Arrangements for Institutional Credit for Agriculture and Rural Development (**CRAFICARD**) in 1979 were constituted. **CRAFICARD** under the chairmanship of **B. Sivaraman**, recommended the setting up of a national level institution called National Bank for Agriculture and Rural Development (NABARD) for providing all types of production and investment credit for agriculture and rural development. In pursuance of its recommendations, NABARD came into existence on **12 July 1982 with a merger** of existing institutions such as **ARDC**, Agricultural Credit Department (**ACD**) and Rural Planning Credit Cell (**RPCC**) of **RBI** with a paid up capital of Rs. 500 crore equally contributed by GOI and RBI.

**Board of Management:** All directors in the Management Board are appointed by the Central Government in consultation with RBI. In addition to Chairman and Managing Director, the Board consists 13 other directors. Out of these two are experts in rural economics and rural development. Three directors are representatives of co-operatives and three from commercial banks. Three directors are officials of the Government of India and two belong to State Governments

**Source of Funds:**

Authorized Share capital Rs. 500 core

Issued and paid up capital Rs. 100 core

Other sources: - Borrowing from the Govt. of India. - Issue and sale of bonds by the Govt. of India. - Borrowing from RBI - Deposits from state Govt. and local authorities - Gifts and grants received.

**Objectives:**

1. As an apex refinancing institution, NABARD survey and estimates all types of credit needed for the farm sector and rural development
2. Taking responsibility of promoting and integrating rural development activities through refinance.
3. With the approval of Government of India, NABARD also provides direct credit to any institution or organization or an individual.
4. Maintaining close links with RBI for guidance and assistance in financial matters.

5. Acting as an effective catalytic agent for rural development i.e in formulating appropriate rural development plans and policies.

Functions:

The activities of NABARD are presented under three categories

- A. Credit activities
- B. Developmental activities
- C. Regulatory activities

**A. Credit activities:**

It prepares for each district annually a potential linked credit plan.

It participates in finalization of annual action plan of block, district and state level.

It monitors implementation of credit plans.

It lay down the form and condition to be followed by credit institutions in financing production, marketing and investment activities of rural farm and non -farm sector.

It provides refinance facilities

**B. Development Activities:** The following are the developmental activities undertaken by NABARD for the productive use of credit.

(i) Institutional Development:

It helps co-operative banks and RRBs for development action plan.

It provides organization development intervention (ODI) through training institute (Bankers Institutes for Rural Development) (BIRD) Lucknow.

It provided financial assistance for the training of institute of co-operative banks.

It provides borrowers education on ethics of repayments.

(ii) Research and Development Funds :

Supporting operational research projects aimed at up gradation and transfer of technology from lab to land.

Organizing national and international seminars, conferences, symposia, etc., on subject related to rural development and banking.

Conducting programmes for upgrading skills of prospective borrowers.

Providing grant to selected Krishi Vikas Kendras.



**C. Regulatory activities:**

As the apex development bank, NABARD shares with RBI, some of the regulatory and supervisory functions in respect of co-operative banks and RRBs.

Under banking regulation Act.1949 NABARD undertakes inspection of RRBs and Co-operative banks (other than PACS).

Any RRB or Co-Op bank seeking permission of RBI, for opening branches needs recommendation of NABARD.

## **LECTURE 20 SCALE OF FINANCE, KISAN CREDIT CARD (KCC) & GOODS AND SERVICE TAX (GST)**

### **SCALE OF FINANCE**

**It is an indicative cost taken as base cost depending on which the amount to be financed to a farmer is fixed**

Scale of finance is the finance required for raising a crop per unit of cultivated area, i.e., acre or hectare. It is fixed for annual, perennial crops and livestock also. Livestock will have fixed costs of finance and they are termed as unit costs. The unit varies with the type of livestock.

Ex: Milch cattle: 2 animals,

    Sheep and goat : a minimum of 10 animals

    Poultry : a minimum of 500 birds.

Factors influencing the Scale of finance:

- a. Type of the crop: It varies from crop to crop.
- b. Nature of the crop: Within the same crop between the improved varieties and high yielding varieties (HYVs) the scale of finance differs.
- c. Season: Scale of finance differs with season for the same crop.
- d. Type of land: Based on the type of the land i.e. irrigated or dry the scale of finance differs with the same crop.
- e. District/Area: For the same crop the scale of finance varies from district to district.

How Scale of Finance is fixed:

Scale of finance is fixed for each district by a committee known as District Level Technical Committee (DLTC). The members of DLTC constitute representatives of leadbank of that district, NABARD, local co-operative banks and commercial banks, officials of department of agriculture & animal husbandry etc. The meetings of DLTC are chaired by district magistrate/ district collector and convened by respective lead bank district manager.

### **THE KISAN CREDIT CARD (KCC)**

The scheme was introduced in 1998 for issue of Kisan Credit Cards to farmers on the basis of their holdings for uniform adoption by the banks so that farmers may use them to readily purchase agriculture inputs such as seeds, fertilizers, pesticides etc. and draw cash for their

production needs. The scheme was further extended for the investment credit requirement of farmers viz. allied and non-farm activities. It is implemented by Commercial Banks, RRBs, Small Finance Banks and Cooperatives.

## 2 Objective / Purpose

The Kisan Credit Card scheme aims at providing adequate and timely credit support from the banking system under a single window with flexible and simplified procedure to the farmers for their cultivation and other needs as indicated below:

To meet the short term credit requirements for cultivation of crops;

Post-harvest expenses;

Produce marketing loan;

Consumption requirements of farmer household;

Working capital for maintenance of farm assets and activities allied to agriculture;

Investment credit requirement for agriculture and allied activities.

## 3 Eligibility

i. Farmers - individual/joint borrowers who are owner cultivators;

ii. Tenant farmers, oral lessees & share croppers;

iii Self Help Groups (SHGs) or Joint Liability Groups (JLGs) of farmers including tenant farmers, share croppers etc.

4 Fixation of credit limit is designed based on the criteria, viz., w.r.t cropping pattern, dairy units, poultry units, post harvest operations, maximum ceiling limit etc.

## **GOODS AND SERVICES TAX (GST)**

*One Country. One Tax. One Market*

GST was launched with effect from 1st July 2017 by Sh.Narendra Modi, Hon'ble Prime Minister of India. GST is one indirect tax for the whole nation, which will make India one unified common market. GST is a single tax on the supply of goods and services, right from the manufacturer to the consumer. Credits of input taxes paid at each stage will be available in the subsequent stage of value addition, which makes GST essentially a tax only on value addition at each stage. The final consumer will thus bear only the GST charged by the last dealer in the supply chain, with set-off benefits at all the previous stages.

The benefits of GST can be summarized as under:

**For business and industry**

- o Easy compliance: All tax payer services such as registrations, returns, payments, etc. would be available to the taxpayers online, which would make compliance easy and transparent.
- o Uniformity of tax rates and structures: GST would make doing business in the country tax neutral, irrespective of the choice of place of doing business.
- o Removal of cascading: A system of seamless tax-credits throughout the value-chain, and across boundaries of States, would reduce hidden costs of doing business.
- o Improved competitiveness: Reduction in transaction costs of doing business would eventually lead to an improved competitiveness for the trade and industry.
- o Gain to manufacturers and exporters: The subsuming of major Central and State taxes in GST would reduce the cost of locally manufactured goods and services. This will increase the competitiveness of Indian goods and services in the international market and give boost to Indian exports

**For Central and State Governments**

- o Simple and easy to administer: Backed with a robust end-to-end IT system, GST is simpler and easier to administer than all other indirect taxes of the Centre and State levied so far.
- o Better controls on leakage: GST will result in better tax compliance by traders.
- o Higher revenue efficiency: GST is expected to decrease the cost of collection of tax revenues of the Government, and will therefore, lead to higher revenue efficiency.

**For the consumer**

- o Single and transparent tax proportionate to the value of goods and services: Under GST, there would be only one tax from the manufacturer to the consumer, leading to transparency of taxes paid to the final consumer.
- o Relief in overall tax burden: Because of efficiency gains and prevention of leakages, the overall tax burden on most commodities will come down, which will benefit consumers.

## **LECTURE 21: FINANCIAL STATEMENTS-BALANCE SHEET & BREAK EVEN ANALYSIS**

### **BALANCE SHEET**

A balance sheet is a “snapshot” of a farmer’s financial position and it outlines an individual’s net worth. Net worth, or Equity, reflects the value or dollar amount of the reported assets you actually own, versus how much is currently financed.

Assets are what you own. Some examples of assets are cash, real estate, equipment, etc. They can be broken down into 3 categories:

1. **Current Assets** – Items you own that will be used up or sold in 1 year (ex. Feed, seed, fertilizer, crops in the ground, feeder calves to sell this year, etc.)
2. **Intermediate Assets** – Items you own that support production. They typically have a 2-10 year life. (ex. Breeding livestock, vehicles, equipment, etc)
3. **Long Term Assets** – items you own that are permanent. They typically have a >10 year life. (ex. Real estate, barns, shelters, etc.)

Liabilities are what you owe. Some examples of liabilities are credit card debt, mortgages, equipment, auto loans, etc. They can also be broken down into 3 categories:

1. **Current Debts** – These are debts to pay within 1 year (ex. Crop loan)
2. **Intermediate Term Debts** – These are debts to pay in 2-5 years (ex. Livestock loans)
3. **Long Term Debts** – These are debts to pay in more than 5 years (ex. Orchard loans)

The **balance sheet** is analysed by estimating various ratios to understand the exact financial position and stability of the farm business.

#### **1. Current Ratio**

- $\text{Current Ratio} = \frac{\text{Total current assets}}{\text{Total current liabilities}}$
- Current ratio indicates the capacity of the farmer to meet immediate financial obligations (liquidity).
- A ratio of more than two indicates a favourable position of the farm business.

#### **2. Intermediate or working Ratio**

- $\text{Intermediate Ratio} = \frac{\text{Total current assets} + \text{Total intermediate assets}}{\text{Total current liabilities} + \text{Total intermediate liabilities}}$
- Working ratio indicates the liquidity position of the farm business for a period upto five years.
- Here, there is scope for the farmer to improve his liquidity position.
- The ratio should be more than one.

### Balance Sheet of a Hypothetical Farm

Assets	Amount (in Rs.)	Liabilities	Amount (in Rs.)
<b>Current Assets</b>		<b>Current liabilities</b>	
Cash on Hand	10,000	Crop loans to be repaid to institutional agencies	8,000
Savings in bank	8,000	Cost of cultivation (excluding loans)	6,000
Inventory	38,500	Other loans (unsecured loans due for immediate repayment)	5,000
Value of grains & Livestock products (eggs, birds, etc.) for sale	60,000	Cost of maintenance of cattle	3,600
Fruits, Vegetables, fodder and feed ready for sale	8,000	Cost in poultry enterprises	25,000
Value of bonds and shares to be realized in the same year	2,000	Annual installments	19,000
Sub-total	1,26,500	Sub-total	66,600
<b>Intermediate Assets</b>		<b>Intermediate Liabilities</b>	
Dairy cattle	10,000	Livestock loans	8,000
Bullocks	9,000	Machinery loans	15,000
Poultry birds	15,000	Unsecured loans	10,000
Machinery and Equipment	15,000		
Tractor	1,75,000		
Sub-total	2,24,000	Sub-total	33,000
<b>Long Term Assets</b>		<b>Long term liabilities</b>	
Land (book value)	6,00,000	Tractor loans	1,20,000
Farm Buildings	25,000	Orchard loans	25,000
		Unsecured loans	10,000
Sub-total	6,25,000	Sub-total	1,55,000
		Total of liabilities	2,54,000
		<b>Networth or Equity</b>	<b>7,20,900</b>
<b>Total of Assets</b>	<b>9,75,000</b>	<b>Total of liabilities + Networth</b>	<b>9,75,000</b>

### 3. Net Capital Ratio

- Net Capital Ratio = Total assets / Total current liabilities.
- NCR indicates the solvency position of the farmers and more than one indicates that the funds of the institutional agencies are safe.
- A consistently increasing ratio over the years reveal the sound financial growth of the farm business.

### 4. Acid test ratio or Quick ratio

- Acid test ratio or Quick ratio =  $\frac{\text{Cash receipts} + \text{Accounts receivable} + \text{marketable securities available in more than one year}}{\text{Total current liabilities}}$ .

- Indicates adequacy of cash and income surpluses to cover all current liabilities during the period of one to two years.

#### **5.Current liability Ratio**

- Current liability Ratio = Current liabilities/Owner's equity which indicates the farmer's immediate financial obligations against the net worth and a ratio of less than one indicates a healthy performance of the farm business.

#### **6.Debt-equity Ratio (Leverage Ratio)**

- Debt-equity Ratio = Total debts/Owner's equity which reflects the capacity of the farmer to meet the long term commitments also.

#### **7.Equity-value Ratio**

- Equity-value Ratio = Owner's equity/Value of assets.
- Highlights the productivity gained by the farmer in relation to the assets.

### **BREAK EVEN ANALYSIS**

The **break-even point** (BEP) is the point at which total cost and total revenue are equal, i.e. "even". There is no net loss or gain. In short, all costs that must be paid are paid, and there is neither profit nor loss.

The break-even point (BEP) or break-even level represents the Total Returns (TR) required to cover Total Costs (TC), consisting of both fixed and variable costs to the company i.e., **TR=TC**. Total profit at the break-even point is zero. It is only possible for a firm to pass the break-even point if the Rupee value of sales is higher than the variable cost per unit. This means that the selling price of the goods must be higher than what the company paid for the good or its components for them to cover the initial price they paid (variable and fixed costs). Once they surpass the break-even price, the company can start making a profit.

The main purpose of break-even analysis is to determine the minimum output that must be exceeded for a business to profit. It also is a rough indicator of the earnings impact of a marketing activity. A firm can analyze ideal output levels to be knowledgeable on the amount of sales and revenue that would meet and surpass the break-even point. If a business doesn't meet this level, it often becomes difficult to continue operation.

Total Fixed Costs ÷ (Sales price per unit – Variable costs per unit)

**Contribution per unit** = Selling price per unit – Variable Cost per unit

#### **Margin of safety & Angle of Incidence**

Margin of safety represents the strength of the business. It enables a business to know what is the exact amount it has gained or lost and whether they are over or below the break-even point.

In break-even analysis, margin of safety is the extent by which actual or projected sales exceed the break-even sales.

**Angle of incidence** is the angle between the Total Cost and Total Returns. The wider the angle of incidence, larger are the profits and vice versa.

Margin of safety = (current output - breakeven output)

Ex: Assume that a company manufactures and sells a single product as follows:

Selling price per unit = Rs 20

Variable cost per unit = Rs 10

Total fixed cost = Rs 1,00,000

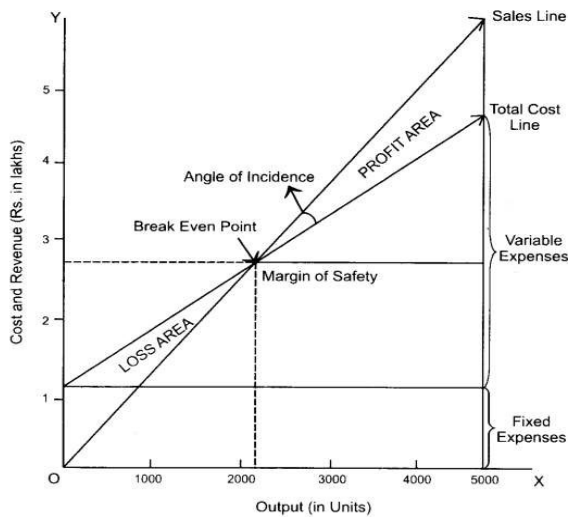
The break-even sales to cover fixed costs will be 10,000 units.

Selling price per unit = Rs 20

Variable cost per unit = Rs 10

Contribution = Rs 10

Break-even volume = Rs 1,00,000 fixed cost/Rs 10 contribution margin = 10,000 unit





## **LECTURE- 22: CROP INSURANCE**

Insurance-meaning: Insurance is a legal contract that transfers risk from a policy holder to an insurance company in exchange for a premium.

- ✓ Risk: The possibility of financial loss
- ✓ Policyholder: The person who has purchased and owned an insurance policy.
- ✓ Insurance Company: A company that provides the insurance coverage for its policyholders
- ✓ Premium: The cost of insurance

### **Advantages of Crop Insurance**

- a) It provides protection to farmers against losses caused by failure and thereby ensures stability in farm income
- b) It also strengthens the position of co-operatives and other institutions that finance, agriculture to the extent it enables the farmer members to repay their loans in years of crop failure
- c) By protecting the economic interest of the farmers against possible risk or loss, it accelerates adoption of latest agricultural practices
- d) It minimizes the matter of rural indebtedness, which is traceable to the frequent failure of crops
- e) It also reduces, to some extent, government expenditure incurred on relief measures extended to satisfy the havoc caused by natural calamities
- f) It may act as anti-inflationary measure, by locking up part of the resources in rural areas.

### **Limitations**

- a) Farmers here don't have any knowledge about insurance and remain without cover
- b) Small farmers have no incentive as they have to pay the premium
- c) In many cases farmers have written to banks saying they do not want insurance
- d) The banks have complied with such requests to meet targets although insurance is a compulsory feature of agricultural loan schemes

### **Origin and Importance of Crop Insurance scheme**

The desire to introduce two pilot schemes viz., crop insurance and cattle insurance with the objective of protecting the farmers from the heavy losses of crop and livestock by Government of India was dates back to 1948 soon after the independence. But due to paucity of funds, none

of the state governments agreed to implement the programme.

The Government of India, accepting the recommendations given by committee led by Prof. Dhandekar, in the year 1973, set up General Insurance Corporation (GIC) to carry out all types of insurance business throughout the country with four subsidiary insurance companies,

1. National Insurance Company Limited
2. The New India Assurance Company Limited
3. The oriental Insurance Company Limited
4. United India Insurance Company Limited

The various Government Schemes and their salient features are discussed as under

### **1. Comprehensive Crop Insurance Scheme (CCIS)**

To provide financial support to the farmers in the event of failure of crops as a result of natural calamities, a Comprehensive Crop Insurance Scheme (CCIS) was introduced in the country with effect from Kharif, 1985. The participation in the scheme was voluntary and the States were free to opt for the scheme. All farmers who availed crop loans from Commercial Banks, Regional Rural Banks and Cooperative Banks for growing wheat, paddy, millets (including maize), oilseeds and pulses were eligible for coverage under the scheme. CCIS remained under implementation till Kharif 1999.

### **2. National Agricultural Insurance Scheme (NAIS):**

To enlarge the coverage in terms of farmers (loanee and non-loanee both), more crops and more risks, 'National Agricultural Insurance Scheme (NAIS) – (Rashtriya Krishi Bima Yojana)' was introduced in Rabi 1999-2000 season in the country. The scheme was available to all the farmers – loanee and non-loanee both - irrespective of their size of holding.

Scheme was demand driven and moreover, claims were based on the occurrence of natural calamities like drought, flood etc. The scheme was withdrawn after Rabi 2015-16.

### **3. Modified National Agricultural Insurance Scheme (MNAIS):**

The major improvements made in MNAIS were – actuarial premium with subsidy in premium ranging upto 75% to farmers; unit area of insurance reduced to village/village panchayat level; indemnity for prevented sowing/planting risk & for post harvest losses due to cyclone in coastal areas; on account payment up to 25% of likely claims as immediate relief; more proficient basis for calculation of threshold yield; minimum indemnity level of 80% and 90% etc. From Rabi 2013-14, it was launched as a full-fledged component scheme under the aegis of NCIP. Scheme was being implemented on actuarial basis but subsidy in premium upto 75% of Sum Insured was provided to farmers.

#### **4. Weather Based Crop Insurance Scheme (WBCIS):**

With the objective to bring more farmers under the fold of Crop Insurance, a Pilot Weather Based Crop Insurance Scheme (WBCIS) was launched in 20 States since Kharif/Rabi 2007. WBCIS aims to provide insurance protection to the farmers against adverse weather incidence, such as deficit and excess rainfall, high or low temperature, humidity etc. which are deemed to impact adversely the crop production. It has the advantage to settle the claims within shortest possible time. The WBCIS is based on actuarial rates of premium..

#### **5. Coconut Palm Insurance Scheme (CPIS):**

Coconut Palm Insurance Scheme (CPIS) was implemented on pilot basis from the year 2009-10 in the coconut growing areas of Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Orissa, Tamil Nadu and West Bengal. 50% of premium is contributed by Coconut Development Board (a Central Govt. agency); 25% by the concerned State Govt. and the remaining 25% by the farmer. The Insurance Company i.e. Agriculture Insurance Company of India (AIC) is implementing the scheme and responsible for making payment of all claims. The CPIS is administered by the Coconut Development Board (CDB).

#### **6. National Crop Insurance Programme (NCIP):**

A restructured scheme in the name of “National Crop Insurance Programme (NCIP)” was been formulated by merging the erstwhile pilot MNAIS, WBCIS & CPIS with some improvements and approved for its implementation with effect from Rabi 2013-14 season.

#### **7. Pradhan Mantri Fasal Bima Yojana (PMFBY)**

Pradhan Mantri Fasal Bima Yojana (PMFBY) has been approved in place of MNAIS/NAIS for implementation from Kharif 2016 season.

Brief features of new schemes are as under:-

PMFBY will provide a comprehensive insurance cover against failure of the crop thus helping in stabilising the income of the farmers and encourage them for adoption of innovative practices.

The Scheme covers all Food & Oilseeds crops and Annual Commercial/Horticultural Crops.

The scheme is compulsory for loanee farmers obtaining Crop Loan /KCC account for notified crops. However, it is voluntary for Other/non loanee farmers who have insurable interest in the insured crop(s).

The scheme provisions have been simplified for easy understanding and the Maximum **Premium payable by the farmers will be 2% for all Kharif Food & Oilseeds crops, 1.5% for Rabi Food & Oilseeds crops and 5% for Annual Commercial/Horticultural Crops.**

The Scheme shall be implemented on an ‘Area Approach basis’. The unit of insurance shall be

Village/Village Panchayat level for major crops and for other crops it may be a unit of size above the level of Village/Village Panchayat.

In case majority of farmers in a notified area are prevented from sowing/planting the insured crops due to adverse weather conditions then insured farmers will be eligible for indemnity claims upto maximum of 25% of the sum-insured.

Three levels of Indemnity, viz., 70%, 80% and 90% corresponding to crop Risk in the areas shall be available for all crops.

The Threshold Yield (TY) shall be the benchmark yield level at which Insurance protection shall be given to all the insured farmers in an Insurance Unit. Threshold Yield of the notified crop will be moving average of yield of last seven years excluding yield upto two notified calamity years multiplied by Indemnity level.

## **LECTURE 23 & 24: MARKET- IMPORTANCE OF AGRICULTURAL MARKETING- BROAD CLASSIFICATION OF MARKETS**

### **MARKET:**

**Meaning:** The word market comes from the latin word „marcatus“ which means merchandise or trade or a place where business is conducted.

Definitions of market

1. A market is the sphere within which price determining forces operate. Hibbard
2. Market means a social institution which performs activities and provides facilities for exchanging commodities between buyers and sellers.
3. Economically interpreted, the term market refers, not to a place but to a commodity or commodities and buyers and sellers who are in free intercourse with one another.

### **IMPORTANCE OF AGRICULTURAL MARKETING**

1. Agricultural marketing plays an important role not only in stimulating production and consumption, but in accelerating the pace of economic development.
2. Optimization of Resource use and Output Management: An efficient agricultural marketing system leads to the optimization of resource use and output management. A well-designed system of marketing can effectively distribute the available stock of modern inputs, and thereby sustain a faster rate of growth in the agricultural sector.
3. Increase in Farm Income: An efficient marketing system ensures higher levels of income for the farmers by reducing the number of middlemen or by restricting the commission on marketing services and the malpractices adopted by them in the marketing of farm products.
4. Widening of Markets: A well-knit marketing system widens the market and helps in increasing the demand on a continuous basis, and thereby guarantees a higher income to the producer.
5. Growth of Agro-based Industries: An improved and efficient system of agricultural marketing helps in the growth of agro based industries and stimulates the overall development process of the economy. Many industries depend on agriculture for the supply of raw materials.
6. Price Signals: An efficient marketing system helps the farmers in planning their production in accordance with the needs of the economy. This work is carried out through price signals.
7. Adoption and Spread of New Technology: The marketing system helps the farmers in the

- adoption of new scientific and technical knowledge. New technology requires higher investment and farmers would invest only if they are assured of market clearance.
8. **Employment:** The marketing system provides employment to millions of persons engaged in various activities, such as packaging, transportation, storage and processing. Persons like commission agents, brokers, traders, retailers, weigh-men, hamals, packagers and regulating staff are directly employed in the marketing system.
  9. **Addition to National Income:** Marketing activities add value to the product thereby increasing the nation's gross national product and net national product.
  10. **Creation of Utility:** Marketing adds cost to the product; but, at the same time, it adds utilities to the product. The following four types of utilities of the product are created by marketing:
    - a. **Form Utility:** The processing function adds form utility to the product by changing the raw material into a finished form. It creates value addition. For example, by processing, oilseeds are converted to oil, sugarcane into sugar and wheat into flour and bread
    - b. **Place Utility:** The transportation function adds place utility to products by shifting them to a place of need from the place of plenty. Products command higher prices at the place of need than at the place of production because of the increased utility of the product.
    - c. **Time Utility:** The **storage** function adds time utility to the products by making them available at the time when they are needed.
    - d. **Possession Utility:** The marketing function of buying and selling helps in the transfer of ownership from one person to another. Products are transferred through marketing to persons having a higher utility from persons having a low utility.

### **CLASSIFICATION OF MARKETS:**

Markets may be classified on the basis of the criteria mentioned below.

#### **1. On the Basis of Area/Coverage:**

On the basis of the area from which buyers and sellers usually come for transactions, markets may be classified into the following four classes:

- a) **Local or Village Markets:** A market in which the buying and selling activities are confined among the buyers and sellers drawn from the same village or nearby villages. The village markets exist mostly for perishable commodities in small lots, e.g., local milk market or vegetable market.
- b) **Regional Markets:** A market in which buyers and sellers for a commodity are drawn from a larger area than the local markets. Regional markets in India usually exist for food grains.

- c) **National Markets:** A market in which buyers and sellers are at the national level. National markets are found for durable goods like jute and tea.
- d) **World Market:** A market in which the buyers and sellers are drawn from the whole world. These are the biggest markets from the area point of view. These markets exist in the commodities which have a world-wide demand and/or supply, such as coffee, machinery, gold, silver, etc. In recent years many countries are moving towards a regime of liberal international trade in agricultural products like raw cotton, sugar, rice and wheat.

## **2. On the Basis of Time Span:**

On this basis, markets are of the following types:

- a) **Short-period Markets:** The markets which are held only for a few hours are called short-period markets. The products dealt within these markets are of highly perishable nature, such as fish, fresh vegetables, and liquid milk. In these markets, the prices of commodities are governed mainly by the extent of demand for, rather than by the supply of, the commodity.
- b) **Long-period Markets:** These markets are held for a long period than the short-period markets. The commodities traded in these markets are less perishable and can be stored for some time; these are food grains and oilseeds. The prices are governed both by the supply and demand forces.
- c) **Secular Markets:** These are markets of permanent nature. The commodities traded in these markets are durable in nature and can be stored for many years. Examples are markets for machinery and manufactured goods.

## **3. On the Basis of Volume of Transactions:**

There are two types of markets on the basis of volume of transactions at a time.

- a) **Wholesale Markets:** A wholesale market is one in which commodities are bought and sold in large lots or in bulk. Transactions in these markets take place mainly between traders.
- b) **Retail Markets:** A retail market is one in which commodities are bought by and sold to the consumers as per their requirements. Transactions in these markets take place between retailers and consumers. The retailers purchase in wholesale market and sell in small lots to the consumers. These markets are very near to the consumers.

## **4. On the Basis of Nature of Transactions:**

The markets which are based on the types of transactions in which people are engaged are of two types:

- a) **Spot or Cash Markets:** A market in which goods are exchanged for money immediately after the sale is called the spot or cash market.
- b) **Forward Markets:** A market in which the purchase and sale of a commodity takes place at time „t“ but the exchange of the commodity takes place on some specified date in future i.e., time  $t + 1$ . Sometimes even on the specified date in the future( $t+1$ ), there may not be any exchange of the commodity. Instead, the differences in the purchase and sale prices are paid or taken.

### 5. On the Basis of Degree of Competition:

Each market can be placed on a continuous scale, starting from a perfectly competitive point to a pure monopoly or monopsony situation. Extreme forms are almost non-existent. Nevertheless, it is useful to know their characteristics. In addition to these two extremes, various midpoints of this continuum have been identified. On the basis of competition, markets may be classified into the following categories:

**Perfect Markets:** A perfect market is one in which the following conditions hold good:

- a) There is a large number of buyers and sellers;
- b) All the buyers and sellers in the market have perfect knowledge of demand, supply and prices;
- c) Prices at any one time are uniform over a geographical area, plus or minus the cost of getting supplies from surplus to deficit areas;
- d) The prices are uniform at any one place over periods of time, plus or minus the cost of storage from one period to another;
- e) The prices of different forms of a product are uniform, plus or minus the cost of converting the product from one form to another.

**Imperfect Markets:** The markets in which the conditions of perfect competition are lacking are characterized as imperfect markets. The following situations, each based on the degree of imperfection, may be identified:

- a) **Monopoly Market:** Monopoly is a market situation in which there is only one seller of a commodity. He exercises sole control over the quantity or price of the commodity. In this market, the price of commodity is generally higher than in other markets. Indian farmers operate in a monopoly market when purchasing electricity for irrigation. When there is only one buyer of a product the market is termed as a monopsony market.

b)



- b) **Duopoly Market:** A duopoly market is one which has only two sellers of a commodity. They may mutually agree to charge a common price which is higher than the hypothetical price in a common market. The market situation in which there are only two buyers of a commodity is known as the duopsony market.
- c) **Oligopoly Market:** A market in which there are more than two but still a few sellers of a commodity is termed as an oligopoly market. A market having a few (more than two) buyers is known as oligopsony market.
- d) **Monopolistic competition:** When a large number of sellers deal in heterogeneous and differentiated form of a commodity, the situation is called monopolistic competition. The difference is made conspicuous by different trade marks on the product. Different prices prevail for the same basic product. Examples of monopolistic competition faced by farmers may be drawn from the input markets. For example, they have to choose between various makes of insecticides, pumpsets, fertilizers and equipments.

#### **6. On the Basis of Extent of Public Intervention:**

Based on the extent of public intervention, markets may be placed in any one of the following two classes:

- a) **Regulated Markets:** Markets in which business is done in accordance with the rules and regulations framed by the statutory market organization representing different sections involved in markets. The marketing costs in such markets are standardized and practices are regulated.
- b) **Unregulated Markets:** These are the markets in which business is conducted without any set rules and regulations. Traders frame the rules for the conduct of the business and run the market. These markets suffer from many ills, ranging from unstandardised charges for marketing functions to imperfections in the determination of prices.

## LECTURE 25, 26 & 27: MARKETING FUNCTIONS

Any single activity performed in carrying a product from the point of its production to the ultimate consumer may be termed as a marketing function. A marketing function may have anyone or combination of three dimensions, viz., time, space and form.

The marketing functions involved in the movement of goods from the producer to its ultimate consumer vary from commodity to commodity, market to market, the level of economic development of the country or region, and the final form of the consumption.

**Assembling or procurement:** It is the process of purchasing the produce from the producers

**Equalization:** The process of adjustment of. Supply to the actual demand on the basis of time, quantity and quality.

**Dispersion or Distribution:** It is the process of making a product or service available for the consumer who needs it.

**Price Determination or Discovery:** The act of determining a common price for a good.

### **PACKAGING**

Packaging is required for nearly all farm products at every stage of the marketing process. The type of the container used in the packing of commodities varies with the type of the commodity as well as with the stage of marketing

Meaning of Packing and Packaging

Packing means, the **wrapping and crating of goods** before they are transported. Goods have to be packed either to preserve them or for delivery to buyers. **Packaging** is a part of packing, which means placing the goods in the market in **the size and pack which are convenient for the buyers**.

### **Advantages of Packing and Packaging**

Packaging is done with a view to preserve and protect their quality and quantity during the period of transit and storage. For some commodities, packing acts as a powerful selling tool.

1. It protects the goods against breakage, spoilage, leakage or pilferage during their movement from the production to the consumption point.
2. The packaging of some commodities involves compression, which reduces the bulk like cotton, jute and wool.
3. It facilitates the handling of the commodity, specially such fruits as apples, mangoes, etc., during storage and transportation.
4. It helps in quality-identification, product differentiation, branding and advertisement of the product, e.g., Amul butter.

5. Packaging helps in reducing the marketing costs by reducing the handling and retailing costs.
6. It helps in checking adulteration.
7. Packaging ensures cleanliness of the product.
8. Packaging with labelling facilitates the conveying of instructions to the buyers as to how to use or preserve the commodity. The label shows the composition of the product.
9. Packaging prolongs the storage quality of the products by providing protection from the ill effects of weather, especially for fruits, vegetables and other perishable goods.

## **TRANSPORTATION**

Transportation or the movement of products between places is one of the most important marketing functions at every stage, i.e., right from the threshing floor to the point of consumption. Most of the goods are not consumed where they are produced. All agricultural commodities have to be brought from the farm to the local market and from there to primary wholesale markets, secondary wholesale markets, retail markets and ultimately to the consumers. The outputs from the factories must be taken to the warehouses and from the warehouses to the wholesalers, retailers and finally to the consumers (farmers).

**Transportation** adds the **place utility** to goods.

Transport is an indispensable marketing function. Its importance has increased with urbanization. For the development of trade in any commodity or in any area transport is a sine qua non. Trade and transport go side by side; the one reinforces and strengthens the other.

### **Advantages of Transport Function:**

The main advantages of the transport function are:

1. Widening of the Market by bridging the gap between the producers and consumers located in different areas.
2. Narrowing Price Difference Over Space as the goods are transported from surplus areas to the places of scarcity and thus price rise and fall is checked.
3. Creation of Employment: Transport function provides employment to large number of persons through construction of roads, loading and unloading, means of transportation, etc.
4. Facilitation of Specialized Farming most suitable to their area, and exchange the goods required by them from other areas at a cheaper price than their own production cost.
5. Transformation of the Economy from subsistence stage to the developed commercial stage.
6. Mobility of the Factors of Production i.e., capital and labour from one area to another.

## **GRADING AND STANDARDIZATION**

**Standardization means the determination of the standards to be established for different commodities.** Pyle has defined standardization as the determination of the basic limits on grades or the establishment of model processes and methods of producing, handling and selling goods and services. Standards are established on the basis of certain characteristics-such as weight, size, colour, appearance, texture, moisture content, staple length, amount of foreign matter, ripeness, sweetness, taste, chemical content, etc. Thus, standardization means making the quality specifications of the grades uniform among buyers and sellers over space and over time.

**Grading means the sorting of the unlike lots of the produce into different lots according to the quality specifications laid down.** Grading is a sub-function of standardization. Grading and standardization is a marketing function which facilitates the movement of produce. Without standardization the rule of caveat emptor (let the buyer beware) prevails; and there is confusion and unfairness as well. Standardization is a term used in a broader sense.

### **Types of Grading**

Grading may be done on the basis of fixed standards or variable standards. It is of three types:

1. **Fixed Grading / Mandatory Grading:** This means sorting out of goods according to the size, quality and other characteristics which are of fixed standards. These do not vary over time and space.
2. **Permissive / Variable Grading:** The goods are graded under this method according to standards, which vary over time. The grade specifications in this case are fixed over time and space, but changed every year according to the quality of the produce in that year.
3. **Centralized / Decentralized Grading:** Based on the degree of supervision exercised by the government agencies on grading of various farm products, the programme can be categorized into centralized and decentralized grading.

Under the centralized grading system, an authorized packer sets up his own laboratory manned by qualified chemists or seeks access to an approved grading laboratory set up for the purpose by the state authorities / co-operatives / associations / private agencies. Ex: Ghee  
The decentralized grading system is implemented by State Marketing Authorities under the overall supervision and guidance of the Directorate of Marketing and Inspection for those commodities which do not require elaborate testing arrangements for quality assessment.

### **Advantages of Grading;**

1. Grading before sale enables farmers to get a higher price for their produce.
2. Grading facilitates marketing for the size, color, qualities and other grade specifications.

3. Grading widens the market for the product.
4. Grading reduces the cost of marketing by minimizing the expenses on the physical inspection of the produce, minimizing storage losses, reducing its bulk, minimizing advertisement expenses and eliminating the cost of handling and weighing at every stage.
5. Grading helps consumers to get standard quality products at fair prices.
6. Grading contributes to market competition and pricing efficiency.

**AGMARK (Agriculture. Marketing)** is a certification mark employed on agricultural products in India assuring that they conform to the set of standards approved by the Directorate of Marketing and Inspection (DMI), an agency of the Government of India. The Agmark is legally enforced in India by the **Agricultural Produce (Grading and Marking Act of 1937**, and amended in 1986. AGMARK standards cover quality guidelines for different commodities spanning the variety of pulses, cereals, essential oils, vegetable oils, fruits and vegetables and semi processed products like vermicelli.

#### **STORAGE:**

Storage is an important marketing function, which involves holding and preserving goods from the time they are produced until they are needed for consumption. The **storage** function, therefore, adds the **time utility** to products.

The storage of agricultural products is necessary for the following reasons:

1. Farm products are seasonally produced, but are required for consumption throughout the year.
2. Storage protects the quality of perishable and semi – perishable products from deterioration;
3. Some of the goods, e.g., woollen garments, have a seasonal demand.
4. It helps in the stabilization of prices by adjusting demand and supply.
5. Storage is necessary for some period for the performance of other marketing functions.
6. The storage of some farm commodities is necessary either for their ripening (e.g., banana, mango, etc.) or for improvement in their quality (e.g., rice, pickles, cheese, tobacco, etc.)

#### **Risks in Storage:**

The storage of agricultural commodities involves three major types of risks. These are:

1. **Quantity Loss:** The risks of loss in quantity may arise during storage as a result of the presence of rodents, insects and pests, theft, fire, etc.
2. **Quality Deterioration:** The second important risk involved in the storage of farm products is the deterioration in quality, which reduces the value of the stored products.

3. **Price Risk:** This, too, is an important risk involved in the storage of farm products. Prices do not always rise enough during the storage period to cover the storage costs.

### **PROCESSING:**

Processing is an important marketing function in the present-day marketing of agricultural commodities. Many technological changes such as the introduction of refrigeration, modern methods of milling and baking food grains, new processing methods for dairy products, and modern methods of packing and preservation.

Meaning: The **processing** activity involves a change in the form utility of the commodity. Processing converts the raw material and brings the products nearer to human consumption. It is concerned with the **addition of value** to the product by changing its form.

### **Advantages:**

The processing of agricultural products is essential for the producer – sellers and for consumers. It increases the total revenue of the producer by regulating the supply against the prevailing demand. It makes it possible for the consumer to have articles in the form liked by him.

1. It changes raw food and other farm products into edible, usable and palatable forms
2. The processing function makes it possible for us to store perishable and semi – perishable agricultural commodities which otherwise would be wasted and facilitates the use of the surplus produce of one season in another season or year.
3. The processing activity generates employment.
4. Processing satisfies the needs of consumers at a lower cost/ Processing saves the time of the consumers and relieves them of the difficulties and botherations experienced in processing.
5. Processing serves as an adjunct to other marketing functions, such as transportation, storage and merchandising.
6. Processing widens the market. Processed products can be taken to distant and overseas markets at a lower cost

### **MARKET INFORMATION:**

Meaning: Market information may be broadly defined as a communication or reception of knowledge or intelligence. It includes all the facts, estimates, opinions and other information which affect the marketing of goods and services.

### **Types of Market Information:**

Market information is of two types

- a) **Market Intelligence:** This includes information relating to such facts as the prices that

prevailed in the past and market arrivals over time.

- b) **Market News:** This term refers to current information about prices, arrivals and changes in market conditions. This information helps the farmer in taking decisions about when and where to sell his produce.

#### **Criteria for Good Market Information:**

- a) **Comprehensive:** Market information must cover prices, production, supply movements, stocks and demand of all the agricultural commodities across geographical regions..
- b) **Accuracy:** The collection of accurate market information is a tedious and expensive task under changing market situations.
- c) **Relevance:** Market information must be collected, arranged and disseminated, keeping in view of the user's interest
- d) **Confidentiality:** There must be a sense of confidentiality among the firms for whom the information has been collected which may assist in drawing policy implications.
- e) **Trustworthiness:** The agency that collects it must create faith, and the users must trust the organization which is making this information available to them.
- f) **Equal and Easy Accessibility:** Every person engaged in marketing, whether big or small, wholesaler, retailer, government or a private agency, must have equal and easy access to the available information.
- g) **Timeliness:** Market information must be made available in time. For this purpose, a speedy transmission is necessary. Late dissemination of market information is of no use.

#### **FINANCING:**

No business is possible nowadays without the financial support of other agencies because the owned funds available with the producers and market middlemen (such as wholesalers, retailers and processors) are not sufficient. The financial requirements increase with the increase in the price of the produce and the cost of performing various marketing services. In the words of **Pyle: “Money or credit is the lubricant that facilitates the marketing machine.”**

Nature and volume of business, necessity of carrying large stocks, continuity of business during various seasons, time required between production and sale, terms of payment for purchase and sale, fluctuations in prices, risk-taking capacity, general conditions in the economy are the some of the factors affecting capital requirements of an agricultural marketing firm

#### **BUYING AND SELLING:**

**Meaning:**Buying and selling is the most important activity in the marketing process that brings

about possession utility with the transfer of goods from seller to buyer. **The buying activity involves the purchase of the right goods at the right place, at the right time, in the right quantities and at the right price.** It involves the problems of what to buy, when to buy, from where to buy, how to buy and how to settle the prices and the terms of purchase.

The selling activity involves personal or impersonal assistance to or persuasion of, a prospective buyer to buy a commodity. The objective of selling is to dispose of the goods at a satisfactory price. The prices of products, particularly of agricultural commodities vary from place to place, from time to time, and with the quantity to be sold. Selling, therefore, involves the problems of when to sell, where to sell, through whom to sell, and whether to sell in one lot or in parts.

#### **Methods:**

The following methods of buying and selling of farm products are prevalent in Indian markets:

##### **(i) Under Cover of a Cloth (Hatha System)**

In this method, the prices of the produce are settled by the buyer and the commission agents of the seller by pressing/twisting the fingers of each other under cover of a piece of cloth. Code symbols are associated with the twisting of the fingers with which traders are familiar with. The negotiations in this manner continue till a final price is settled. The name and offer price of the highest bidder is announced to the seller by the commission agent. This method has been banned by the government because of the possibility of cheating, though it continues to be used in some markets.

##### **(ii) Private Negotiations:**

By this method, prices are fixed by mutual agreement. This method is common in unregulated markets or village markets. Under this method, the individual buyer come to the shops of commission agents at a time convenient to the latter and offer prices for the produce which, they think, are appropriate after the inspection of the sample. If the price is accepted, the commission agent conveys the decision to the seller, and the produce is given, after it has been weighed, to the buyer.

In villages, too, private negotiations take place directly between buyer and seller. The sellers takes the sample to the buyer and asks him to quote the price. If it is acceptable to the buyer, a contract is executed. The advantage of this method is that the seller gets a good price, for buyers are not aware of the price offered by other buyers. Each buyer, therefore, tries to bid the highest to get the produce.

**(iii) Quotations on Samples taken by Commission Agent:** By this method the commission agent takes the sample of the produce to the shops of the buyer instead of the buyer going



to the shop of the commission agent. The price is offered, based on the sample, by the prospective buyers.

**(iv) Dara Sale Method**

By this method, the **produce in different lots is mixed and then sold as one lot**. The advantages of this method is that, within a short time, a large number of lots are sold off. The disadvantage is that the produce of a good quality and one of a poor quality fetch the same price. This method is common for such crops as zeera in many markets of the country.

**(v) Moghum Sale Method:**

By this method, the sale of produce is effected on the basis of a **verbal understanding between buyers and sellers without any pre-settlement of price**, but on the distinct understanding that the price of the produce to be paid by the buyer to the seller will be the one as prevailing in the market on that day, or at the rate at which other sellers of the village sold the produce. This method is common in villages, for farmers are indebted to the local money lenders. Often the buyer pays less than the prevailing market rate on the plea of the poor quality of the produce.

**(vi) Open Auction Method:**

By this method, the prospective buyers gather at the shop of the commission agent around the heap of the produce, examine it and offer bids loudly. The produce is given to the highest bidder after taking the consent of the seller farmer. This method is preferred to any other method because it ensures fair dealing to all parties, and because the farmers with a superior quality of produce receive a higher price. In most regulated markets, the sale of the produce is permissible only by the open auction method.

The following are the merits of the open auction method:

- a) A sale by this method inspires confidence among the buyers and sellers. The seller is able to follow the bidding easily.
- b) The auction serves as a meeting place for the supply of, and demand for, goods.
- c) It disposes of the market supply promptly.
- d) A wide variety of goods are available to buyers for selection.
- e) The auction method reduces the number of salesmen needed in the process.
- f) The buyers of small lots are not put to a disadvantage against the buyers of large lots.
- g) All the sections interested in the sale and purchase are well informed about the prevailing prices and can take judicious decisions about the sale and purchase of the commodities.
- h) The payment of the price of the goods is made immediately after the sale if an auction has been completed.

Three types of open auctions are prevalent in different markets. These are:

- a) **Phar System of Open Auction:** By this method, one bid is given for all the lots in a particular shop and all the lots are sold at that price. One extreme case of this method is when one bid is given for the product in the whole market.
- b) **Random Bid System of Open Auction:** By this method, the commission agent invites a few buyers when the produce is brought to his shop for sale. All the prospective buyers are not informed. As a result, the competition is poor.
- c) **Roster Bid System of Open Auction:** This is a systematic method of open auction. Bidding starts from a point in the market at a notified time about which the prospective buyers are given information in advance. This overcomes the defects existing in the previous two methods of open auction. The bidding party, after the auction of the produce at one shop, moves to the next in a clock-wise or anti-clockwise direction till the auction of the produce at all shops is over, or the scheduled auction time expires. This method is in vogue in most of the regulated markets.

vii) **Close Tender System:**

This method is similar to the open auction method, except that bids are invited in the form of a close tender rather than by open announcement. The produce displayed at the shop of the commission agent is allotted lot numbers. The prospective buyers visit the shops, inspect the lots, offer a price for the lot which they want to purchase on a slip of paper, and **deposit the slip in a sealed box** lying at the commission agent shop. When the auction time is over, the slips are arranged according to the lot number, and **the highest bidder** is informed by the commission agent that his bid has been **accepted** and that he should take delivery of the produce. The regulated markets have adopted this method of sale, which is time-saving and involves the minimum physical labour

## LECTURE 28: MARKETING EFFICIENCY

Marketing efficiency is essentially the degree of market performance. It is a broad and dynamic concept. It is the ratio of market output (satisfaction) to marketing input (cost of resources).

An increase in ratio represents improved efficiency and vice versa.

### **Components of marketing efficiency :**

1. Effectiveness with which a marketing service is performed.
2. The cost at which the service is provided.
3. The effect of this cost and the method of performing the service as production and consumption. i.e. effect of (1) & (2), last two are more important.

### **Assessment of marketing efficiency :**

1. **Technical or Physical or Operational efficiency:** It pertains to the cost of performing a function; Efficiency is increased when the cost of performing a function per unit of output is reduced.

Eg: - Storage processing, handling etc.

2. **Pricing / Allocative efficiency :** System is able to allocate farm products either over time, across the space or among the traders, processors and consumers at a point of time in such a way that no other allocation would make producers and consumers better off. This is achieved via pricing the product at different stages, places, times among different users. Pricing efficiency refers to the structural characteristics of the marketing system, when the sellers are able to get the true value of their produce and the consumers receive true worth of their money.

### **Empirical Assessment of Marketing Efficiency :**

- a. A reduction in the cost for the same level of satisfaction or an increase in the satisfaction at a given cost results in the improvement in efficiency. (Khol and Uhl.)

O

$$E = \frac{O}{I} * 100$$

I

E = level of efficiency

O = value added to the marketing system.

I = real cost of marketing

b. Shepherd's formula of marketing efficiency :

$$ME = \left[ \frac{V}{I} - 1 \right] * 100$$

ME = Index of marketing efficiency

V = Value of the goods sold or price paid by the consumer (Retail price)

I = Total marketing cost or input of marketing.

This method eliminates the problem of measurement of value added

c) Acharya's Approach

According to Acharya (2003), an ideal measure of marketing efficiency, particularly for comparing the efficiency of alternate markets channels should take into account all of the following:

- a) Total marketing costs (MC)
- b) Net marketing margin (MM)
- c) Prices received by the farmer (FP)
- d) Prices paid by the consumer (RP)

Further, the measure should reflect the following relationship between each of these variables and the marketing efficiency.

- i) Higher the (a), the lower the efficiency
- ii) Higher the (b), the lower the efficiency
- iii) Higher the (c), the higher the efficiency
- iv) Higher the (d), the lower the efficiency

As there is an exact relationship among four variables, i.e.,  $a+b+c = d$ , any three of these could be used to arrive at a measure for comparing the marketing efficiency.

The following measure is suggested by Acharya,

$$ME = FP \div (MC + MM)$$

## **LECTURE 29: RISKS IN MARKETING**

Risk is inherent in all marketing transactions. Fire, rodents, quality deterioration, price fall, change in tastes, habits or fashion, placing the commodity in the wrong hands or area are all also associated with marketing risk. **Hardy has defined risk as uncertainty about cost, loss or damage.** The longer the time lags between production and consumption, the greater the risk. Most of the risk is taken by market middlemen. A risk cannot be eliminated because it also carries profit.

**Types of Risk :** The risks associated with marketing are of three types,

- i. **Physical risk** includes loss of quantity and quality. It may be due to fire, flood, earthquake, rodents, pests, excessive moisture or temperature, careless handling, improper storage, looting or arson.
- ii. **Price risk** associates with fluctuation in price from year to year or within the year.
- iii. **Institutional risks** include the risks arising out of a change in the government budget policy, imposition of levies price controls etc.

**Measures to Minimize Risks :**

- a. Reduction in Physical loss through fire proof storage, proper packing and better transportation.
- b. Transfer of physical losses to Insurance companies.
- c. Minimization of price risks through.
  - Fixation of minimum and maximum price by government.
  - Dissemination of price information to all sections of society over space and time.
  - Effective system of advertising and create a favourable atmosphere for the commodity.
  - Operation of speculation and hedging : Futures trading, forward market, contract farming, contract marketing.

**Speculation :** Purchase or sale of a commodity at the present price with the object of sale or purchase at some future date at a favourable price.

**Hedging :** It is a trading technique of transferring the price risk. “Hedging is the practice of buying or selling futures to offset an equal and opposite position in the cash market and thus avoid the risk of uncertain changes in prices” (Hoffman).

**Futures Trading :** It is a device for protecting against the price fluctuations which normally arise in the course of the marketing of commodities. Stockicsts , processors or manufactures utilize the futures contracts to transfer the price risks faced by them.

Future trading includes both hedging and speculation.

<b>Speculation</b>	<b>Hedging</b>
Purchases and sales in the cash as well as in futures markets are made with the objective of making profit	To protect oneself against excessive price fluctuation.
The activities of buying and selling are not necessarily opposed to each other	Are always opposed to each other
It is not necessary that the two types of transactions should be of equal quantity	It is obligatory to buy and sell the goods in equal quantities in the two markets
Speculator purchases and sells goods when prices are as per his expectations	The commodities are not stored by traders. Only the difference in the price is given or taken on the due date.

Commodities for Futures Trading Commodities permissible under futures trading must satisfy the following conditions.

1. Plentiful supply of the commodity.
2. Must be storable.
3. Commodity should be homogeneous.
4. Commodity should have a large demand.
5. Supply of the commodity should not be controlled by a few large firms.
6. The price of a commodity should be liable to fluctuate over a wide range.

**Forward Markets** A market in which the purchase and sale of a commodity takes place at time 't' but the exchange of the commodity takes place on some specified date in future i.e. t+1. Some times even on the specified date in the future, (t+1) there may not be any exchange of the commodity. Instead, the differences in the purchase and sale price are paid or taken.

**Services Rendered by a Forward Market.**

1. Reduces price fluctuations so that the margin of profit may be small.
2. Ensures an even flow of goods, avoiding gluts in the peak season, and shortages in the slack seasons.
3. It brings about an integration of the price structure of commodities at different points of time.
  4. Facilitates large purchases and sales at a short notice.
5. Brings coordination of the current and future expectations by rotating in the light of changing supply – demand situation.

## **LECTURE 30: ADMINISTERED PRICES- MINIMUM SUPPORT PRICE**

Characteristics of Agricultural product prices

- i. Production and supply of agricultural products cannot be adjusted quickly to changes in prices or demand.
- ii. Variability in cost of production from region to region.
- iii. Wide variation in quality of products and hence prices.
- iv. The prices of farm products in general exhibit co-movement at least within a group.
- v. The prices of farm products vary across space.
- vi. The prices of farm products in general remain low in the post-harvest period.
- vii. There are multiple prices in the same market at a point of time.

### **Agricultural Price Stabilization**

The objectives of price stabilization assures reasonable level of living, keeping parity with other sectors, adjustment of production to demand as well as stabilization of general price level in relation to world prices.

### **Need for Agricultural Price Policy**

Agricultural Price Policy has special significance when there is a maladjustment in demand and supply and jump up and down the equilibrium price level. Several government interventions were initiated to protect farmers and consumers viz.,

1. Procurement operations.
2. Public distribution at fixed issue prices, rationing, restrictions on movement of food grains from one place to another place i.e. state to state.
3. Maximum controlled prices, assured minimum prices, statutory minimum prices, ban on exports, stepping up of imports, regulation of futures trading.
4. Minimum price for sugarcane to sugar factories.
5. Floor and ceiling prices, controls on futures trading and imports have been the major policy measures taken for regulation of prices of raw cotton and jute.

### **CACP: Commission for Agricultural Costs and Prices**

Agricultural Price Commission, (APC) was established in 1965 on the recommendations of Food grains Policy committee under the chairmanship of **L.K. Jha**.

The APC has been renamed as CACP on similar lines as has been done to the industry in 1985.

**Administered Prices :**

Prices fixed by the government with the objective of protecting farmers against a decline in prices during the year of bumper production, protecting consumers from excessive price increases and ensuring procurement for buffer stocks or operation of PDS. These are 3 types :

1. **Minimum Support Price, (MSP):** Price fixed by the government to protect farmers against excessive fall in prices.
2. **Procurement Price :** Refers to the price at which government procures from producers to maintain buffer stocks and feed Public Distribution System.
3. **Issue Price :** Price at which the commodity is made available to consumers at fair price shops. It is always higher than procurement price.



## LECTURE 31: AGMARKNET and eNAM

**Agmarknet** is an initiative towards globalisation of Indian agriculture by the **Ministry of Agriculture under Government of India**. This portal on agricultural marketing is backed by a wide area information network connecting agricultural markets, State Marketing boards/Directorates and also providing linkages to the websites of the important National and International Organisations.

The Portal provides both static and dynamic information relating to agricultural marketing in India **The static information is about infrastructure- related** (Storage, warehousing, Cold Storage, grading and packing facilities), Market – related (market fee/ charges, weighment, handling, market functionaries, development programmes, market laws, composition of market Committees, income and expenditure, etc) and Promotion-related information (Standards, Grades, Labelling, Sanitary and Phyto-Sanitary requirements, Pledge Financing, Marketing Credit and new opportunities available, etc.). **The dynamic part comprise Price-related information** comprising maximum, minimum and model prices of varieties, total arrivals and dispatches with destination.

The portal provides easy access to commodity-wise, variety-wise daily prices and arrivals information of more than **2000 varieties and about 300 commodities from the wholesale markets** spread all over the country. Prices and arrivals trend reports for important commodities, futures prices from **Multi Commodity Exchange of India Limited and NCDEX** are being reported online on the portal.

**The portal is run by the Directorate of Marketing & Inspection**. The computer facility has been provided at different markets at grassroot level and connected to internet with DMI Headquarters. The data from the APMCs/markets are transferred to portal immediately after reported from the APMCs.

The main users of Agmarknet website are Farmers , Traders, Research Institutes, Exporters, Commodity Boards/Various Government Departments, ECO-STAT. The linkages are also provided to Kisan, Krishi World, Indian Agro-net, Agriwatch, Indian Dairy Industry, Agro-India, Forwards Markets Commission, National Multi Exchange of India Limited and NCDEX through the portal to form a close user-group

The portal provides information on **commodity profiles, reports of important research studies, CODEX Standards of agricultural commodities, markets profile, etc. E-mail**

**addresses of the agencies involved in agricultural marketing sector are progressively being published for public access for facilitating direct interaction.**

Information linkages were provided to **Farmer's portal, Mkisan portal, Nokia, BITCOE, IKSL**, a Cooperative Sector company, has been involved in disseminating the price information to a large network of farmers cooperatives,

### **eNAM (National Agriculture Market)**

Government of India launched on 14th April, 2016, a Pan-India electronic trading portal known as **National Agricultural Market (e-NAM)**. It is a virtual market platform linking the existing physical Mandis i.e. APMCs electronically with a theme of “**one nation, one market**” as eNAM market. e-NAM promotes uniformity, streamlining of procedures across the integrated markets, removes the information gap between buyers and sellers and promotes real time price discovery based on actual demand and supply in the market. It provides transparency in the auction process and access to a nationwide market to both the parties.

**Mission:** Integration of APMCs across the country through a common online market platform to facilitate pan-India trade in agriculture commodities, providing better price discovery through transparent auction process based on quality of produce and ensure timely online payment.

Objectives of e-NAM:

1. A national e-market platform for transparent sale transactions and price discovery initially in regulated markets.
2. Liberal licensing of traders / buyers and commission agents by State authorities without any pre-condition of physical presence or possession of shop /premises in the market yard.
3. One license for a trader valid across all markets in the State.
4. Harmonisation of quality standards of agricultural produce and provision for assaying (quality testing) infrastructure in every market to enable informed bidding by buyers.
5. Single point levy of market fees, i.e. on the first wholesale purchase from the farmer.
6. Provision of Soil Testing Laboratories in/ or near the selected mandi to facilitate visiting farmers to access this facility in the mandi itself.

## **LECTURE 32: GATT-WTO-TRIPS**

### **Genesis of GATT**

**Brettonwood conference of 1944** recognized the need for an institution to oversee the liberalization of free trade. For facilitating world trade, General Agreement on Tariffs and Trade, (GATT) was established in 1947 at Geneva in Switzerland. **India was one of the founder member of GATT.** The General Agreement on Tariffs and Trade (GATT) was an international trade agreement. It was signed by 23 nations, in 1947 and came into effect on 1 January 1948, It was refined over eight rounds of negotiations

### **Objectives of GATT**

- a. Reduced tariff-barriers and free trade.
- b. Developing full use of resources of the world.
- c Expansion of production and international trade.
- d. Ensuring full employment and large and steady growing volume of real income and effective demand.

There have been eight rounds of negotiations from 1947 to 1994, which led to the creation of the **World Trade Organization (WTO)**. It replaced the GATT on 1 January 1995.

### **WTO**

On the recommendation of Dunkel draft, WTO was established on 1st January, 1995 with Head Quarters at Geneva.

### **Functions**

The WTO's overriding objective is to help trade flow smoothly, freely and predictably.

- a. Administering trade agreements
- b. Acting as a forum for trade negotiations
- c. Settling trade disputes
- d. Reviewing national trade policies
- e. Building the trade capacity of developing economies
- f. Cooperating with other international organizations

### **Trade Related Intellectual Property Rights (TRIPs)**

Different form of intellectual property rights (IPR) identified by TRIPs Agreement governed by WTO are

1. Patents
2. Copyrights
3. Trade marks

4. Designs
5. Trade secrets
6. Geographical indications.

**1. Patent :**

A patent is an exclusive right granted to the inventor to use and market the invention for a limited period of time in consideration of the disclosure of the invention. The product must be (a) novel, (b) have industrial application and (c) must be useful for entitlement of a patent. Patents are given only for inventions. Inventions are solutions to specific problems in the field of technology. An invention may relate to a product or a process.

**2. Copy Rights :**

Copy right law deals with the rights of intellectual creators. It is concerned with protecting creativity and ingenuity. It promotes and disseminates national cultural heritage. It is meant for original literary, dramatic, musical and artistic works, cinematographic films and softwares. Copy right is registered at Ministry of HRD which is valid for 60 years after author's death.

**3. Trade mark :**

It is a sign that individualize the goods of a given enterprise and distinguishes them from the goods of its competitors. It is limited to word marks, abbreviations, names, figures and hologram.

**4. Designs :**

A design includes features of structure, configuration, pattern, ornament, or composition of lines and colors applied to an article in 2 or 3 dimensional form by any technical process. The process or product can be manual, civil, electrical, chemical and mechanical or combination of all.

**5. Trade secret :**

It is the agreement between the employer and employee to keep the research information secret or confidential. The employer can recover damages from the improper disclosure or use of his trade secret by the employee.

**6. Geographical Indications :**

Place names used to identify products such as "Champagne", Roquefort cheese, Basmati rice etc. They provide legal means so that interested parties can stop the use of such geographical indications for products that do not originate from the used place name or do not have the usual characteristics associated with that place name