PGEC S4 OP2 (A/B)
Exam Code: AECO

Agricultural Economics

SEMESTER-IV

ECONOMICS

BLOCK- 1

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August 2021

ISBN: 978-93-91026-54-7

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Printed and published by Registrar on behalf of the Krishna Kanta Handiqui State Open University

Headquarter : Patgaon, Rani Gate, Guwahati - 781017

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The University acknowledges with thanks the financial support provided by the **Distance Education Bureau**, **UGC** for the preparation of this study material.

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COURSE INTRODUCTION

"Agricultural Economics'' is the fourth course of fourth semester of the M.A. in Economics programme of this University. The fourth course of fourth semester of M.A. in Economics programme of this University is basically an optional course. Out of the two optional course viz. Agricultural Economics and Economics of Insurance, learners can opt for any one course based on their interest. This course Agricultural Economics is designed to help the learners to have a deep understanding about various concepts and theoretical perspectives related to Agricultural Economics. This course comprises of 15 units and has been divided into two blocks. Block 1 consists of 8 units and Block 2 consists of 7 units.

BLOCK INTRODUCTION

This is the first block of the course and it comprises eight units. The first unit of the course discusses the basic concepts of Agricultural Economics. This unit will help you to know the definition, scope and nature of Agricultural Economics. The second unit discusses role and importance of Agriculture in Economic development. Important concepts discussed in the unit include Life vs. Development of Agriculture during Five Year plans, interdependence of Agriculture and Industry are also discussed in this unit . The third unit deals with the farm organisation and its types, most suitable farm organisation in Indian Agriculture. Unit four explains objectives of land reforms and the needs of land reforms in Indian Agriculture. The concept of ownership vs. tenancy cultivation, large vs. small farms, critical evolution of land reforms are described in this unit. The fifth unit discusses about the Risk and Uncertainity in Agriculture, as well as its types and measures to control the same. The sixth unit will help you to leaser about agricultural price policy, fixation of product price, price policy for agricultural inputs, consumer protection and ancillary policy. This unit gives you an insight into Agricultural Price Policy in India. The seventh unit of this block discusses the topics like Agricultural Marketing, its needs and importance and the status of agricultural marketing in India. In unit eight, various aspects of agricultural finance are discussed. This unit covers topics like source of various credit, and problems of capital formation.

While going through the units of the block, you will find that the unit is further divided into certain sections and sub-sections, wherever necessary, for your better understanding. Again, the units carry certain activities after a particular section. These "ACTIVITIES" will provide you the opportunity to practically apply your own thoughts based on the knowledge gained from reading the text in a particular section. Besides, in order to give you additional information on certain relevant topics, you will find a category titled "LET US KNOW" after the sections in each unit. Another category that has been included at the end of each section of a particular unit is "CHECK YOUR PROGRESS". The purpose of this category is to help you to asses for yourself as to how thoroughly you have understood a particular section. You may then match your answers with "ANSWERS TO CHECK YOUR PROGRESS" given at the end of each unit. The section "FURTHER READING" in each unit contains the names of a few books which you might want to consult if you are intereted in learning more elaborately about the concepts discussed in a particular unit. Furthermore, the category called "POSSIBLE QUESTIONS" is intended to give you a hint of the type of questions you are likely to get in the examination.

UNIT 1: BASIC CONCEPTS OF AGRICULTURAL ECONOMICS

UNIT STRUCTURE

1.1 Learning Objectives
1.2 Introduction
1.3 Definition of Agricultural Economics
1.4 Scope and Nature of Agricultural Economics
    1.4.1 Scope of Agricultural Economics
    1.4.2 Nature of Agricultural Economics
1.5 Need for a Separate Study of Agricultural Economics
1.6 Importance of Agricultural Economics
1.7 Let us Sum Up
1.8 Further Reading
1.9 Answers to Check Your Progress
1.10 Model Questions

1.1 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- explain the meaning and definitions of Agricultural Economics
- describe Scope, Nature and Importance of Agricultural Economics
- discuss the need for a separate study of Agricultural Economics

1.2 INTRODUCTION

"Agricultural Economics" the term consists of two words viz., "agriculture" and "economics". Before going into the details of agricultural economics as a whole, it is essential to understand what is agriculture and economics first.

The word agriculture comes from two Latin words 'ager' means the soil and 'cultura' means cultivation. Therefore, agriculture in the broader sense can be defined as the science or practice of farming which includes cultivation of the soil for the growing of crops and the rearing of animals to

provide food, wool, and other products.

The other word Economic derived from Greek word 'Oikonomikos'. **OIKOS** means a house or home and Nomos means to manage or management.Thus, economics means home or household management. A head of the family faces the problem of "unlimited wants" and "limited income". Similarly the society also has to make the choices between "unlimited wants" and "scarce resources". Thus, economic refers to the science that deals with the study of the human behaviour; on how individuals, businesses, governments and nations make choices to use scarce productive resources to produce various goods and to distribute these goods among various members of society. Therefore, Economics is the science that deals with production, exchange and consumption of various goods and services in the economic system. It shows how scarce resources can be used to increase wealth and human welfare. In this world, the availability of resources or inputs to produce goods are limited. This scarcity induces people to choose among available alternatives and the knowledge of economics is used to compare the alternatives for choosing the best among them. For example, a farmer can grow different crops like paddy, sugarcane, banana, vegetables etc in his farm. However, he has to choose a crop depending on the availability of inputs like irrigation water, labour and most importantly availability of money etc.

Let us now look into the field of agricultural economics in a defailed manner.

1.3 DEFINITION OF AGRICULTURAL ECONOMICS

Agricultural Economics is an applied field of economics which deals with the principles that help the farmers in the efficient use of scarce resources such as land, labour, capital and management in farming and allied activities. According to Prof. Grey, Agricultural Economics can be defined as "the science in which principles and methods of economics are applied to the special conditions of agriculture industry".

Prof. Hibbard defined the Agricultural Economics "as the study of relationships arising from the wealth-getting and wealth-using activity of

man in agriculture". Jouzier defined that, "Agricultural Economics is that branch of agricultural science which treats that manner of regulating the relations of different elements comprising the resources of the farmers, whether it be the relations of each other, or to human beings in order to secure the greatest degree of prosperity to the enterprise." In the words of Goodwin, "Agricultural Economics as a social science is concerned with human behaviour during the process of producing, processing, distributing and consuming the products on farms and ranches"

From these definitions, it can be concluded that, the subject of agricultural economics deals with the problems of the farms, income earning and spending activities of the farmers and also the management of farm business and making necessary changes according to the situation so as to bring stability of farm income.



CHECK YOUR PROGRESS

Q 1: What do you mean by agriculture?

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Q 2: What do you mean by economics?

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Q 3: Define Agricultural Economics.

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1.4 SCOPE AND NATURE OF AGRICULTURAL ECONOMICS

1.4.1 Scope of Agricultural Economics

Scope means field of study and the scope of economics covers the subject matter of economics. There are two approaches to study the subject matter of economics:

- Traditional Approach

- Modern Approach
- **Traditional approach:** Traditionally, subject matter of economics can be studied under 4 divisions viz., consumption, production, exchange and distribution.
  - **Consumption :** It means the use of wealth, commodities and services to satisfy human wants. It also means the destruction of utility or using up of utility (capacity of goods to satisfy the wants), because, all the goods that are produced are consumed immediately or sometime in the future. Through consumption we use utility, so it represents using up of utilities.
  - **Production :** It is an activity that helps to create or add utility. It involves the processes and methods in which one set of goods is transformed into the other. In economics only creation of utilities is not treated as production, the produced goods should have value too. The production process transforms the input or resource into output or products.
  - **Exchange :** It implies transfer of goods from one person to other. It may occur among groups of individuals, countries, markets, regions and so on. The exchange of goods leads to an increase in welfare of the individuals through creation of higher utilities for goods and services.
  - **Distribution :** It refers to the sharing of wealth produced among different factors of production land, labour, capital and organisation. Proper distribution of wealth and resources leads to growth and economics welfare of the people in the nation.
- **Modern Approach:** Under modern approach, economics is studied under two divisions: Microeconomics and Macroeconomics.
  - **Microeconomics :** It is also known as **price theory.** The term has been derived from the Greek word "**MICROS**"

meaning small. It deals with economic behaviour of individual economic units such as consumer, producer, business firms etc. It also studies the flow of economic resources or factors of production from resource owners to business firms and the flow of goods and services from business firms to households/ultimate consumers. Micro economics covers theory of consumer behaviour, theory of value (product pricing and factor pricing) and theory of economic welfare.

- **Macroeconomics :** The term derived from the Greek word "**MAKROS**" means large. It is also known as **income theory**. It considers the economic system as a whole. It concerns with the value of the overall flow of goods and the value of the overall flow of resources. It covers theory of income and employment, theory of money and prices, banking, policy formulation and analysis, theory of distribution, general equilibrium analysis etc.

Since the agricultural economics is the branch of economics, agricultural economics is not different from the general economics. All the tools of analysis used in general economics are employed in agricultural economics as well. We have the same branches of agricultural economics as in case of general economics such as economics of production, consumption, exchange, distribution, marketing, financing and planning and policy making etc. An economic study at the micro and macro level for the agricultural sector is also made just similar to general economics.

To be more specific, agricultural economics examines how a farmer chooses various enterprises like production of crops or raising of cattle and how he chooses various activities in the same enterprise for eg. which crop to

grow and which crop to drop; how the costs are to be minimised; what combination of inputs for an activity are to be chosen; what amount of each crop is to be produced; what type of commercial relation the farmer should have with people; from whom they purchase their inputs or to whom they sell their products etc. Again, Agricultural Economics does not study only the behaviour of a farmer at the farm level which is under micro analysis. Agricultural problems also have a macro aspect as well. Instability of agriculture and agricultural unemployment, the way governments decide how to support farmers etc are some examples of agricultural problems which have to be dealt with, mainly at the macro level.

Therefore, we can consider the scope of general economics as the scope or subject matter of agricultural economics as well.

1.4.2 Nature of Agricultural Economics

By nature, Agricultural Economics is both a social science and natural science. It is a social science because farmers' decisions, activities and functions are affected by society and precise measurement of farmers' decisions without the influence of social institutions and religious beliefs are difficult. Agricultural economics studies the social relationship of farmers with the other members of society. It is also a natural science because it uses principles, scientific methods, and innovations suggested by agricultural scientists in agricultural activities.

Some agricultural economists have called agricultural economics an applied science. According to Forster and Leoger, **"Agricultural Economics is an applied science and as such is concerned with the identification, description and classification of economic problems of agriculture to the end**

that these problems may be solved." Also according to Gray, 'Agricultural Economics may be defined as the science in which the principles and methods of Economics are applied to the special conditions of agricultural industry.'

Again, Agricultural Economics is both a science as well as an art. Science is a systematised body of knowledge that traces the relationship between cause and effect. An art is a systematised body of knowledge which is a system of procedures to attain a given objective or goal. In other words, Science teacher us to know, art teach us to do. As science, it explains the cause and effect relationships among various economic variables operating in agriculture. On the other hand, the relationship as found to exist can be used for solving various problems affecting agriculture, owing to which agricultural economics is also an art. Further, as is the case with 'General Economics', Agricultural Economics is also a normative science as it prescribes what ought to promote human welfare by making distinction between good and bad and involves ethical values (ethical values are the kind of values that have to do with being good or doing the right thing).

The nature of agricultural economics is **unique** because nature plays an important role in its working. Actually this unique nature of agricultural economics comes from the unique features of agricultural production which distinguishes it distinctly from other non-agricultural sectors especially industrial production. These distinguished features are discussed in the latter part of this section.



CHECK YOUR PROGRESS

Q 4: What are the different approaches studied under the scope of economics?

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Q 5: What is the nature of Agricultural Economics?

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1.5 NEED FOR A SEPARATE STUDY OF AGRICULTURAL ECONOMICS

Prior to 1900 Agricultural Economics did not exist as a field of specialised study either within general economics departments or in colleges of agriculture although courses in “Agricultural Economy” and “Economics of Agriculture” appeared in college catalogues at the University of Illinois and at Cornell University before 1870. The rapid growth of Agricultural Economics as an academic field between 1900 and the early 1920’s reflected the emerging interests of a number of men who had been trained in several agricultural disciplines such as agronomy, horticulture, animal husbandry, and soil science in factors affecting the costs of production and in the economics of farm management -’particularly in problems such as the economics of enterprise selection, choice of production methods, and the financing and growth of the firm. It also reflected the growing interest of a number of economists in problems of agricultural policy, the behaviour of agricultural commodity markets, and the economics of land use.

The nature of Agricultural Economics is such that it obtains most of the principles required from the General Economics which means there is no basic difference between the principles of General Economics as well as of Agricultural Economics. If it is so, the question is why there is need of separate study of agricultural economics. The answer is very simple. Agricultural Economics does not imply a direct application of the principle of economics. Rather, it is just an abstraction from reality. It means that, different principles of economics are required to be modified before applying in agriculture so that their assumptions completely tally with the main features of the real situation. These modifications of economic principles are so large and varied in nature that there is complete justification for studying the agricultural economics as a separate branch.

Again, the need for the separate study of Agricultural Economics also comes from unique nature of agricultural production which makes it different from the other disciplines. Different features of agricultural production as follows:

- Most of the farmers consider farming as a way of life rather than a business opportunity. This is mainly due to small and scattered land holdings and large extent of family labour involvement. They are easily satisfied with mere fulfillment of their family requirement. The sense of entrepreneurship is yet to be well developed among of the farmers.
- Agriculture being a biological activity is totally dependent on weather. Different factors like rainfall, temperature, humidity etc have significant effect on agricultural production. On the other hand, weather has little control over industrial production.
- Agricultural productions are seasonal in nature. Different crops like rice, wheat, pulses, vegetables, fruits etc. are grown in different seasons. Thus, the production of agricultural commodities is not uniform throughout the year unlike the other industrial commodities.
- Again, the agricultural commodities are perishable in nature. The storage period of farm commodities ranges from few hours (eg. flowers) to few days (fruits and vegetables) or few years (cereals, pulses, oilseed etc). It results in price variations in the same day, in the same season and among the different seasons in a year. In industrial products such price variations are not found and they are durable in nature.
- Many agricultural products are joint products meaning that they are produced from the same production processes like paddy and straw, mustard oil and cake etc. Since they are joint products, the cost of production (Rs. per unit of product) of main product (paddy) and byproduct (straw) cannot be separated. However, for the industrial products, it is easy to estimate the cost of production of several products produced in the same plant.
- Most of the farm products are bulky in nature exerting pressure on storage and transportation.

- Problems of standardisation are generally found in Agriculture due to variations in appearance, size, shape, colour, quality, taste etc. for different varieties of crops.
- There is a lapse of time between the decision to produce and gaining actual output in Agriculture, which is called production period. As for example: four to six months for rice, one year for sugarcane, three months for green gram etc. This time lag in production may interfere with the farmer's plan. During that time price fluctuation may occur which in turn effects farm incomes.
- Agriculture requires large proportion of land divided into several small and scattered holdings.
- In agriculture, law of diminishing returns starts to operate at an earlier stage than industry. Law of diminishing returns means that after a certain stage has been reached, the application of every additional capital and labour units in a given unit of land results in a lesser proportionate production of output. Thus, it leads to an increase in costs of production per unit of output.
- Farm business takes relatively longer time to return the investment as compared to the industrial production
- Due to seasonal nature of production, the response of output to change in price is low i.e. demand and supply of agricultural products have low elasticity. Even there price increases if the sowing time is over then the farmer is unable to increase the supply. Similarly, most of the agricultural products are basic necessities of life having definite but limited market demand irrespective of price changes.

  Therefore, to deal with these distinguished problems, Agricultural Economics has been evolved as a separate study.



CHECK YOUR PROGRESS

Q 6: When did the Agricultural Economics evolved as a separate field of study?

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Q 7: What are the different features of Agricultural production that distinguish it from other non agricultural sector?

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Q 8: Why is Agricultural Economics important?

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1.6 IMPORTANCE OF AGRICULTURAL ECONOMICS

The field of Agricultural economics seeks the relevance between cause and effect in agriculture using different advanced methods like production functions and programming models. It uses theoretical concepts of economics to provide answer to the problems relating to production, consumption, exchange and distribution of agricultural goods and services. It also helps the farmers to take decision regarding production of goods and services, as well as quantities and increase in the efficiency of production. Agricultural sector plays a strategic role in the process of economic development of a country. It is convinced that increased agricultural output and productivity tend to contribute significantly to an overall economic development of a nation. Therefore, it will be rational and appropriate to place greater emphasis on further development of the agricultural sector having the foundation links between crops and animal production system. Here, the major role has to be played by agricultural economists in understanding the different complexities involved in these foundation links. Agricultural Economics provides clear insight and understanding of the effect of climate on production and marketing of agricultural commodities. It also provides knowledge regarding problems related to production, finance, marketing, government policies and their impact on production and distribution. This knowledge is very much essential to solve different farm problems. Therefore, under agricultural economics different subject disciplines viz., microeconomics, macroeconomics, agricultural production economics, farm management, agricultural marketing, price analysis, finance etc. are taught separately.



1.7 LET US SUM UP

- 'Agricultural Economics' consists of two words viz., "agriculture" and "economics". Agriculture in the broader sense can be defined as the science or practice of farming which includes cultivation of the soil for the growing of crops and the rearing of animals to provide food, wool, and other products. Economic refers to the science that deals with the study of the human behaviour of how individuals, businesses, governments and nations make choices to use scarce productive resources to produce various goods and to distribute these goods among various members of society.
- There are four concepts of definition of economics given by different economists- definition of wealth by Adam Smith, definition of welfare by Alfred Marshall , definition of scareity by Lionel Robbins and definition of Growth by Prof. Samuelson.
- The subject of Agricultural Economics deals with the problems of farms, income earning, spending activities of the farmers and also the management of farm business and making necessary changes according to the situation so as to bring stability of farm income.
- There are two approaches to study the subject matter of economics- traditional and modern approach. Under traditional approach there are four divisions- production, consumption, exchange and distribution. Again under, modern approach, Micro economics and Macro economics are studied. Since the Agricultural Economics is a branch of General Economics, the same subject matters as the General Economics are studied.
- By nature, Agricultural Economics is both a Social Science and Natural Science. Also, it is considered as an applied science. Again, agricultural economics is both a science as well as an art as it explains the relationships of cause and effect among various economic variables operating in agriculture and again use these for solving various problems affecting agriculture. The nature of Agricultural

Economics is **unique** because nature plays an important role in its working.

- Agricultural Economics gives clear insight and understanding of the effect of climate on production and marketing of agricultural commodities. It also provides knowledge regarding problems related to production, finance, marketing and government policies and their impact on production and distribution. This knowledge is very much essential to solve different farm problems.
- The rapid growth of Agricultural Economics as an academic field emerged between 1900 and the early 1920's. Different features of agricultural production like considering farming only as a way of life rather business, Heavy dependence on weather, seasonality of production, perishable nature of agricultural products etc, Also, many agricultural products are joint product, bulkiness of agricultural products, problems of standardisation, time lag in production of agricultural products, large proportion of land, requirement of longer time to return the investment, law of diminishing return, low elasticity of demand and supply etc. make Agricultural Production separate from non agricultural industrial production which calls for the need for separate study about Agricultural Economics.



1.8 FURTHER READING

1) Lekhi, R.K. and Singh, Joginder (2015). *Agricultural Economics -An Indian Perspective,* Kalyani Publishers, New Delhi.

2) Reddy S.S., Ram, P.R.,Sastry, T.V.N., Devi, I.B. (2012) *Agricultural Economics*, Oxford & IBH publishing co. Pvt.ltd., New Delhi



1.9 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Agriculture in the broader sense can be defined as the science or practice of farming which includes cultivation of the soil

for the growing of crops and the rearing of animals to provide food, wool, and other products.

Ans to Q No 2: Economic refers to the science that deals with the study of the human behaviour how individuals, businesses, governments and nations make choices to use scarce productive resources to produce various goods and to distribute these goods among various members of society.

Ans to Q No 3: There are four concepts of definition of economics given by different economists: 1. Wealth, 2. Welfare, 3. Scarcity, 4. Growth

Ans to Q No 4: Agricultural Economics can be defined as “the science in which principles and methods of economics are applied to the special conditions of agriculture industry” as stated by Prof. Grey.

Ans to Q No 5: There are two approaches to study the subject matter of economics: traditional approach and modern approach.

Ans to Q No 6: By nature, Agricultural Economics is both a Social Science and Natural Science. Also, it is considered as an aApplied Science. Again, Agricultural Economics is both a science as well as an art as it explains the relationships of cause and effect among various economic variables operating in agriculture and again uses these for solving various problems affecting agriculture.The nature of Agricultural Economics is **unique** because nature plays an important role in its working.

Ans to Q No 7: Agricultural Economics gives clear insight and understanding of the effect of climate on production and marketing of agricultural commodities. It also provides knowledge regarding problems related to production, finance, marketing and Government policies and their impact on production and distribution. This knowledge is very much essential to solve different farm problems. It also helps the farmers to take decision regarding production of goods and services and their quantities and increase in the efficiency of production.

Ans to Q No 8: Agricultural economics evolved as a separate field of study between 1900 and the early 1920’s.

Ans to Q No 9: The different features of Agricultural production that

distinguish it from other non agricultural sector are as follows: considering farming only as a way of life rather business, heavy dependence on weather, seasonality of production, perishable nature of agricultural products. Also many agricultural products are joint products, Bulkiness of agricultural products, problems of standardisation, time lag in production of agricultural products, large proportion of land, requirement of longer time to return the investment.



1.10 MODEL QUESTIONS

Q 1: What do you mean by Economics? What are the four concepts of definition of Economics? Discuss briefly.

Q 2: Define Agricultural Economics. Write about scope and nature of Agricultural Economics.

Q 3: What is the importance of Agricultural Economics? Why is a separate study for Agricultural Economics necessary ? Explain briefly.

*** ***** ***

UNIT 2 : AGRICULTURE AND ECONOMIC DEVELOPMENT

UNIT STRUCTURE

2.1 Learning Objectives

2.2 Introduction

2.3 Role of Agriculture in Economic Development

2.4 Changing Importance of Agriculture to Economic Development

2.5 Development of Agriculture During the Five-Year Plans

2.6 Interdependence of Agriculture and Industry

2.7 Let Us Sum Up

2.8 Further Reading

2.9 Answer to Check Your Progress

2.10 Model Questions

2.1 LEARNING OBJECTIVES

Once you go through this chapter you will be able to learn-

- discuss the role of agriculture in economic development,
- explain the changing importance of agriculture in economic development of India,
- highlight the various agricultural development that has taken place during the Five-Year Plans of India
- analyse the interdependence between agriculture and industry

2.2 INTRODUCTION

Indian agriculture is the most important sector in the path of development of India from the beginning of the planning periods. Indian agriculture has witnessed a lot of ups and downs over the years. At the time of Independence, Indian agriculture was in a state of acute food shortage. It portrayed an image of the begging bowl economy as it was dependent on overwhelming imports of food grains during that period. The tremendous population growth rates after independence had placed long

term pressures on Indian agriculture, creating deficiency in the supply against increasing demand for food grains in the markets to feed its growing population. In that 'ship to mouth' period, food prices had risen. In 1956, India had started to import foods from US under the scheme PL-480. The growth of the import of food under this scheme increased from nearly 3 million tonnes in 1956 to more than 4.5 million tonnes in 1963. Again, the wars with China in 1962 and with Pakistan in 1965 along with the drought in 1965-1966 led to about 17 percent and 20 percent fall in the Indian agricultural output and food grains respectively. All these had further worsened the situation of food grain shortage in India. There was food inflation at the rate of 2 percent per annum and India was forced to import more than 10 million tonnes of food grains. With all these problems, problems, those was an outbreak of famines in several parts of India (UP, Bihar etc.) food crisis. Along with this, the pressure of US was tremendons with regwed to the for recognition of the importance of self-sufficiency as well as economic self-reliance.

Aiming at self-reliance and self-sufficiency in food grains, the Green Revolution was initiated in 1964-1965. The High Yielding Variety (HYV) seeds, chemical fertilisers, pesticides, machineries like tractors, power tillers, pump sets, soil testing facilities, agricultural educational programmes, institutional credits etc. were introduced in the field of agriculture in India. The Agricultural Prices Commission was set up in 1965 to assure that the farmers received remunerative prices. Public investment on agriculture had also increased remarkably. All these resulted in an increase in the productivity of agriculture. The total food grain production increased by 35 percent from 1967-68 to 1970-71. The food grain production was only 51 million in 1950-51 and it increased to nearly 200 million by the end of the 1990s. Rapid increase in the marketable surplus due to the Green Revolution enabled the government to procure food grains for maintaining large stocks of food grains. This helped to liberalise India from import of food grains PL-480. It was the first step towards the self-reliant economic development of India. The impact of the Green Revolution was also criticised on many grounds. For example, it has increased the polarisation

among the farmers, created health hazards as well as environmental damage due to the application of pesticides, chemical fertilisers, machineries like tractors, wasteful irrigation practices etc. Thus, the negative impact of Green Revolution is a major area of concern in the context of sustainable agriculture in the present situation.

2.3 ROLE OF AGRICULTURE IN ECONOMIC DEVELOPMENT

Agriculture plays a crucial role in the development of a country. Agriculture provides food security and supports development of other sectors by supplying raw materials. Therefore, an increase in the production of agricultural products is vital for overall development of an economy. It generates national income, provides employment, ensures food security, complements the development of other sectors, helps in alleviation of poverty, generates valuable foreign exchange reserves directly through export of primary goods, etc. Let us discuss the role of agriculture in the context of economic development of India.

2.3.1 Generation of National Income

Agriculture has a determining role in the development of an economy particularly in a developing country. In the First Five Year Plan, agriculture was taken as the basis for economic development of India. The agriculture and allied sectors occupied a major share in the Gross Domestic Product (GDP) of India though its share has registered a steady decline over the years. The share of agriculture to the Gross Domestic Product was 57.7 per cent in 1950-51, 36.4 per cent in 1982-83, 33 per cent in 1990-91 and 14.33 per cent in 2018-19 (II Advanced estimates). However, the share of agriculture in GDP increased to 19.9 per cent in 2020-21 from 17.8 per cent in 2019-20 at constant prices. The share of agriculture sector in Gross Value Addition (GVA) at the current price (2017-18) is 19.5 per cent. Empirical evidence has shown that the share of agriculture and allied sector in GDP is much higher in less developed countries

than in the developed countries. For example, in USA and UK, the share of agriculture to their national income was only 3 per cent. As the backward economies are dependent on agriculture, the role of agriculture in the development of such economies is very crucial.



LET US KNOW

The share of agriculture in GDP of India is 19.9 per cent in 2020-21 at constant prices. The share of agriculture in GDP has almost 20 per cent after 17 years of gap, i.e., the share of agriculture to GDP was 20 per cent from 2003-04.

2.3.2 Generation of Employment

Agriculture ensures food security for the entire population of a country. Again, the surplus production of agriculture complements the development of other sectors of a country by providing inputs and raw materials. Therefore, agriculture generates employment opportunities in both direct and indirect ways. Agricultural activities like farming, rearing, selling, processing of agricultural produce, etc. generate the employment opportunity directly for the rural population. Indirectly, the production of raw materials like cotton, jute, sugarcane, oilseeds, etc. in agricultural sector and supply of these raw materials to industrial sectors also increase the employment opportunity for the non-agricultural labourer. In India, agriculture provides livelihood to almost two-third of the total population of India. However, this percentage has come down to nearly 46 percent in 2015-16 and to 44.2 percent in 2019. Despite this decline, agriculture in India still provides employment to the largest share of the population compared to the other sectors of India. However, in the developed countries, the percentage of population employed in agriculture is low as compared to the underdeveloped countries. For example, in USA, it is between 2-3 cent per and in Australia, it is only 7 percent.

2.3.3 Ensuring Food Security

Ensuring food security has been one of the prime objectives of economic policy of India since independence. Food security is not only the availability of food for everyone in a country but also the affordability to consume the food. The affordability can be assured by lowering of prices. In this process, the balance between the demand and supply of food is important. The increase in the production of food grains through enhancing productivity are the primary policy objectives of India since independence. Thus, in ensuring food security, agriculture plays a vital role. In India during 1950-51 only 52 million food grains were available in the country which increased to 264.77 million in 2013-14. The per capita availability of cereals increased from 354.10 grams during the period 1950-51 to 1955-56 to 442 grams during 1996-97 to 1999-2000. Again, the food production has registered a growth rate of about 3 percent against the 1.86 percent rate of population growth since 1970-71. Remarkable steps like introduction of Green Revolution as well as Rainbow Revolution in agriculture resulted in exponential growth in per capita availability of almost all foods in India which ensures food security in the country.

2.3.4 Development of Non-Farm Sectors

Agriculture has immense contribution to the development of non-farm sectors in an economy. The role of agriculture in the development of non-farm sectors (industrial sector and tertiary sector) can be analysed under the following heads:

- Supplier of raw materials.
- Supplier of wage goods
- Generating demands for industrial products in rural areas.

Agricultural sector supplies raw materials for the agro-based industries. Increase in agricultural production make raw materials available at a lower price within the country or/and also generates

valuable foreign exchange reserves required to import technology for industrial development. In both these ways, the enhancement in agricultural production helps to develop the non-farm sectors of a country. Again, expansion in agricultural production widens the market and expansion of market generates demand for services like transportation services, marketing services etc. In this way, agriculture also supports development of services sector. Therefore, without proper development of the agricultural sector, the development of other sectors will be adversely affected. Agriculture produces wage goods or consumption goods. Production always generates factor income. Agricultural production also generates factor income of the rural population as most of the agricultural labourers reside in rural areas. These factor incomes generate demand for the industrial goods which also encourage expansion of the industrial output. Therefore, agriculture plays a vital role for the development of the industrial and services sector of a country.

2.3.5 Revenue Generation

Agriculture generates revenue for the government through the taxation on land (as property tax) and on the incomes generated through the agricultural activities (income tax). The agriculture is a state subject. The taxes on land and agricultural incomes are listed in the state list (list II of the Seventh Schedule enlists the taxes which are within the jurisdiction of the States) of India. Thus, agriculture is a source of revenue generation for the government in a state.

2.3.6 Contribution to International Trade

In a country, the international trade plays an important role in the generation of foreign exchange. In a developing country, the foreign exchange is accumulated through the export of primary products. For example, agricultural goods or primary products (like cotton, food grains, tea, jute, spices, oilseeds, sugarcane, cashews,

fruits, etc.) constitute a major share in India's total exports. Agriculture and allied sector constituted about 9.94 percent of the total exports in 2010-11 which again had increased to 12.47 percent in 2011-12. Apart from primary products, many manufactured items using inputs from agriculture are also being exported by India signifying its indirect contribution to foreign exchange earning of the country. The goods that are produced using raw materials directly from agricultural sector constitute more than 20 percent of India's total exports in recent years. Since 1990-91, except for the year 1994-95, the share of agriculture exports has been steadily increasing. India's agricultural and allied sector's trade export was Rs. 2.52 lakh crores during 2019-20. Even in the COVID-19 pandemic, the agricultural and allied export was worth of Rs. 2.74 lakh crores from April, 2020 to February, 2021.

2.3.7 Gross Capital Formation

The slow rate of gross capital formation has been considered as one of the biggest hurdles in the path of economic development of developing country. The role of agriculture in capital formation is important because in developing and less developed countries, agriculture provides the route to capital formation. Hence, the state of capital formation and the role of agricultural sector in gross capital formation need to be examined with proper attention. The process of capital accumulation depends on the elasticity of the food supply. This is due to the fact that if there is bottleneck in the supply side, wages and costs tend to rise and profit margins are considered to fall, leading to an overall decline in surplus and growth. The process of capital accumulation also depends upon fiscal and monetary policies. The monetary and fiscal policies siphon off surpluses from the agriculture.

Contribution of agriculture to gross capital formation (GCF) in India is remarkable. For example, in 2011-12, the share of agricultural sector in India's CGF was nearly 8.6 percent.

2.3.8 Internal Trade and Transport

Agriculture plays a critical role in expanding the size of the domestic market particularly in developing countries. Increase in agricultural productivity is very important because surplus production helps in export earnings, generation of farmer's income as well as supply of raw materials at low price for development of other sectors. Surplus agricultural production over self-consumption creates market. Market creation and expansion help in the development of many services associated with the marketing of the agricultural surpluses. The income generated through this market creation and expansion creates market for non-agricultural products also. To bring surplus production to the market, the connectivity like road, railways, waterways, airways are needed. Therefore, transportation service has scope for development. Other services like storage services, marketing services, communication services, power services, financial services are also simultaneously developed giving rise to infrastructural development. The market connectivity among internal markets helps in better disposal of surpluses with price stability by reducing wastages. The increase in the domestic production of agricultural products also helps in curbing inflation of food and other goods in the internal market.

2.3.9 Ensuring Price Stability

The increase in production of agricultural products helps to reduce the gap between the demand and supply of food to support entire population of a country. This helps in curbing food inflation. Again, increase in agricultural production helps to supply raw materials at lower prices which in turn lead to increase in production of non-agricultural goods at lower costs. This makes such goods available at lower prices and hence helps in curbing inflation of industrial goods. Therefore, to ensure price stability, agricultural production must be increased. Otherwise, either a major income of

the nation will be used to import food to meet food demand or/and savings of the people will be reduced due to price inflation. Thus, in order to combat price inflation, the productivity of the agricultural crops is to be increased with improvement in the technology etc. Thus, agriculture plays a crucial role in price inflation of the agricultural commodities through balancing demand and supply of agricultural products.

2.3.10 Reducing Poverty and Income Inequality

Increase in agricultural productivity increases per capita income of the farmer and those who are directly or indirectly involved in farming and other agricultural operation. Again, increase in production as well as productivity improve per capita availability of food for all people of a country. If per capita availability of food increases with increase in per capita income, then this will definitely help in reduction of poverty. Most of the rural population is small, marginal and landless farmers who suffer from disguised unemployment and under-nutrition. Therefore, increase in agricultural production and productivity can increase income and improve nutritional intake of poor people in rural areas. With increase in nutritional status, physical health of the rural population gets improved which in turn improves marginal productivity of each and every agricultural worker. This may lead to decline in income gap between rural and urban population (to some extent) as well as agricultural and non-agricultural workers. Moreover, global experiences reveal that GDP growth originating from agriculture is at least twice as effective in reducing poverty as GDP growth originating from outside agriculture.

2.4 CHANGING IMPORTANCE OF AGRICULTURE TO ECONOMIC DEVELOPMENT

In the early years of planning, agriculture had been a dominant sector in India with the highest share in GDP and providing employment

to more than 70 per cent of the total population. However, now with the pace of development, there has been a gradual shift of importance from agriculture to other sectors in India. In India the share of agriculture to GDP has been gradually declining over the past years. While the contribution of the other sectors, particularly services sector to the GDP is increasing rapidly, the share of industrial sector to GDP has remained almost stagnant. This signifies a structural shift of Indian economy directly from agriculture to services making India's recent economic growth pattern as services-led-growth.

At present, although India is experiencing services-led-growth, the importance of agriculture to overall development of India is increasing with plethora of challenges. Without addressing these challenges, it is difficult to develop agriculture and ensure sustainable economic development of India. Some of the major challenges are discussed below which signifies the changing role of agriculture in Indian economy.

The employment opportunities in the field of agriculture are not expanding compared to industry and service sectors. It results in transformation of resources from agriculture to the other sectors. According to National Sample Survey-2019, about 44.2 percent workforce in the country is still engaged in agriculture while the share of agriculture to GDP is reduced to 17 per cent. The sluggish decline in the share of employment in agriculture is not a serious matter. However, it is important to address the problem that its share to GDP is declining more rapidly than the decline in the employment in agriculture. It results in widening of gap between labour productivity in agriculture and non-agriculture sectors rapidly. Again, low or negative marginal productivity enlarges income gap between the agricultural labourers and non-agricultural labourers. As most of the farmers are illiterate and unskilled, lack of proper skill, education and knowledge forces them to remain in the agricultural and allied sector despite the prevalence of underemployment or disguised unemployment in agricultural and allied sector as they are unable to find employment in other sectors. The poor human resource development among rural population is another reason for the higher employment in agriculture and

slow shift of surplus agricultural labourer to other non-agricultural sectors. There was a decline of 39 percentage points in the share of agriculture in GDP from 1960-61 to 2012-13 while for the same period, decline in share of agriculture in employment was 27 percentage points. This has also intensified some of the basic problems like poverty, under-nutrition, starvation etc. Therefore, the role of agriculture as the source of food is becoming more important for India in recent years. India produces about 726 million tonnes of food to meet food demand of 1.3 billion people. About another 1016 million tonnes of food will be required to meet the domestic demand by the year 2031-32. Food production in the country has been increasing annually at a rate close to 3 percent since 1970-71, while population growth rate in the same period was 1.86 percent. As per the Global Hunger Index (GHI), 2020, India occupied 94th position among 107 countries. This reveals that India has serious level of hunger. Low intake of food is the main reason for widespread hunger in India. The domestic absorption of food is lower than the domestic production of food in India. The prevalence of unemployment, underemployment and disguised unemployment are responsible for irregular income patterns as well as poverty. Poverty reduces the affordability of the poor people to consume food. According to Global Multidimensional Poverty Index, 2020, India ranked 62nd position among 107 countries. Most of the agricultural labourers are small and marginal farmers occupying land less than 1 hectare. They are deprived of food due to low purchasing power. Again, Periodic Labour Force Survey (PLFS) revealed that rural unemployment stood at a 6.1 percent during 2017-18, which was the highest since 1972-73. Therefore, this present paradoxical situation of India is termed as 'Hunger in the Midst of Plenty' and this appears to be a biggest challenge to the Indian economy in recent times.

As agricultural production is growing by about 2.9 percent per year and domestic demand is projected to rise by about 2.3 percent, therefore, there is surplus agricultural production over domestic demand. These surpluses are exported to the other countries and India generates valuable foreign exchanges. India exported agricultural products of US $ 3.50

billion in March-June, 2020 which was nearly a 23.24 percent hike from the March-June, 2019. As primary goods have inelastic demand in international markets therefore, export of these goods face intense competition in international markets. In order to deal with this intense competition, the prices of these primary goods should be sufficiently lower than the international market prices, price spread in various stages of marketing of these products should be reduced and the producers of these products should be integrated with global value chain. In view of the increasing importance of agricultural export, the Government of India is taking several steps to increase export of agricultural products. Ministry of Commerce and Industry rolled out Agricultural Export Policy (AEP), 2018 with an aim to double farmers' income by 2022 by doubling agricultural exports and integrating Indian farmers and agricultural products to the global value chain. Government of India has promulgated three ordinances to implement reforms in the agricultural sector: The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020, the Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Ordinance, 2020 and the Essential Commodities (Amendment) Ordinance, 2020. Agricultural and Processed Food Products Export Development Authority (APEDA) plays a significant role in tapping India's agricultural strength and works towards expanding the export potential of Indian agricultural and food products.

At present, climate change is the most important global environmental issue. Agricultural practices also impact environment adversely by degrading water, soil and air. The uses of pesticides cause ecological imbalances as it harms and kills beneficial microbes, small creatures with the dangerous and harmful pests. It also gives rise to the phenomena like eutrophication, when mixed with water bodies and bio-magnification, harmful chemicals enters into food cycle. Again, the spreading of pesticides creates health hazards for humans when they get contaminated with the components of environment, i.e., soil, air and water. Agricultural activities emit greenhouse gases (GHGs). Agriculture is responsible for about 17 percent of GHGs in India. In India, 3/4th of the

total emission of GHGs from agriculture is in the form of methane which is produced during rice cultivation along with livestock production while remaining 1/3rd of emission is in the form of nitrous oxide generated from use of fertilisers. Other sources of emission of GHGs are applications of organic and inorganic inputs to the soil for crop production, decomposition of biomass and dead plant residues, crop production, plant respiration, livestock rearing, enteric fermentation in ruminants, manure handling, and burning of crop residues. Again, the over use of agricultural inputs like water, soil etc. has been a threat to sustainability of both agriculture and environment. Over dependence on groundwater as a source of irrigation through tube well technology (shallow/deep) and production of more water intensive crops in India has considerably reduced ground water reserves of the country. Thus, due to over extraction of groundwater for irrigation use, ground water level is significantly decreasing which is a crucial area for concern in Indian agricultural in recent years.

Among other challenges, post-harvest losses of crops is another area of concern in India agriculture. Estimates show that on the average there are nearly 10 to 25 per cent of post-harvest loss of crops in India being particularly high in horticulture, livestock and fisheries. Such a huge quantity of losses has to be checked by developing agricultural markets, grading and standardisation, quality certification, warehouses, cold storages and adopting other post-harvest management of produce. Here, considering the size of required investments such infrastructure can be developed in public-private partnership (PPP) mode.

In order to improve the conditions of agricultural sector as per the requirement for the 21st century, the main challenges are to sustain agriculture growth to increase farmer's income without intensifying hardship of consumers by food price inflation, to increase productivity of agriculture, to obtain production efficiency in agriculture, to increase agricultural production without harming environment, to increase quality of agricultural export etc. To overcome all these challenges, agricultural production must be increased without an increase in average cost of production. To increase farmers' income, the marginal productivity of each farmer should be

increased. For this, the employability as well as efficiency of each and every farmer should be increased. For this good education, skill enhancement programmes, special trainings related to agriculture, business-oriented courses to maintain professionalism among agricultural farmers, labours, etc. in agricultural marketing should be provided with low cost or free of costs specially for economically vulnerable people in rural areas. Pradhan Mantri Kaushal Vikas Yojana (PMKVY), TRYSEM are some of such schemes provided by the government of India. The employment opportunity other than farming should be created through the creation of jobs related to agricultural marketing, post-harvest activities and creation of Medium, Small and Micro Enterprises in agro-food processing units. To increase agricultural productivity and production, adoption of new technology, contract farming, shift from using low technology to high technology like greenhouse cultivation, poly house cultivation, tissue culture, precision farming, etc. with lowering of costs should be adopted. It also requires upgradation and innovation in technology, lowering of wastages of agricultural inputs like water, fertilisers, power, pesticides, etc. The technologies that are adopted by advanced countries to increase agricultural productivity and to decrease wastages of agricultural inputs should be emulated. Therefore, technologies like broadcasting fertilisers, flood irrigation, indiscriminately spraying chemicals and pesticides are to be replaced with sensor-based application of inputs based on requirement of plant. In marketing practices artificial intelligence technology should be widely used. The Research & Development (R&D) should be enhanced.



CHECK YOUR PROGRESS

Q 1: What is the percentage of people engaged in agriculture and allied sector in 2019?

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Q 2: What is the share of agriculture to GDP of India in 2020-21?

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2.5 DEVELOPMENT OF AGRICULTURE DURING THE FIVE-YEAR PLANS

As agriculture is recognised as the most important sector for development of India, Five-Year Plans also set goals for development of agriculture. Although, in the initial plans, planning was made to achieve self-sufficiency in food for its rapidly growing population, but in subsequent years, objectives had been broadened. The development of agriculture during each of the Five-Year Plans in India are discussed below

- **The First Five Year Plan (1951-1955):** Indian agriculture was not performing well on the eve of the first five-year plan. At that time, nearly 70 percent of total population was engaged in agriculture and the productivity was rather low due to which the Indian agriculture faced two major problems, i.e., (i) food crisis and (ii) inadequate supply of raw materials for the industrial development. Thus, Indian economy was dependent on food import as well as import of other industrial inputs. The introduction of first five-year plan for the agriculture was the first attempt to make the Indian economy as a self-sufficient economy. Since the Indian economy was struggling with acute short supply of food and industrial raw materials, the major objectives of this five-year plan in the field of agriculture were to correct the imbalances caused by partition in the supply of food grains and commercial crops and to improve infrastructural facilities. Hence, the focus of this plan was to increase productivity of agriculture. Topmost priority was given to the agriculture along with irrigation and power with the aim of converting agriculture into a successful business. The programs undertaken during this plan period were:
  - To bring more lands under cultivation
  - To increase agricultural productivity through improvement in both conventional and non-conventional methods of agriculture.

- **The Second Five Year Plan (1956-1961):** Second five-year plan placed more emphasis on industrial development. The main reasons behind this shift from agricultural development to industry were:
  - The performance of agriculture during the 1st five-year plan.
  - The possibility of financing the development via foreign aid especially food aid.
  - It was recognised that heavy industry was necessary for development.

  The second five-year plan emphasised on the increase in the production of food grains to meet the demand of increasing population and the raw-material to support the industrial development. It intensified interdependence between industry and agriculture for balanced economic development as well as to create conditions for an appreciable increase in rural incomes and standards of living. In view of inadequacy of food grains, this plan aimed to diversify agricultural production and also planned to provide programmes for increasing the production of coconut, lac, black pepper, cashew nut etc.
- **The Third Five Year Plan (1961-1966) and the Three Annual Plans (1966-1967, 1967-1968 and 1968-1969):** Third Five Year Plan attempted to restructure the rural economy of India giving thrust on increasing agricultural production. For increasing agricultural production, measures like development of irrigation, soil conservation programmes and supplies of fertilisers, improved seed and credit, along with the provision of extension services reaching down to the village level etc., were undertaken. In order to support these programmes, community development and effective mobility of resources were harnessed. Land reform policies were introduced to remove the challenges in developing of a progressive cooperative agriculture. Measures for cooperative development that were taken in the previous plans were strengthened in this plan for building up required institutional frameworks for promoting rapid economic development in rural areas particularly to benefit the weaker section of the rural population. More emphasis was given for the development

of animal husbandry, dairy farming and fisheries. In view of the long-term development, various schemes were undertaken for the conservation of soil, care of forest wealth and plantation for fuel for village.

The major objectives of this pain in regards to agriculture were:

- To attain self-sufficiency in food grains and to increase the agricultural production to suffice the requirements of exports and industry.
- To bring technological changes by adopting scientific methods for agricultural production
- To ensure optimum utilisation of the country's labour power and increase the employment opportunities.
- To reorganise the rural economy via cooperative activities like financing, provision of credits, processing and distribution, marketing, cooperative farming etc.
- To expand non-agricultural activities in rural areas to reduce the dependence on agriculture.
- To improve the utilisation of available land resources through systematic planning like multiple cropping, change in the cropping pattern etc.

In this plan, greater importance was not only lailon attaining self-sufficiency in food grains but also on substantial increase in the production of the commercial crops especially cotton, oilseeds and jute. This was because the export of commercial crops could generate foreign exchange.

There was a gap of eight years between the commencement of the Third plan and Fourth plan. The three annual plans were 1966-1967, 1967-1968 and 1968-1969. These eight years had significant impact on Indian agriculture. During this period in place of traditional agricultural practices new strategy of agricultural development was adopted.



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- There were two wars during the third five-year plan:
  - In 1962 with China, and
  - In 1968 with Pakistan
- Due to the drought and two wars, the agricultural production was below the targeted level.

- **Fourth Five Year Plan (1969-1974):** The two main objectives of this five-year plan were:
  - The target of annual growth rate of agriculture was set at 5 percent.
  - It aimed at more inclusive development by facilitating economic development of large numbers of rural population including small farmers, dry lands farmers, landless agricultural labourers. This means that a huge population was to take part in the development process on India and benefit from it.
- **Fifth Five Year Plan (1974-1979):** In the year 1974-1975, India had witnessed severe price inflation. During that year the wholesale price was increased by 23.1 percent over 1973-1974. The major reason behind this was the population growth rate which was higher than the growth rate of agricultural production. Thus, there was an immediate need for increase in the production of food grain in India. Therefore, the major objectives of this plan were:
  - To achieve self- reliance and self- sufficiency
  - To raise the standard of living of the rural people who were below the poverty line by adopting required technology and measures.

  Therefore, the motives behind the objectives of this plan were to strengthen the objectives of the previous plan period. The target for the production of agricultural output was set at 132.9 million tonnes. The output of food grains was expected to grow at the rate of 4.63 percent per annum. More initiatives were taken for increase in production by increasing consumption of fertilisers and extending

irrigation facilities. It had also put emphasis on the extension of dry land techniques to more lands. The share of public expenditure to total outlay was 20.6 percent, which was equal to Rs.8084 crores.

- **Sixth Five Year Plan (1980-1985):** The aims of the agricultural programmes during the Sixth Plan period were as follows:
  - To consolidate the gains already achieved;
  - To accelerate the pace of implementation of land reforms and institution building for beneficiaries;
  - To extend the benefits of new technology to more farmers, cropping systems and regions and to promote greater farm management efficiency through concurrent attention to cash and non-cash inputs;
  - To make agricultural growth not only an instrument of maintaining an effective national food security system but also a catalyst of income and employment generation in rural areas;
  - To promote scientific land and water use patterns based on considerations of ecology, economics, energy, conservation and employment generation;
  - To safeguard the interests of both producers and consumers by attending to the needs of production, conservation, marketing and distribution in an integrated manner.



CHECK YOUR PROGRESS

Q 3: What are the major objectives of 5th Five-Year Plan for agriculture?

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Q 4: When was the National Bank for Agriculture and Rural Development (NABARD) established?

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- **Seventh Five Year Plan (1985-1990) and Two Annual Plans (1990-1991) & (1991-1992):**

  The main objectives of 7th Five-Year Plan were as follows:

  - Priority was given for increase in agricultural productivity and cropping intensities.
  - It also had emphasis on the providing the facility for increase in productive employment.
  - It emphasised on the efforts to increase in the production of food grains, edible oils, sugarcane and some non-agricultural products.

- **Eight Five Year Plan (1992-1997):** After the completion of the seventh five-year plan, there was a delay in starting the next plan by almost two years due to the political instability in the country. Therefore, the eight five-year plans were initiated in 1992 with the objectives of growth and diversification in agriculture for export and self-sufficiency in food grains particularly in oilseeds and pulses.
- **Ninth Five Year Plan (1997-2002):** The main objective of this plan was to ensure food security (and nutritional security) by the means of the following three-pronged strategies:
  - Increase in overall employment and incomes by raising farm productivity and growth of other economic activities in the rural areas.
  - Provision of gainful supplementary employment through poverty alleviation schemes such as JRY (Jawahar Rojgar Yojana), EAS (Employment Assurance Scheme) which would generate additional employment in the short run and help in the creation of durable rural infrastructure for more sustained employment over time.
  - Distribution of food grains through public distribution system at concessional prices to those people living below the poverty line.
- **Tenth Five Year Plan (2002-2007):** The main objectives of this Plan were:

- The three-pronged strategy envisaged the Ninth Plan (see ninth five-year plan's objectives) to meet the basic food requirements for all were to be continued during this plan.
- It advocated the use of the sustainable agricultural practices for agricultural growth.
- To ensure growth with equity, agricultural growth was to be demand driven.
- The target for annual growth of agricultural sector was 2.4 percent.
- Thrust Areas were utilisation of wastelands and unutilised/ underutilised lands, reclamation or development of problem soils or lands, rainwater harvesting and conservation for the development of rainfed areas, development of irrigation, especially minor irrigation, conservation and utilisation of biological resources, diversification to high value crops/activities, increasing cropping intensity, timely and adequate availability of inputs, strengthening of marketing, processing or value addition infrastructure, revamping and modernising the extension systems and encouraging private sector to take up extension services, bridging the gap between research and farmer's yields, cost-effectiveness while increasing productivity, promotion of farming systems approach, promotion of organic farming and utilisation of organic waste, development of eastern and north-eastern regions, hill and coastal areas, reforms to introduce proactive policies for the farm sector.
- The Government of India has approved a National Policy on Handling, Storage and Transportation of food grains during previous plan was to be continued in this plan.
- The emphasis was to be put on demand-driven research besides adequate thrust on modern biotechnologies like development of transgenics and space technology and on sustainable development of natural resources together with preservation and exploitation of our rich biodiversity.

- **Eleventh Five Year Plan (2007-2012):** The Eleventh Five-Year Plan envisaged a fast and more inclusive economic growth. Since agriculture is one of the major elements of inclusiveness, this plan set up a target of 4 percent annual growth rate for agriculture. With this, the objective of this plan towards agriculture was to increase productivity through improvements in inputs like irrigation in rainfed areas, enhancement of seed quality with high seed replacement rate, increased and balanced use of fertilisers, creating protective irrigation and improving water harvesting, improving research of ground water through water conservation campaign, strengthening and promoting Agriculture Informatics and Communication through Agriculture Information System Network (AGRISNET), facilitation of institutional credit at lower cost, encouragement to organic farming, etc. A technical committee for watershed development known as Parthasarathy Committee was set up by the Ministry of Rural Development (MoRD) and it submitted report in January 2006. As per the recommendation of this committee, focus was to be provided for increase the productivity of rainfed areas to meet the demand of food for 2020. It also placed emphasis on development of livestock with the following objectives:
  - To achieve an overall growth between 6 per cent and 7 per cent per annum for the sector as a whole with milk group achieving a growth of 5.0 per cent per annum and meat and poultry group achieving a growth of 10 per cent per annum;
  - The benefit of growth should be equitable, benefiting mainly the small and marginal farmers and landless labourers and should benefit poorly endowed areas like draught prone, arid, and semi-arid areas;
  - To provide adequate animal health services for effective disease control;
  - The sector should generate additional employment opportunity to people in the rural areas especially to the female population;
  - Livestock should provide major source of income in the selected

areas having potential for mixed crop-livestock farming system,

- The growth in the sector should result in the improvement of environment, especially in the rural areas.

In addition to these, other thrust areas in the Eleventh Plan were development of the untreated area in Desert Development Plan (DDP) and Drought Prone Areas Programme (DPAP) blocks. Also, special attention was to be devoted to developing villages where groundwater was over exploited.

- **Twelfth Five Year Plan (2012-2017):** The thrust areas of this Plan were increase in productivity, efficiency in resource use, technological upgradation and innovation to ensure sustainability of natural resources, adaptation to climate change and improvements in total factor productivity. The main objectives were:
  - Preparing for faster and rapid growth of agriculture through a more diversified agriculture, with investment in the necessary modern infrastructure required for perishable products.
  - Bringing scale through development of farmer producer organisation
  - Increasing funds to the agricultural research and development
  - Emphasising on the research on agriculture. Providing interdepartmental platforms for multi-disciplinary research in agriculture.
  - Importance was provided to the sustainable and climate resilient agriculture.



CHECK YOUR PROGRESS

Q 5: What were the three-pronged strategies to ensure food security in Ninth Five-Year plan?

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Q 6: What is the target growth rate of agriculture during Eleventh Five-Year Plan?

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2.6 INTER-DEPENDENCE OF AGRICULTURE AND INDUSTRY

The industry and agriculture are two main components of an economy. The growth of one sector is related with the growth of another sector and vice versa. The industry and agricultural are both complementary to each other. The interdependence of agriculture and industry are discussed under the following heads:



LET US KNOW

Wage Goods: Wage goods are the goods that a worker can buy with wages. Wage goods are commonly known as consumption goods.

Non-wage goods: Non-wage goods are the goods that a worker with non-wage income may buy. Non-wage goods are also known as investment goods or capital goods. These goods are used for the production of other goods.

Note: The distinction between the wage goods and non-wage goods on the basis of the sources of money is ambiguous because a non-wage earner (for example: a collector of charity) also buys wage goods. Therefore, a wage good is defined as a good use for final consumption is more appropriate. In the same line, non-wage good can be defined as the good which is used for further production (i.e., investment) of the goods.

- **Agriculture is a Supplier of Raw Material to Agro- Based Industries:** Output of the agricultural sectors is used as the raw material for the production of goods in the industrial sector. Especially, food processing industries use agricultural products as the main ingredients for their products like edible oils, ghee, besan, refined flowr, etc. Cotton textile industries use cotton as the raw material.

- **Agricultural Sector is a Source of Labour:** In an economy, particularly agrarian and underdeveloped economy, there is surplus labour in the agriculture sector which leads to the disguised unemployment in agriculture. Again, low labour productivity results in lower as well as irregular income patterns. On the other hand, industrial sector is a lucrative destination of job opportunity for agricultural laborers for offering relatively higher and regular incomes to the industrial labourers. Thus, there is a shift of labour from labour surplus agriculture to the industrial sector as development occurs. Therefore, agriculture acts as supplier of labour to industry.
- **Agriculture as a Generator of Agricultural Income That Enables Rural Demand for Industrial Products:** In underdeveloped countries, a large proportion of labour force is engaged in the agricultural sector. The remuneration obtained by the agricultural labour generates the rural demand for the industrial products. Hence, it enlarges the scope for the expansion of the industrial sector of rural areas.
- **Industrial Development as Opportunity for Technological Improvement in Agriculture:** As the pressure of population on agriculture increases over the years, there is a need for further improvements in the agricultural technology. The technological development in agriculture is crucial for the increase in productivity of agriculture as well as income of the farmers. Use of hybrid seeds, disease resistant varieties of crops, high yielding varieties of crops, artificial manures, machineries like tractors, power tillers, pesticides, modern irrigational facilities, etc. are the determinant factors for increasing production of agriculture. Thus, industrial development is complementary for technological improvements of agriculture.
- **Industrial Development Helps in Easy Market Reach and Opens the Scope for Higher Farmer Income:** Agricultural products are generally produced in the remote and rural areas and so the farmers need good road connectivity to reach the market areas of sub-urban or urban areas. Again, most of the agricultural products are perishable

in nature. Therefore, fast disposal of the perishable commodities is important. Thus, the economic development via infrastructural development like road connectivity ascertain the easy reach to the market and better remuneration to the farmers than selling his produce in the local market.

- **Expansion of Market for Industrial Goods:** Food is necessary for the subsistence of human-beings. The source of food is the agriculture. The surplus food over consumption are used as raw materials for the industries which helps to meet the non-food demand for the goods like cloth, housing, cars, television, etc. of the consumers. Again, the surplus labour of agriculture are also supplied to the industries. The agricultural income increases the purchasing power of the people which will increase the need for the non-food industrial products. All these provide scope for expansion of the market of the industrial goods as a whole.



2.7 LET US SUM UP

- Indian economy is an agrarian economy in which agriculture had remained as the mainstay since time immemorial.
- Agriculture plays an important role to the development of a country particularly a less developed country.
- In India's development, the agriculture and allied sector plays a major role as it also has an impact on the economic development in the context of India. The agriculture and allied sector contribute to the national income. It provides employment opportunity, reduces poverty, generates important foreign exchanges through export of agricultural produce, complements development of other sectors of an economy by providing raw materials and conducive infrastructural development, ensures price stability, ensures food security, generates public revenues, etc.
- With the passage of time, role of agriculture in economic development of India is emerging as more complex as well as important. Although

agricultural production has increased manifold, India has still undernourished children under age of 5 with stunted growth. High maternal and neonatal morality rates also exist in India due to lack of sufficient intake of calories during pregnancy. This paradoxical situation referred to as 'hunger in the midst of plenty' which India has been experiencing now is very serious. Therefore, the basic and most important role of agriculture as source of food security is gathering more importance in order to attain sustainable economic development for India. India is portraying the fact that not only availability of food is necessary to ensure food security but affordability is utmost important. However as the highest proportion of people of India are still engaged in agriculture in spite of prevalence of underemployment and disguised unemployment, this causes negligible as well as negative returns to these people. Therefore, the role of agriculture as venture for employment is to address this issue by innovating new low-cost techniques as well as enhancement of productivity of agricultural labourers by facilitating skill development training and better education. Again, with the shrinking of natural resource base and climate change, the low-cost production of agriculture is another threat. With recognition of the importance of green environment, agriculture is the only sector among all other sectors which can provide sustainable growth. Therefore, the importance of agriculture has been changing according to the need of the hour for sustainable, inclusive and fastest economic growth of India.

- In the Five-Year Plans of India, agriculture is an important component. From the very beginning of First Five-Year Plan, it has been recognised that without developing agriculture, it would not be possible for India to attain economic development. Therefore, in different five-year plans, action plans are proposed to attain target growth of agriculture and to resolve the issues/challenges hindering agricultural improvements.
- Agriculture and industry are interdependent on each other. Without development of one, the development of other cannot be achieved. Agriculture supports industry as:

- Suppliers of wage goods
- Supplier of raw material
- Source of labour
- Generator of rural demand for industrial products.

On the other hand, industry supports agriculture by:

- Helping in technological upgradation of agriculture
- Generating demand for agricultural produce
- Providing better income opportunity for surplus agricultural labourers.



2.8 FURTHER READING

1) Kapila, U. (2016.), "Indian Agriculture: Developments, Issues, policies and Agenda for Reforms (Editorial notes), chapter-21" in Uma Kapila (ed.) *Indian Economy Since Independence*, Academic Foundation, New Delhi.

2) Kapila, U. (2016.), "Indian Economy: Issues in Development and Planning and Sectoral Aspects" in Kapila, U. (ed.) *Indian Economy Since Independence*, Academic Foundation, New Delhi.

3) Reddy, S. S., P. R. Ram, T. V. N. Sastry & I. B. Devi (2020), *Agricultural Economics*, Oxford & IBH, New Delhi

4) Dev, S. M. (2015-16). ‘’Agricultural Development in India: Peformance, Issues and Policies’’. In U. Kapila (Ed.), *Indian Economy Since Independence* (Vol. 26, pp. 647-676). Academic Foundation, New Delhi.

5) For further informations regarding agriculture during Five-Year Plans, https://niti.gov.in/planningcommission.gov.in



2.9 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: 44.2 per cent.

Ans to Q No 2: 19.9 per cent.

Ans to Q No 3: Major objectives of 5th Five-Year Plan for agriculture were:

- To achieve self- reliance and self- sufficiency
- To raise the standard of living of the rural people who were below poverty line by adopting required technology and measures.

Ans to Q No 4: The National Bank for Agriculture and Rural Development (NABARD) in July, 1982.

Ans to Q No 5: The three-pronged strategies were:

- Increase in overall employment and incomes by raising farm productivity and growth of other economic activities in the rural areas.

Provision of gainful supplementary employment through poverty alleviation schemes such as JRY (Jawahar Rojgar Yojana), EAS (Employment Assurance Scheme) which would generate additional employment in the short run and help in the creation of durable rural infrastructure for more sustained employment over time

Ans to Q No 6: 4 percent



2.10 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: What is the role of agriculture in economic development of India?

Q 2: How does agriculture generate foreign exchange?

Q 3: Why is employment in agriculture still higher than other sectors?

Q 4: What is present share of agriculture to GDP of India?

Q 5: What do you mean by Yellow Revolution?

Q 6: What is the importance of Green Revolution in Indian Agriculture?

Q 7: In which five-year plan, prior importance was given to the development of Indian agriculture?

Long Questions (Answer each question in about 300-500 words)

Q 1: What is the importance of agriculture in economic development of India?

Q 2: Discuss the role of agriculture on economic development of a country.

Q 3: There is paradigm shift of Indian economy from agrarian economy to services led economy. In this context, discuss the importance of agriculture to economic development of India.

Q 4: Discuss the progress of agriculture in five-year plans of India.

Q 5: How do you explain the role of agriculture in price stability in an economy?

Q 6: How do you explain the situation 'hunger in midst of plenty' in context of India?

Q 7: How does agriculture complement industrial development?

Q 8: Discuss the interdependence of Agriculture and Industry.

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UNIT 3 : FARM ORGANISATIONS

UNIT STRUCTURE

3.1 Learning Objectives

3.2 Introduction

3.3 Types of Farm Business Organisation

3.4 Most Suitable Farm Organisation

3.5 Further Reading

3.6 Answers to Check Your Progress

3.7 Model Questions

3.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- Learn about the different types of farm business organizations
- Discuss the most suitable farm organisation in Indian Agriculture

3.2 INTRODUCTION

The system of farming is generally concerned with the organisational set up under which the farm is being run. The systems mainly governed by three basic questions viz. who is the owner of land, whether the resources are pooled or used individually, and who makes the marginal decisions. Under the system of farming there may be situation where an individual is the owner of land and he himself makes the managerial decisions what should be produced, how should-be produced, where to market etc. This is different from another situation where land belongs to a group of persons, these persons collectively do the farming operations and a board of management or executive committee is formed to make necessary decisions. Still another system may be found where the landlord gives his land to a tenant farmer on share basis. Here, the tenant decides about the activities to be carried out on the farm, provides his labour and other inputs except land, and whatever output he gets half of that goes to the landlord.

‘‘ Farming System is defined as a complex inter related matrix of soil, plants, animals, implements, power, labour capital and other inputs controlled in part by farming families and influenced to varying degrees by political, economic, institutional and social forces that operate at many levels. The farming system therefore, refers to the farm as an entity of interdependent farming enterprises carried out on the farm

3.3 TYPES OF FARM BUSINESS ORGANISATIONS

- **Peasant Farming:** This is the most commonly followed form of farm business organisation. In this form of farming, individual farmer is the owner, manager and organiser of the farm. The biggest advantage of this farming is that farmer is totally independent in his decisions, as he is the owner. He makes decision and plans for his farm depending upon his resources which are generally not seen in other systems of farming. Compared to other farms, one drawback here is the resource limitation including the land at the disposal of the farmer. He has to judiciously use these resources to run the farm business profitably.
- **Co-operative Farming:** It is a form of farm business organisation in which persons unite voluntarily, pool their lands, resources and cultivate the lands jointly. The pooling of land, labour and capital makes it possible to fully utilise the resources and thereby increase the production capacity of the pooled land most economically.

  The All India Co-operative Planning Committee (1951) classified co-operative farming into four categories viz.,
  - Co-operative better farming society,
  - Co-operative joint farming society,
  - Co-operative tenant farming society; and
  - Co-operative collective farming society
- **Co-operative Better Farming Society:** Any ten or more cultivars can form into a better farming society. Here the ownership as well as the operation is individual. All members abide by a plan of cultivation adopted by the society. The society arranges for the adoption of better methods of cultivation, joint purchase of inputs, etc. Every member is

free to follow his own plan except for the purposes agreed. The administration is done by a managing committee, elected by the general body and it governs all the activities.

- **Co-operative Joint Farming Society:** In this category of the society, the ownership is individual and operation is collective. Individual owners of land merge their lands and other resources in order to form compact blocks for joint cultivation. This pooling of land permits the scientific methods of cultivation. The management of the society is in the hands of an elected body. All the members work jointly and each member gets wages for his daily work. The ownership of the land is recognised by the payment of dividend in proportion to the value of his land.
- **Co-operative Tenant Farming Society:** In this case, landless people organise into a farming society. Here, the ownership is collective but the operation is individual. Land of the society is divided into plots and leased out for cultivation to individual cultivators. Society draws a plan for the best cultivation of the land. The society arranges for the cultivation requirements and also the marketing of the produce. Every member is responsible for the payment of rent only to the society.
- **Co-operative Collective Farming Society:** In this society, ownership as well as operation is collective. Members do not have any right on land. Administration is the same as that of joint farming society. Members work jointly and they are paid according to the volume of work contributed. Profits are distributed according to labour and capital invested by the farmer.
- **Capitalistic Farming:** Under capitalistic farming, the farms are large and owned by the capitalists. These farms enjoy plentiful resources. These are managed by either individuals or groups. These farms are quite efficient using the latest technology available, but this form of farming is not a common feature in India. Capitalistic farms are popular in countries like USA, Canada, UK etc. Farms enjoy plenty of capital and organisational strength. The limitation of this type of farm business organisation is that the actual cultivator is not the owner of the farm.
- **Collective Farming:** Collective farm is a group of farming families

who pool their resources i.e., land, livestock, machinery, etc., and decide to work together under a management committee elected by them. The management committee is responsible for the overall farm management, allocation of work and distribution of income. This type of farming is not prevalent in India. Russia and China follow this form of farm business organisation. The production plan on the farms is laid down by the State and the farms have to sell a fixed portion of the output to the State. Incentives are paid to the farmers for the improvement of the farm.

- **State Farming:** These farms are owned, managed and run by the State. State farms are equipped with latest machinery and equipment and employ scientific methods of cultivation. The workers on these State farms are wage earners. Besides producing foodgrains, the State farms produce raw products like cotton, wool, etc. State farming is suitable in newly reclaimed areas, where large scale mechanised cultivation is possible.
- **Contract Farming:** Another emerging farming system in India is contract farming. In this system land is taken on long time lease base from individual owners. Land remains under ownership of individuals but they have no role to play in farm policy. They are paid rental value of land. It is a good system in developed countries where holdings are large. However in India 75% farmers are small and marginal and if they lease out their land, they become forced to migrate to cities in search of jobs. In the long term, there are chances of landlessness as well.

3.4 MOST SUITABLE FARM ORGANISATION IN INDIAN AGRICULTURE

Farming is an age old practice on which millions of Indian dependent for their livelihood. However, there are few systems on which farmers are assured of a market for their produce. Farmers become compelled to discard their produce more often due to lack of buyers. On the other hand, agri-based and food industry always requires timely and

adequate inputs of good quality agricultural produce. This inconsistency of the Indian agricultural scenario has given birth to the concept of Contract Farming, which promises to provide a proper linkage between the 'farm and market'. Thus contract farming can be considered as the most suitable form of farm business organisation in the Indian agricultural scenario.

The farmers adopting contract farming receive/gain the following advantages:

- The farmers will be exposed to world class mechanised agro-technology, which increases productivity.
- The farmers obtain an assured price for their products. They also get market outlet for their products
- The farmers get healthy disease-free nursery, agricultural implements and improved technology from the contracting company,
- There will be crop monitoring on a regular basis. Technical advice will be provided free of cost at the doorstep of the farmer. This also helps the farmer to get assured output.

In Indian agricultural situation, to develop an agrarian economy that ascertain food and nutrition security to a population of over a billion, supply of raw material for its expanding industrial growth, surpluses for exports, and a fair and equitable rewarding system for the farming community, 'commitment driven' contract farming is no doubt a viable alternative farming model, which provides assured and reliable input service to farmers and desired farm produce to the contracting firm. Few examples of successful cases of contract farming in India are: The Classic Case of Pepsi Foods Ltd; Appachi's Integrated Cotton Cultivation: Innovative Model; Ugar Sugar's experience with barley etc.



CHECK YOUR PROGRESS

Q 1: Name the different types of farm business organisation.

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Q 2: Write the different types of co-operative farming

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Q 3: What is the most suitable form of farm organization.

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3.5 FURTHER READING

1) Reddy, S.S. and Ram P.R. (2018) Agril. *Finance and Management*, Oxford & IBH Publishing Co Pvt.Ltd.

2) Reddy S.S. (2006) *Agricultural Economics*, Oxford & IBH Publishing Co Pvt.Ltd.



3.6 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Manpower P

Ans to Q No 1: The different types of farm business organisation are

a) Peasant farming

b) Co-operative farming

The All India Co-operative Planning Committee (1951) classified co-operative farming into four categories viz., (i) Co-operative better farming society, (ii) Co-operative joint farming society, (iii) Co-operative tenant farming society; and (iv) Co-operative collective farming society

c) Capitalistic Farming

d) Collective Farming

e) State Farming

f) Contract farming

Ans to Q No 2: The All India Co-operative Planning Committee (1951) classified co-operative farming into four categories viz., (i) Co-

operative better farming society, (ii) Co-operative joint farming society, (iii) Co-operative tenant farming society; and (iv) Co-operative collective farming society.

Ans to Q No 3: The most suitable form of farm business organisation is contract farming. The farmers adopting contract farming will get the following advantages: 1.The farmers will be exposed to world class mechanised agro-technology. Which increases productivity; 2. The farmers obtain an assured price for their products. They also get market outlet for their products; 3. The farmers get healthy disease-free nursery, agricultural implements and improved technology from the contracting company, 4. There is also crop monitoring on a regular basis.



3.7 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: Define Farming System

Q 2: What is Peasant Farming

Q 3: Differentiate between Co-operative Better Farming Society and Co-operative Joint Farming Society

Long Questions (Answer each question in about 300-500 words)

Q 1: Discuss in details about different types of business farm organisation

Q 2: Discuss the most suitable form of farm organisation in India

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UNIT 4 : LAND REFORMS

UNIT STRUCTURE

4.1. Learning Objectives

4.2. Introduction

4.3. Objectives and Measures of Land Reforms:

- 4.3.1 Objectives of Land Reforms
- 4.3.2 Measures of Land Reforms

4.4. Need of Land Reforms in Indian Agriculture.

4.5. Ownership vs. Tenancy Cultivation

4.6. Large Farms Vs. Small Farms

- 4.6.1 Definition of Small Farms
- 4.6.2 Economics of Large Farms
- 4.6.3 Economics of Small Farms

4.7. Critical Evaluation of Land Reforms

4.8. Let Us Sum Up

4.9. Further Reading

4.10. Answer to Check Your Progress

4.11. Model Questions

4.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- discuss the context and the meaning of land reforms as a part of agrarian reforms.
- learn the objectives of land reforms and its needs in Indian agriculture.
- grasp the meaning and types of tenancy as well as needs and measures of tenancy reforms in Indian agriculture.
- dwell upon the debate hovered around farms size and evolution of large and small farms.
- discribe the progress of land reforms and critical evaluation of land reforms measures adopted.

4.2 INTRODUCTION

We have learnt from the previous units that agriculture occupies a significant place in Indian economy in terms of its contribution to GDP, to employment and livelihood security to a vast section of rural masses, to the growth of industrial and other sectors and most importantly to India's export sector at large. Further, we have also learnt that over the years, the sector itself has witnessed major changes in terms of it structure and pattern and faced many challenges as well. In this context, it seems highly important to understand the institutional, demographic and socio-political context within which agricultural growth has been taking place. The major thrust of the policies in the first decade of planning (1951 to 1961) was on institutional and agrarian reforms. Agrarian reforms are a part and parcel of evolution of agricultural system of an economy. We all know that Indian economy is primarily an agrarian economy as agriculture shares about 23 percent of the countings GDP providing employment opportunities to nearly to 52 percent of the total work force. It is, thus, imperative to understand state of operation of the agriculture and various reforms undertaken from time to time to strengthen it. India being an agrarian economy with great scarcity and unequal distribution of land along with a large mass of landless rural population, there are pressing economic and political arguments for land reforms. In general, land reforms are a part of the agrarian reforms and have a bearing on agricultural production, productivity and income distribution among small and marginal farmers in rural areas.

According to the Food and Agriculture Organisation (FAO) the term land reforms means: "More than redistribution of land either by breaking up large estates to improve consolidation of land holdings, it must include a number of measures to improve relationship of the man who works the soil to the land he works, including opportunity for land ownership, improved conditions of tenancy, agricultural credit at reasonable rates of interest, reforms of exorbitant rents and taxes and facilities for obtaining agricultural supplies and marketing agricultural products with emphasis on cooperatives."

Thus, land reforms refer to an institutional measure directed towards altering the existing pattern of ownership, tenancy and management of land and land reform largely entails a redistribution of the rights of ownership and/or use of land away from large landowners, in favour of cultivators with very limited or no landholdings.

Before we proceed to the discussion on land reforms, let us have a discussion on land tenure system prevalent in India which witnessed changes over a long period of time. Land tenure mainly deals with the rights and pattern of control of the land resource. There were three types of land tenure systems in India at the time of independence. Based on the mode of payment of land revenue these land tenure systems were classified under Zamindari system, Mahalwari system and Ryotwari system. Thus, under the Zamindari system, the Zamindar collected land revenue from the farmers and paid to the government. While under the Ryotwari system land revenue was directly paid by the farmers to the state government, and in Mahalwari system the village head was responsible to collect the land revenue. Under land tenure system, three types of tenants viz., occupancy tenants, tenants-at-will and sub-tenants were present. Occupancy tenants enjoyed permanent and inheritable rights on land, tenants-at-will and sub-tenants did not have any security of tenants on the land and were subjected to eviction at any time by the landlords. Besides these tenants, the whole land tenure system had a big class of agricultural laborers with no rights on land but worked on land for wages. Let us discuses the following land tenure systems:

- **Ryotwari System**: The Ryotwari tenure system was first introduced in Madras in 1820 by Thomas Munro, then Governor of Madras province and later on it was extended to Bombay (present Mumbai), parts of Assam and Coorg provinces under British India. Under this Ryotwari tenure, every individual is registered and holder is recognised as the proprietor of land and he is responsible for the payment of land revenue to the Government. The rate for land revenue were fixed at 50 percent for dry lands and 60 percent for the wetlands. The ryot or the farmer had all rights on land including sale, transfer and lease as long as he paid land revenue to the Government. There was practically

no room for any intermediary owners of the soil and the state. But later on, money lenders started giving land for lease and collected exorbitant rents from the cultivators. In Punjab this situation was alarming.

- **Mahalwari Tenure:** Mahalwari tenure system was introduced by Holt Mackenzie in 1822. In 1833, this system was reformed by William Bentick in Agra and Oudh. Under this system of tenure, lands were held jointly by the village communities and were collectively liable for the land revenue. As per the system, the village common land, waste lands were the properties of the village community. This waste land was free to be rented and the rent was divided among all members of the community. The entire village (Mahal) was treated as a unit for collection of revenues. The responsibility of collecting land revenue was vested on the village headman or a co-sharer appointed for collection of land revenue.
- **Zamindari System:** Under this system the Zamindar acted as the intermediary agency between the state and the actual cultivators. They were entitled with ownership and control rights in land and to collect rent or appropriate share of crop produce from the actual cultivators. Besides Zamindars, the intermediaries were also known as Jagirdars, Talukdars, Khot, Lambarder etc.

  The Zamindari system in India came into existence in the year 1793 at the behest of the British Government. Lord Cornwallis made settlement with landlords (Zamindars) to collect the land revenue from the farmers. The landlords were declared as full proprietors of land in the return for the land revenue or land rent from the farmers collection. The system was prevalent in India upto 1949 in the states of West Bengal, Orissa, Andhra Pradesh, Uttar Pradesh and Madhya Pradesh. The system had its limitation in terms of unlimited rights enjoyed by the Zamindars to extract as much of rent as they wished resulting in large scale exploitation of the farmers. The Zamindars poverty and misery of the cultivators.appropriated more than 25 percent of the collected rent and the rent constituted 25 percent of the value of the

produce. Thus, the Zamindari system resulted in large scale exploitation and innumerable

Land reforms measures have been adopted by various developing and underdeveloped countries for attaining a rational land distribution pattern and viable farming structure. Land reforms cover a vast contour of meaning. While in narrow sense, land reforms are concerned with those reforms related to land ownership ad land holdings. However, in the larger sense of the tem, it means those measures of reforms necessary to raise agricultural productivity which include reforms relating to fixation of rent on land, abolition of intermediaries, credit and marketing arrangement. Land reforms received top on policy agenda at the time of independence. In decades following independence, India passed a significant body of land reform legislation. The constitution of 1949 left the adoption and implementation of land and tenancy reforms to the state governments.



According to the Food and Agriculture Organisation (FAO) the term land reforms means: "More than redistribution of land by breaking up large estates to improve consolidation of land holdings, it must include a number of measures to improve relationship of the man who works the soil to the land he works, including opportunity of land ownership, improved conditions of tenancy, agricultural credit at reasonable rates of interest, reforms of exorbitant rates and taxes and facilities for obtaining agricultural supplies and marketing agricultural products with emphasis on cooperatives."Broadly," Land reforms refer to an institutional measure directed towards altering the existing pattern of ownership, tenancy and management of land and largely land reform entail a redistribution of the rights of ownership and or use of land away from large landowners and in favour of cultivators with very limited or no landholdings."

4.3 OBJECTIVES AND MEASURES OF LAND REFORMS

Let us now discuss the objectives and measures of land reforms:

4.3.1 Objectives of Land Reforms

The two basic objectives of land reforms were, viz. (i) to remove such impediments on agricultural production that arises from the character of agrarian structure in rural areas and (ii) to reduce or eliminate exploitation of landless and small cultivators through measures of land redistribution. The Planning Commission of India (known as NITI Ayog since 2014) outlined the following objectives of land reforms in India:

- To remove such impediments to increase agricultural production
- To eliminate all forms of exploitation and social injustice within the agrarian system
- To provide security to the tiller

- To assure equality of status and opportunity to all sections of rural people

Taking into consideration the whole measures of land reforms, the objectives of land reforms can be outlined as mentioned below:

- Redistribution of land across society so that land is not held in the hands of a few people
- Land ceiling to disburse surplus land amongst small and marginal farmers
- Removal of rural poverty
- Abolition of intermediaries
- Tenancy reforms
- Increasing agricultural productivity
- Consolidation of land holdings and prevention of land fragmentation
- Developing cooperative farming
- To ensure social equality through economic parity
- Tribal protection by ensuring their traditional land is not taken over by outsiders
- Land reforms were also for non-agricultural purposes like development and manufacturing



CHECK YOUR PROGRESS

Q 1: What do you mean by land reforms?

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Q 2: What are the main objectives of land reforms?

.....

.....

4.3.2 MEASURES OF LAND REFORMS

Land reforms measures/legislation in India comprises of four main categories: abolition of intermediaries who were rent collectors

under the pre-independence land revenue system; tenancy regulation that attempted to improve the contractual terms for tenants including crop share and security tenure; a ceiling on land holdings with a view to redistributing surplus land to the landless and finally to consolidate disparate landholdings. The land reforms measures can be stated as the following:

- Abolition of intermediaries
- Tenancy reforms
- Reorganisation of agriculture

Tenancy reforms include:

- Regulation of rent
- Security of tenure
- Ownership of rights
- Ceiling on land holdings

Measures of reorganisation of agriculture include:

- Redistribution of land
- Consolidation of holdings
- Co-operative Farming

Points to Remember: The two basic objectives of land reforms in India are,

- to remove such impediments on agricultural production that arises from the character of agrarian structure in rural areas and
- to reduce or eliminate exploitation of landless and small cultivators through measures of land redistribution.

  Land reforms legislation in India comprises of four main categories:

  - abolition of intermediaries who were rent collectors under the pre-independence land revenue system,
  - tenancy regulation that attempted to improve the contractual terms for tenants including crop share and security tenure,
  - a ceiling on landholdings with a view to redistributing

surplus land to the landless

- to consolidate disparate landholdings.

Following is the detailed discussion on objectives and measures of land reforms in India:

- **Abolition of Intermediaries:** The Land reforms committee constituted under the chairmanship of Kumarappa in 1949 recommended for abolition of intermediaries as a part of land reforms measures. Abolition of Zamindari and other similar intermediary tenures largely involved removal of intermediary levels or layers of various amorphous and parasitic groups in land between state and the actual cultivators which of course requires compensation to the owners of land. In response to this, towards the end of first plan, Zamindari system was abolished and nearly 173 million acres of land was acquired from intermediaries and 2.5 crores tenants were brought into direct relationship with the state. It also made possible distribution of about 61 lakhs hectares of land to landless farmers. As a result of this, large acres of land (mostly privately owned forests) and wasteland came under the jurisdiction of the state. Those tenants cultivating lands for more that 6 years were given the right to purchase the land at fair prices fixed by the land tribunal. They were also protected from exorbitant rents and illegal extortions. Zamindars were given compensation for the land acquired from them based on the net income or net asset basis.

  Despite abolition of intermediary rights, poor peasantry was exploited in various ways. It also led to large scale disruption of poor tenants from the land. While landlordism has been abolished, absentee landlordism now continues to grow in numbers. This is mainly due to the fact that the legislation conferred ownership rights not upon the actual cultivator, but on the statutory tenant who himself was an intermediary with a chain of sub-tenants under him. The reasons for this can be cited thus,

- The law permitted the intermediaries to retain their home farms.
- No limit was put on the area of land they could retain.
- The term personal cultivation was ill defined.
- No protection was given to sharecroppers and other tenants at will.

Thus, though the abolition of zamindari has paved the way for a remarkable shift in the balance of power, the major goal of "land to tiller" is yet to be achieved.

- **Tenancy Reforms:** As a result of tenancy reforms, occupancy tenants enjoyed permanent rights like the owner of land and did not face any fear of eviction. Under tenancy reforms there were regulation of rent, security of tenure and conferment of ownership rights on tenants.
- **Regulation of Rent:** In order to regulate rent, the first five year plan recommended that the rent should be fixed at one fourth or one fifth of the value of total produce obtained from land. All states accepted this limit except Andhra Pradesh, Punjab, Haryana, Jammu and Kashmir and Madras. These states fixed their own limit. For example, in Madras it was 40 percent of the gross produce which was fixed as maximum rent which in Bihar was 50 percent of the gross produce. In Andhra Pradesh 30 percent of the gross produce of irrigated land and 25 percent of the gross produce of dry land was fixed as rent.
- **Security of Tenure:** Tenants are the persons cultivating the land on payment of rent though in some states like West Bengal and Uttar Pradesh share croppers were not regarded as tenants. Tenants were insecure in the sense that land owners were permitted to resume the land rights up to the ceiling limit and the term personal cultivation was defined with lots of flaws.



CHECK YOUR PROGRESS

Q 3: What do you mean by cooperative farming?

.....

.....

Q 4: State the reasons for failure of abolition of intermediaries though attempted under land reform measures.

.....

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4.4 NEED OF LAND REFORMS IN INDIAN AGRICULTURE

The need for land reforms in an agrarian country like India is immense. In many cases, backwardness of Indian agriculture can also be attributed to defective land policy adopted in the country. Some of the problematic areas in land policy of India as identified by the Planning Commission of India are as follows: (i) presence of multiplicity of intermediaries between government and cultivators, (ii) land of adequate security of tenure; (iii) fixation of high rent and lack of incentive; (iv) large scale sub-division and fragmentation of holdings and the impediments arising on it towards adoption of modern and scientific methods of cultivation; (v) unequal distribution of land among farmers; (vi) low productivity per hectare of land, and (vii) increasing inequality between rich and poor as a result of green revolution. Some of the important land reforms in India are the following:

- Creation of economic holdings through redistribution of land to small and marginal farmers with a view to facilitate adoption of modern improved farming techniques.
- Removal of intermediaries and tenancy system thereby giving ownership of land to actual cultivators which in turn provide incentive to the famers.
- Increase in production and productivity through increase in size of land holdings and development of co-operative farming.

- Establishment of direct link between government and farmers through abolishing intermediaries which in turn facilitate the government to implement plan for agricultural development.
- Securing social justice among millions of farmers in India by transferring them ownership rights to lands, fixing ceiling on land holdings and by reducing the exploitation of farmers.
- **Economic arguments in favor of land reforms:** Equity is the most celebrated argument in favour of land reforms in India. In a land scarce country with significant section of BPL rural population, it became imperative that everyone has access to minimum portion of land.

  Secondly, quite a large number research from various parts of the country by researchers have widely documented that small farm tend to be more productive than large farms. Further, there are evidences that owner-cultivated plots of land tend to be more productive than those under sharecropping tenancy.

The presence of large numbers of intermediaries in agricultural sector has been identified as an impediment to growth and development of Indian agriculture. Land reforms were argued for abolition of intermediaries. In fact, the intermediaries were abolished within a few years after independence and the actual tillers accounting for about 40 percent of the cultivated area became owners.

4.5 OWNERSHIP VS. TENANCY CULTIVATION

We have discussed above that tenancy reform is a major part of land reform measures. Under tenancy reforms, the important component was the conferment of ownership rights to tenants.

As per the tenancy regulation policy introduced at the national level, large landowners were allowed to evict their tenants and to bring the land under personal cultivation up to a ceiling limit which is to be prescribed by each state. The term “personal cultivation” was used to define as cultivation by the owner of the land and other members of a farmers’ family.

The tenants of those lands which were not resumable (i.e., without landowners) were given occupancy rights on payment of a price to be fixed

as a multiple of the rental value of the land. The owners of land not exceeding a family holding were defined as small owners. Land belonging to small and middle owners was divided into two categories viz. land under personal cultivation, and land leased to tenants at will. If the land possessed was below a ceiling restriction, tenants of such land owners were given limited protection, provided that it should be renewed for five to ten years and should be renewable, and that the maximum rent payable should not exceed 20 to 25 percent of the gross produce. However, in the second five-year plan, the definition of "personal cultivation" was amended with three elements viz. risk of cultivation, personal supervision, and personal labour. This further narrowed down the definition of who was eligible for the ownership rights on land. In the third five-year plan, the final goal was fixed on conferring rights of ownership to as many tenants as possible. The policy suggested that the states should study the problem and determine the suitable action in light of prevailing conditions. In the fourth plan, the tenancies were suggested to be declared non-resumable and permanent, except in the case of landowners working in defence services or with any disability." Thus, the lands where cultivators, agricultural labourers, and artisans had constructed their houses, was now to be their own land.

All these efforts were partially successful in reversing the conditions of the British Era. However, there were issues of tenants being forced to sell the lands due to poverty. The government was suggested to make efforts to bring them within the institutional credit regime.

In the sixth five-year plan, a time bound schedule was given to the states to implement the measures of land reforms. It further recommended that the states in which legislative provisions for conferment of ownership rights on all tenants did not exist, should immediately introduce appropriate legislative measures within one year (by 1981–1982). However, it was not achieved in all states.

4.6. LARGE FARMS VS. SMALL FARMS

In this section let us discuss about the relative importance large farms and small farms one by one.

4.6.1 Definition of Small Farms

Quiet a large number of criteria has been used to define a small farm. Different economists and agriculturalists define small farms by using different criteria. For example, Cohen classified farms according to the numbers of workers or value of the gross output produced. The common criteria used for the classification of farms into large and small farms are: number of workers or laboures, value of the gross output and area of cultivation. In capitalist agriculture, the quantity of scare factor in agriculture is taken as measure for farm classification. For example, in USA, where labour is scarce number of labourers/workers engaged in cultivation is considered as a criterion for division of farms into small and large farms. In India, land has become a scarce factor in agriculture. Therefore, area of land holdings is used as the criterion for classification of farms into large and small farms. According to Small Farmer's Development Agency (SFDA), farms with 1 to 2 hectares of land is considered as small farms while farms with less than 1 hectare of area of land holdings is considered as marginal farms.

4.6.2 Economies of Large Farms

Let us discuss the benefits of large farms on the following on the following grounds.

- **Technical Economy:** A large farm may have the advantage of application of specialised machineries, scientific equipment, technical know-how etc. as the average cost of production of farm decreases with increase in the size of the farm.

  In case of large farms, more area is available for productive use. The overhead cost of production per unit of output declines on large farms.

  Rotation of crops is easy for large farms as large area is available for cultivation of various crops.

  Operational cost of machinery in per acre of land is low

due to full utilisation of machinery in large area of cultivation in case of large farms.

Huge resources and capacity to tackle the risk of failure enable a large farm to introduce new crops.

For an optimum use of scarce management and skilled man power, a large farm is necessary.

The quality of the output can be controlled if the size of the farm is large and its number is few in the market. This situation is also an impetus for proper adjustment of the individual farm output to the market outlets.

- **Financial Economy:** The size of a large farm enables the farmer in obtaining easy credits from multiple sources. The availability of borrowing a huge sum of money at lower interest rate from outside sources makes a large farmer gain the opportunity to invest in agriculture as per the requirement. When the large farmer needs immediate money, he can withhold the sale of his output in the market. This will also permit him to sell his output at the most favourable price in the market.
- **Commercial Economy:** The commercial economy refers to the benefits that a large farm can obtain in business (buying and selling activities). A large farm can obtain economy in buying large quantity of inputs at lower prices. It can also get the economy of supplying its large amount of outputs to various markets (local, districts, national, international) with lower cost of transportation.

4.6.3 Economies of Small Farms

Let us discuss the economies of small farms over large farms in agriculture.

- **Advantage in Monitoring and Supervision:** The supervision of each and every worker in agriculture is difficult if the size of the farm is large. In case of small farm, as the workers are working in close vicinity, therefore supervision of workers is easy.

- **Need for Spot Decision:** The decisions in agriculture are to be made mostly at spot as most of the products of the agriculture are perishable and agricultural production is affected by many physical factors. These fresh, frequent and immediate decisions are to be taken by the farmer himself. If the size of the farm is small, it is easy for the farmer to take decision otherwise it is dificult to take decisions.
- **Agriculture is Generally a Family Proposition:** As agriculture is taken as a family proposition, therefore policy regarding amount of input to be used, output to be produced or quantity and quality of workers to be employed is decided by the family members. If his policy is to change from generation to generation then large-scale farming organisation will be discouraged.
- **Tenacity of Small Farms:** Small scale farming is a feature of small farm and generally family members work in their own farm. The higher flexibility in the supply of labourers by the family members determine the tenacity of a small farm by coping up with various fluctuations in requirement quantity of labour supply due to vacillation of weather condition and unpredictable needs of crops and livestock.
- **Productivity of Small Farms:** Some studies reveal that the output per acre was higher on small farms than on large farms. This is mainly due to the fact that in small farms the scope for intensive cultivation is much larger than the large farms.
- **Generation of Employment Opportunity:** Small farms use labour intensive techniques and large farms use capital intensive techniques. Therefore, small farms create more employment opportunities than large farms. Again, greater intensity of cultivation in small farms generates more employment in these farms.
- **Quality of Output:** Agriculture is a tough occupation and it requires consistent hard work, care and attention. In small farms, farmers render majority of the activities manually and

nourishes the crops as their baby as they do not have capital, access to modern and costly machineries. Again, if the motivation of small farmers is to feed their own family, they never compromise on the quality of the products. However, in case of large farms, farmers are concerned with the cost benefit calculations and they seem to be ready to comprise on quality of the products.



CHECK YOUR PROGRESS

Q 5: How do you address the debate between ownership cultivation and tenancy cultivation?

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Q 6: On what basis the farms are classified in India?

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Q 7: Define small farm in India.

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Q 8: What are the advantages of large farms over small farms?

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4.7 CRITICAL EVALUATION OF LAND REFORMS

Here, let us look at the progress of land reforms measures adopted by the goverment of India in its various five-year plans. We can discuss the progress of land reforms measures in India under three different phases viz. 1936-55, 1956-71 and 1972-95.

- **First Phase (1936-55):** During this period the state governments and the union territories had given top priorities in bringing actual cultivators in direct contact with the state government through abolition of zamindars and other intermediaries. To the achievement of this move it has been noticed that towards the end of second

five-year plan, intermediaries covering about 40 percent of the area were largely abolished and as many as 20 million tenants were brought into direct contact with the state. Nearly 57.7 lakhs hectares were distributed to landless agricultural labourers under Zamindari/ Jagirdari abolition acts in various states.

During this phase, emphasis were laid on bringing tenancy reforms which basically aimed at conferring the rights of ownership of tenants. Several measures like declaring tenants as owners and making them pay compensation to owners in suitable installments, acquisition of the right of ownership by the State for payment of compensation and transfer of ownership of tenants and State's acquisition of the landlord's rights bringing tenants into direct relationship with the state. About 30 million tenants had the rights on tenure-held land in the process and most of them free of cost. A significant number of tenants in Assam, Kerala, Maharashtra, West Bengal, Gujarat and Karnataka had benefited from the tenancy reforms while in other states it was marginal. In the states when ownership rights could not be conferred on tenants they were protected through security of tenure by not allowing eviction of tenants and reducing the rent from 20 to 25 percent of the yield. Out of an estimated 15 million protected tenants, West Bengal alone had given recorded rights of hereditary occupancy to 1.46 million tenants.

Though tenancy reforms were undertaken, the reforms measure still had certain limitations:

- Share croppers who constitute bulk of the tenant cultivators have been excluded from reform measures.
- On several grounds, eviction of tenants had taken place.
- As a fall out of the tenancy reforms especially resumption given in the legislation, land grabbing by the unscrupulous was quite present.
- There is non-recording of tenancy in land records, hence ownership rights could not be conferred on a large body of tenants.

- **Second Phase (1956 -1971):** During this phase, as part of reform measures, ceiling on agricultural land holdings has been imposed. In response to this, all states enacted ceiling laws by the end of 1961 though ceiling limits were different for different states. Near about one million hectares of agricultural land were identified out of which about 50 percent were distributed among the rural poor.
- **Third phase (1972-1995):** During the phase the major breakthrough was to reduce existing land holding ceiling limit especially in the conference of chief ministers held in New Delhi on 23rd July, 1972. The revised ceiling limits were: (a) the Government irrigated land should enjoy a lower ceiling limit ranging from 4 ha to 7 ha, (b) the privately irrigated land the ceiling limit ranges from 5 ha to 7 ha and (c) the dry land and other kinds of agricultural land, the ceiling limit should not exceed 22 ha. The ceiling laws were implemented during the sixth five-year plan period (1980-85) but during the seventh and eight plan periods, there was no progress and it had come to a standstill in a majority of states. Towards the end of 1996, the area declared surplus was 30.59 lakh ha of which 26.47 lakh ha were taken possession of and 21.28 lakh ha were distributed among 51.21 lakh beneficiaries in the country. About 8.78 lakh hectares of land was not available for distribution for reasons such as involvement of litigation in various courts, reserved or transferred surplus land for public purposes, unsuitable for cultivation etc. The estimates from planning commission state that the area distributed under ceiling laws accounted for only 1.5 percent of the net cultivated area and beneficiaries. At the same time most the ceiling surplus lands were very poor in quality and require heavy investment for bringing them under the plough. Equally important is to note that in most cases the beneficiaries received less than 0.5 ha of land and hence such holding could not provide economic sustenance to the beneficiaries of farm households.

  As regards the ceiling on land holdings and distribution of surplus land among landless, there were two rounds of land reform legislation – one in 1950s and another in the early 1970s. However, due to

numerous exemptions provided in the law and due to lack of political will, the objectives of this reform could not be fulfilled and not much surplus land could be acquired by the government for redistribution among the landless.



4.8 LET US SUM UP

- Land reforms are a part of the agrarian reforms.
- "Land reforms refer to an institutional measure directed towards altering the existing pattern of ownership, tenancy and management of land and largely land reform entail a redistribution of the rights of ownership and or use of land away from large landowners and in favour of cultivators with very limited or no landholdings."
- Land tenure deals with the rights and pattern of control of the land resources. There were mainly three types of land tenure systems in India during the British period. These were:
  - Zamindari system
  - Mahalwari system
  - Ryotwari system
- The objective of land reforms as stated in the report of Planning Commission of India were:
  - To remove such impediments to increase agricultural production
  - To eliminate all forms of exploitation and social injustice within the agrarian system
  - To provide security to the tiller.
  - To assure equality of status and opportunity to all sections of rural people.
- Two important changes caused by land reforms are: (a) grant of ownership to tenants or other landless workers, (b) small size of the farms due to redistribution of lands.
- The advantages of ownership cultivation over tenancy cultivation are: (a) ownership cultivation reduces the extent of underutilisation of resources; (b) ownership cultivation ensures adaptation of an

appropriate technique of production; (c) ownership to the cultivable land provides best incentive to the cultivator to use resources for efficiently and productively; (d) ownership cultivation leads to investment in both variable capital (improved seeds, fertilisers etc.) as well as in fixed capital (bullock, machinery etc.) which helps in better capital formation in future. (e) financial assistance (loans, grants) can be easily available in case of ownership cultivation than in tenant cultivation as the land can be used as a security. Despite these advantages of ownership cultivation over tenancy cultivation, under certain circumstances (for examples: when the owner died and heir is too younger or when the owner of the land possesses more capital than the land), the tenancy cultivation can only ensure optimum combination of factors of production. Tenancy cultivation provides mobility to the factors of production which opens the door to maximisation of returns to these factors. In case of tenancy cultivation, risks and uncertainties can be distributed among the land owner and the tenants.

- A large farm has advantage over the small farms on the following grounds: scale of operation, cost of production, full utilisation of capital equipment, availability of easy credit facility at lower interest rates, low transportation cost, optimum use of scarce managerial and skilled manpower, availability of inputs at lower concessional prices etc. While small farm also has some advantages over large farms. These include easy monitoring of farming activities of workers, quality of products, flexible supply of family labour, greater employment opportunity for labourers etc.
- Although large farms have many benefits, there is persistence of small farms in underdeveloped countries. The main reasons behind the persistence of small farms are: technical difficulties to increase the size of the farms, financial scarcity, rising population pressure/ rapid population growth, breaking up of joint family system, distribution of lands among all the heirs, fragmentation of landholdings etc.
- The implementation of the land reforms in India are criticised on the following grounds:

defective nature of the land reform legislation, opposition of the land owners, lack of social consciousness among the beneficiaries, inefficiency and partiality of the administrative machinery, emergence of new agricultural technology.



4.9 FURTHER READING

1) Reddy, S. S., Ram, P. R., Sastry, T. N., & Devi, I. B. (2020). *Agricultural Economics*. (Second, Ed.) New Delhi: CBS Publishers & Distributors Pvt Ltd.
2) Soni, R. (2002). *Leading Issues Agricultural Economics* (Fifth ed.). Vishal Publishing Co. Jalandhar, India.
3) Dev, S. M. (2015-16). *Agricultural Development in India: Peformance, Issues and Policies*. In U. Kapila (Ed.), Indian Economy Since Independence (Vol. 26, pp. 647-676). Academic Foundation, New Delhi.
4) Meier, G. M., & Rauch, J. E. (2006). *Leading Issues in Economic Development.* (Eight, Ed.) Oxford University Press.



4.10 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: According to the Food and Agriculture Organisation (FAO) the term land reforms means: “More than redistribution of land by breaking up large estates to improve consolidation of land holdings, it must include a number of measures to improve relationship of the man who works the soil to the land he works, including opportunity of land ownership, improved conditions of tenancy, agricultural credit at reasonable rates of interest, reforms of exorbitant rates and taxes and facilities for obtaining agricultural supplies and marketing agricultural products with emphasis on cooperatives.”

Broadly, land reforms refer to an institutional measure directed towards altering the existing pattern of ownership, tenancy and management of land and largely land reform entail a redistribution

of the rights of ownership and or use of land away from large landowners and in favour of cultivators with very limited or no landholdings.

Ans to Q No 2: The main objectives of land reforms are:

- Redistribution of land across society so that land is not held in the hands of a few people.
- Land ceiling to disburse surplus land amongst small and marginal farmers.
- Removal of rural poverty.
- Abolition of intermediaries.
- Tenancy reforms.
- Increasing agricultural productivity.
- Consolidation of land holdings and prevention of land fragmentation.
- Developing cooperative farming.
- To ensure social equality through economic parity.
- Tribal protection by ensuring their traditional land is not taken over by outsiders.
- Land reforms were also for non-agricultural purposes like development and manufacturing.

Ans to Q No 3: Cooperative farming is an agricultural practice in which farmers pool their small landholdings for the purpose of cultivation and reap benefits of large-scale farms. In this farming operations are conducted cooperatively.

Ans to Q No 4: The reasons for failure of abolition of intermediaries though attempted under land reform measures are:

- The law permitted the intermediaries to retain their home farms.
- No limit was put on the area of land they could retain.
- The term personal cultivation was ill defined.
- No protection was given to sharecroppers and other tenants at will.

Ans to Q No 5: Refer to the section 4.5.

Ans to Q No 6: On the basis of area of land holdings farms are classified in India into large and small farms.

Ans to Q No 7: According to Small Farmer's Development Agency (SFDA), farms with 1 to 2 hectares of land is considered as small farms

Ans to Q No 8: Advantages of large farms over small farms are as follows:

- **Technical Economy:** A large farm may have the advantage of application of specialised machineries, scientific equipment, technical know-how etc as the average cost of production of farm decreases with increase in the size of the farm.

  In case of large farms more area is available for productive use. The overhead cost of production per unit of output declines on large farms.

  Rotation of crops is easy for large farms as large area is available for cultivation of various crops.

  Operational cost of machinery in per acre of land is low due to full utilisation of machinery in large area of cultivation in case of large farm.

  Huge resources and capacity to tackle the risk of failure, enables a large farm introduce new crops.

  For an optimum use of scarce management and skilled man power, a large farm is necessary.

  The quality of the output can be controlled if the size of the farm is large and its number is few in the market. This situation also provids an impetus for proper adjustment of the individual farm output to the market outlets.

- **Financial Economy:** The size of a large farm enables the farmer in obtaining easy credits from multiple sources. The availability of borrowing a huge sum of money at lower interest rate from outside sources make a large farmer gain the opportunity to invest in agriculture as per the requirement. When the large farmer needs immediate money, he can withhold the sale of his output in the market. This will also permit him to sell his output at most favourable price in the market.

- **Commercial Economy:** The commercial economy means the benefits that a large farm can obtain in business (buying and selling activities). A large farm can obtain economy in buying large quantity of inputs at lower prices. It can also get the economy of supplying its large amount of outputs to various markets (local, districts, national, international) with lower cost of transportation.



4.11 MODEL QUESTIONS

Short Questions (Answer within 150 words)

Q 1: How are land reforms different from tenancy reforms?

Q 2: State the objectives of land reforms in India.

Q 3: Write a note on Zamindari system as a part of land tenure system of India.

Q 4: What are advantages of ownership cultivation?

Q 5: What are reasons for persistence of small farms in India

Long Questions (Answer each question in about 300-500 words)

Q 1: Discuss objectives and measures of land reforms of India?

Q 2: Do you think ownership cultivation is better than the tenancy cultivation? Give arguments.

Q 3: Discuss the circumstances in which tenancy cultivation results in optimum allocation of resources.

Q 4: How do you resolve the debate between large farm vs small farm?

Q 5: Critically discuss the achievement of various land reforms measures adopted in India.

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UNIT 5 : RISK AND UNCERTAINTY IN AGRICULTURE

UNIT STRUCTURE

5.1 Learning Objectives

5.2 Introduction

5.3 Difference Between Risk and Uncertainty in Agriculture

- 5.3.1 Definition of Risk
- 5.3.2 Definition of Uncertainty
- 5.3.3 Key Difference Between Risk and Uncertainty

5.4 Types of Risk and Uncertainty in Agriculture

5.5 Measures for Reducing Risk and Uncertainty in Agriculture

5.6 Let Us Sum Up

5.7 Further Reading

5.8 Answers to Check Your Progress

5.9 Model Questions

5.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- discuss the difference between risk and uncertainty in agriculture
- explain different types of risk and uncertainty in agriculture
- describe measures for reducing risk and uncertainty in agriculture

5.2 INTRODUCTION

Being biological and seasonal in nature, agricultural production is encountered with conditions of risk and uncertainty. Farmers are generally concerned with different decisions what crops to be grown, when to be grown, seed rates, fertiliser application, application of other crucial inputs etc. These decisions are subjected to change depending on the nature of weather or other associated risks. Similarly, a livestock farmer has to take numbers of decisions regarding his livestock farm and he has to wait for several years to get back the investment and income from the

investment. Changes in the weather, prices and other socioeconomic factors may occur between the time periods which in turn may affect the investment decisions. For that reason, the farmers have to consider various management strategies relevant to the risk and uncertainty conditions. Only a few farmers can become efficient, particularly those who could understand better about different risk and uncertainty situations in farming and rearing livestock and follow different relevant risk management strategies accordingly. Therefore, it is very important to know about different risk and uncertainty in agriculture and how to manage them in better way.

5.3 DIFFERENCE BETWEEN RISK AND UNCERTAINTY IN AGRICULTURE

Quite often, the terms risk and uncertainty are used interchangeably. In reality, there is a very significant difference between the two of them. **Risk** can be understood as the potential of loss. It is not exactly same as **uncertainty**, which implies the absence of certainty of the outcome in a particular situation.

5.3.1 Definition of Risk

In the ordinary sense, the risk is the outcome of an action taken or not taken, in a particular situation which may result in loss or gain. It is termed as a chance or loss or exposure to danger, arising out of internal or external factors, that can be minimised through preventive measures. The risk refers to the probability or outcomes which are measurable in an empirical manner. Risk is defined as a situation when all possible outcomes are known for a given management decision and probability associated with each possible outcome is also known. Risk is measured through probability concepts. It can be insured by the insurance companies. As a result of experience of the farmer, some future outcomes can be fairly calculated. Eg. Poultry farmers, rice farmers etc having long and repeated experience can predict cost, output and price closure to the reality.

5.3.2 Definition of Uncertainty

By the term uncertainty, we mean the absence of certainty or something which is not known. It refers to a situation where there are multiple alternatives resulting in a specific outcome, but the probability of the outcome is not certain. This is because of insufficient information or knowledge about the present condition. Hence, it is hard to define or predict the future outcome or events. Therefore, uncertainty refers to future events where outcomes cannot be measured empirically or quantitatively. Uncertainty is not insurable and cannot be measured in quantitative terms through past models. Therefore, probabilities cannot be applied to the potential outcomes, because the probabilities are unknown. Based upon the experience of using familiar inputs such as known varieties of crop seeds, fertiliser etc one can make an estimate of possible yield with some degree of risk. But if there is change in technology like introduction of new variety, the possible yield cannot be estimated. Thus the change in yield due to change in technology is merely an uncertainty.

5.3.3 Key Differences between Risk and Uncertainty

The difference between risk and uncertainty can be drawn clearly on the following grounds:

- The risk is defined as the situation of winning or losing something worthy. Uncertainty is a condition where there is no knowledge about the future events.
- Risk can be measured and quantified, through theoretical models. Conversely, it is not possible to measure uncertainty in quantitative terms, as the future events are unpredictable.
- The potential outcomes are known in risk, whereas in the case of uncertainty, the outcomes are unknown.
- Risk can be controlled if proper measures are taken to control it. On the other hand, uncertainty is beyond the control of the

person or enterprise, as the future is uncertain.

- Minimisation of risk can be done, by taking necessary precautions. As opposed to the uncertainty that cannot be minimised.
- In risk, probabilities are assigned to a set of circumstances which is not possible in case of uncertainty.



CHECK YOUR PROGRESS

Q 1: Define risk and uncertainty.

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Q 2: What are the key differences between risk and uncertainty?

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Q 3: What are the different types of risk and uncertainty in Agriculture?

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5.4 TYPES OF RISK AND UNCERTAINTY IN AGRICULTURE

There are different risks and uncertainties exist in Agriculture. These are broadly categorised into four groups as follows:

- **Production Risk/ Yield Risk :** Production of crops and livestock is subject to change due to weather, disease, insects, weeds and inadequate technology. These factors are unpredictable and hence they result in the variability of the output. Besides these yield variations are due to many factors. Some are controllable, while some others are not under control of management. Weather risk and technical risk are the most important components of production risk. Again yield risk may arise due to change in production costs, institutional factors, change in management, non-availability of timely inputs including labour, seeds, breeds, fertilisers, feeds, irrigation, change in

technology of production, variation in prices of inputs and outputs etc.

- **Price Risk or Marketing Risk :** Marketing risk is also called as price risk, because prices are determined by two major forces in the market i.e. demand and supply. All the factors affecting the demand and supply are likely to cause risk of falling price. Supply is very much affected by weather risk and production risk, where as demand for a commodity is mainly changed due to consumer's income, habits, taste, preferences, export and import policies and general economic measures taken up by the government etc. Production of crops and livestock is influenced by prices in the market which are beyond the control of farmers. These prices vary from year to year, season to season and exhibit seasonal variation. In case of most of the agricultural commodities, there is a vast time lag between production and marketing activity which permit enough time for prices to fluctuate when the commodities move from production centre to consumption centre.
- **Risk of Fall in Real Return :** There are a number of enterprises in agriculture where the gestation period is much longer. Eg: for fruit crops like mango, gestation period is taken as 5-6 years. So the cost is incurred at present, but the return is spread over the entire period. In case, there is fall in value of money (e.g., due to inflation), the real value of future return would also fall which is a serious risk to the farmers.
- **Financial Risk :** This type of risk increases with increased amount of borrowed money in farm business. Uncertainty arises due to the changes in future interest rates and fiscal policies and finally changes in the ability of farm business to generate required cash flow for the clearance of debts.

5.5 MEASURES FOR REDUCING RISK AND UNCERTAINTY IN AGRICULTURE

Measures to Reduce Production Risk

- **Selection of Less Risky Enterprise :** Various farm enterprises differ

from each other in terms of different risk. For example, crop of long gestation period such fruits the risk is high due to possible fall in value of money and thus fall in the real value of net return. Again vegetable crops are risky because of highly fluctuating prices due to its perishable nature and high resource requirement which may not be available when needed. On the other hand, wheat and paddy are less risky due to almost stable yield and effective price support (Minimum support price) given by Government. However, weather risks like flood, drought can hamper these crops. Thus, the nature and degree of each type of risk varies from one enterprise to the other. It is upto the farmer's capacity to take risk and to make a choice accordingly.

- **Adopting Production Methods with Low Variability :** By selecting the least risky method of production would be helpful in reducing variability in return. As example: at the time of land preparation using of human labour may be less risky than by a tractor (if human labour is easily available and availability of tractor is not certain.) Similarly the sale of produce by storage for longer period is generally more risky for price fluctuation than post harvest sale.
- **Insurance :** There are many types of insurances in farming to reduce production risk and financial risk. Crop insurance scheme can reduce production risk. Similarly, livestock insurance provides safety against the fatal diseases of cattle. Farm assets like farm factory, tractors, power tillers also can be insured against theft, burglary, fire or any other damage.
- **Diversification of Enterprise :** Diversification of enterprise means having large variety of enterprise under a single farm management. It can help the farmers to reduce the risk. Eg.: a farmer having some area under rice, some area under maize, some area under vegetable crops has less risk as compared to putting the entire area under cultivation of any one of these crops. As already mentioned, vegetable crops like cauliflower, cabbage, carrot, chilli etc are much more risky than field crops due to yield and price fluctuation. Therefore, by combining these crops production with

other crops, farmers can lower the risk to a reasonable extent. Again, a number of non cropped allied enterprises like dairy, poultry, fishery, mushroom cultivation etc. if combined with crop farming can be helpful in reducing the risk in future.

- **Agronomic Practices :** Different agronomic practices such as crop rotations, selecting suitable varieties like flood tolerant varieties of rice, disease resistant varieties, adoption of deep tillage operation, mulching etc should be adopted to reduce production risk.
- **Asset Structure :** Keeping capital assets in more liquid form can reduce the financial risk to fall back upon. Asset means anything which is owned by the farmer. Example: cash, crop produce, machinery, livestock, tractors, building, land etc. Liquid assets are those which can be converted into money or cash within a short period of time usually one year. Example: cash in hand, cash in bank, farm produce ready for disposal or sale etc. Similarly, a pair of bullock is generally considered more risky than a tractor. Therefore, the asset structure is important to estimate the degree of risk.
- **Flexible Production Plan :** If possible, adjustments in the production plan can lead to minimisation risk and uncertainty. For example: during the sowing time of wheat, if there is continuous rain then it is desirable to shift over to next best alternative crop i.e. sunflower rather than sowing wheat late and facing heavy risk of fall in yield. Similarly, scarce resources may be shifted from one crop to another depending upon the possible risk in each crop. For example: the use of labour may be made more on cauliflower than on wheat, if cauliflower is likely to pay much more than wheat and the manpowers is limited.
- **Market Risk Management :** If commodity prices are changing to a greater degree, then the price risk arising from market is more. Following methods can be used to reduce marketing risk:
  - **Selling the Farm Products at Different Points of Time :** Due to financial obligations, farmers sell their produce immediately after the harvest. During the harvesting periods generally prices will be low in the market due to large arrivals. Such

sales at harvest period at lower price are called as distress sales. If the farmers avoid such selling practices, they can get reasonable prices for their farm produce. However, for this good knowledge regarding supply and demand, price of farm products, good storage facilities, processing facilities etc are required to get remunerative prices.

- **Government Price Policies and Programmes :** Different price policies like minimum support price, procurement price, levy price, issue price etc. are implemented for different agricultural commodities by the Government to bring about price stabilisation. Minimum support price provides protection to the farmers against fall in prices of farm products.

- **Financial Risk Management**
  - **Keeping Farm Records :** A key to a farmer reducing financial risk is to know his financial situation. By having good farm records, a farmer can evaluate where he has been, where he is now, and whether or not he is moving in the right direction. Good financial records allow a farmer to better understand his financial risks and in what areas he needs to improve his financial situation. By evaluating balance sheets, income statements, cash flow statements, etc., a farmer can more adequately evaluate his financial performance and make more financially sound decisions regarding his enterprise. In short, good financial records reduce a farmer's financial risks and guides him to take actions that will improve the overall profitability of his enterprise and better secure its long-term success.
  - **Smart Loans :** If loans must be secured for large amounts of money or long periods of time, getting a fixed interest rate reduces the financial risk associated with the loan. A variable interest rate may increase in later years of the loan, making repayment difficult or impossible. While a fixed interest rate may be slightly higher at the beginning of the loan, the cost of the loan will not increase over the life of the loan. Self-liquidating loans also

reduce financial risk. Self-liquidating loans, essentially, are loans which can be repaid by the productivity of what the loan was secured to purchase, such as loans for crop production and dairy cows or feeder cattle. A crop production loan can be paid off when crops are sold, a loan for dairy cows can be repaid with the sale of the cow milk, and a loan for feeder cattle can be repaid when the cattle are sold.

- **Reserves :** Maintaining liquid and credit reserves can also protect a farmer against adverse effects of financial risk. A liquid reserve of cash or other liquid assets can be easily used if needed to weather financial difficulty. Similarly, many financial institutions offer various types of credit lines and many farmers borrow amounts below their imposed credit limit. Such credit reserves allow the farmer to obtain additional loan funds (if necessary) to continue operation under adverse financial situations.
- **Renting/Leasing :** Renting or leasing land or machinery can reduce financial risk. By renting or leasing land, a farmer can avoid the financial risk associated with a large land loan. As with land, renting or leasing equipment can also lessen financial risk by making equipment loans unnecessary. Further, if the rented or leased equipment is newer or more reliable, the farmer can avoid the production risks associated with an equipment breakdown or the need to pay for costly repairs.



CHECK YOUR PROGRESS

Q 3: What are the different types of risk and uncertainty in Agriculture?

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Q 4: List out different measures to reduce risk and uncertainty in Agriculture.

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5.6 LET US SUM UP

- In agriculture, farmers face different risk and uncertainty while performing different farming activities. Although, the terms risk and uncertainty are used interchangeably; in reality, there is a very significant difference between the two of them.
- Risk is termed as a chance or loss or exposure to danger, arising out of internal or external factors, that can be minimised through preventive measures.
- By the term uncertainty, we mean the absence of certainty or something which is not known.
- Risk can be measured and quantified, while it is not possible to measure uncertainty in quantitative terms. The potential outcomes are known in risk, whereas in uncertainty, the outcomes are unknown. Risk can be controlled while uncertainty is uncontrollable. Minimisation of risk can be done, as opposed to the uncertainty that cannot be minimised.
- Production risk/ yield risk, price risk or marketing risk, risk of fall in real return, financial risk are the different types of risk and uncertainty in agriculture.
- Different measures can be taken to reduce risk and uncertainty in agriculture such as selection of less risky enterprise, adopting production methods with low variability Insurance, diversification of enterprise, appropriate agronomic practices, liquid asset structure, flexible production plan, market risk management like selling farm product at different time, government price policies and financial risk management through keeing farm record, smart loan, reserves, renting/leasing etc.



5.7 FURTHER READING

1) Lekhi, R.K. and Singh, Joginder (2015). *Agricultural Economics Kalyani Publishers*, New Delhi.

2) Reddy S.S., Ram, P.R.,Sastry, T.V.N., Devi, I.B. (2012) *Agricultural Economics*, Oxford & IBH publishing co. Pvt.ltd., New Delhi



5.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Risk is defined as a situation when all possible outcomes are known for a given management decision and probability associated with each possible outcome is also known. Uncertainty refers to a situation where there are multiple alternatives resulting in a specific outcome, but the probability of the outcome is not certain.

Ans to Q No 2: The risk is defined as the situation of winning or losing something worthy. Uncertainty is a condition where there is no knowledge about the future events. Risk can be measured and quantified, through theoretical models. Conversely, it is not possible to measure uncertainty in quantitative terms, as the future events are unpredictable. The potential outcomes are known in risk, whereas in the case of uncertainty, the outcomes are unknown. Risk can be controlled if proper measures are taken to control it. On the other hand, uncertainty is beyond the control of the person or enterprise, as the future is uncertain. Minimisation of risk can be done, by taking necessary precautions, as opposed to the uncertainty that cannot be minimised. In risk, probabilities are assigned to a set of circumstances which is not possible in case of uncertainty.

Ans to Q No 3: Production risk/ yield risk, price risk or marketing risk, risk of fall in real return, financial risk are the different types of risk and uncertainty in agriculture.

Ans to Q No 4: Different measures to reduce risk and uncertainty in agriculture are: selection of less risky enterprise, adopting production methods with low variability insurance, diversification of enterprise, appropriate agronomic practices, liquid asset structure, flexible production plan, market risk management like selling farm product at different time, government price policies etc.



5.9 MODEL QUESTIONS

Q 1: What do you mean by risk and uncertainty in Agriculture?

Q 2: Differentiate between risk and uncertainty.

Q 3: What are the different types of risk and uncertainty faced by farmers in agricultural activities? Write briefly.

Q 4: How can risk and uncertainty be reduced in agriculture? Write briefly about different measures to reduce them.

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UNIT 6: AGRICULTURAL PRICE POLICY

UNIT STRUCTURE

6.1 Learning Objectives

6.2 Introduction

6.3 Objectives of Agricultural Price Policy

6.4 Main Elements

6.5 Agricultural Price Policy in India

6.5.1 Features of Agricultural Price Policy in India

6.5.2 Advantages of Agricultural Price Policy in India

6.5.3 Failures of Agricultural Price Policy in India

6.6 Let Us Sum Up

6.7 Further Reading

6.8 Answers to Check Your Progress

6.9 Model Questions

6.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- discuss the meaning of agricultural price policy and its objectives
- describe the main elements of agricultural price policy
- highlight the features, advantages and failures of agricultural price policy in India.

6.2 INTRODUCTION

Agricultural price policy plays an important role in the economic development of a country. It is an important tool for providing incentives to farmers and motivating them in the production oriented investment and technology. Agricultural price policy refers to that policy which determines, regulates and control the prices of agricultural products. The main objective of agricultural price policy is to prevent frequent fluctuations in the prices of agricultural products

and to provide fair prices to the farmers. This policy aims to maintain a balanced relationship between the prices of food grains and non-food grains and help to raise the agricultural production of developing countries. In this unit we will discuss the agricultural price policy in details.

6.3 OBJECTIVES OF AGRICULTURAL PRICE POLICY

The main objectives of agricultural price policy are :

- To control insistent fluctuation in the prices of agricultural food grains, so that it does not hamper in the country's terms of trade.
- To raise the production of agricultural products that will help in the development of an economy.
- To protect the interest of the farmers by providing fair prices for agricultural products, this will encourage to invest more in the agricultural production.
- To provide facilities for processing, marketing, storage and irrigation of agricultural products for all round development of agricultural sector.
- To develop infrastructure facilities related to agriculture and to enhance dynamism through large volume of public investment.
- To ensure a stable relationship between prices of agricultural products, manufactured goods and prices of food grain, and non-food grain.
- To maintain the relationship between farmers and consumers so that farmers does not suffer due to the prices of the food grains.
- To increase an aggregate agricultural output by practicing the use of high yielding variety seeds, fertiliser, technology, etc.
- To provide incentive to the farmers for raising their agricultural output that results in an increase in the level of income and standard of living.

- To maintain the regular flow of marketable surplus and enhancing the export of farm products. The policy aims to integrate prices between the various regions in the country.



CHECK YOUR PROGRESS

Q 1: What is meant by agricultural price policy? (Answer in about 20 words)

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Q 2: What are the main objectives behind the introduction of agricultural price policy in India? (Answer in about 30 words)

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6.4 MAIN ELEMENTS

- **Fixation of Product Price:** Government fixes the prices of agricultural products like rice, wheat, cotton, sugarcane, pulses, etc to protect the farmers. In this regard, Government has set the Minimum Support Price (MSP) to safeguard the farmers and helping them to get a minimum profit. MSP is a fixed price paid by the government or government agency to farmers whenever they procure a particular crop. This price is fixed prior to the sowing seasons which encourage high investment in agricultural production. The government also fixes the maximum price of agricultural product to protect general people from excessive rise in prices.
- **Price Policy for Agricultural Inputs:** Input price policy plays an important role for providing incentives to the farmers. The price policy for agricultural inputs helps to maintain stability in the prices of agricultural products. Rise in agricultural price leads to high input price. As a result, price of industrial goods increases which reduces demand for them. Consequently, it reduces the purchasing power of consumers as well as demand and output of industrial goods.

- **Consumers' Protection:** The main objective of price policy in India is to protect the interest of the consumers. The procurement price set by the government is usually higher than the minimum support price so that it can provide the proper incentive to the producer as well as reasonable price to the consumers. Agricultural price policy considers the matter of the shortage of essential commodities and undertakes some measures to control the prices of agricultural products. It protects the consumers from unwanted inflation. The policy has also resulted in considerable benefit to the consumers by supplying the essential agricultural products at reasonable price regularly. The policy has also taken into consideration the provision for buffer stock of food grains for its distribution among the consumers through public distribution system.
- **Ancillary Policies:** For the overall growth of an economy, the ancillary policy provides all necessary support or facilities to the agricultural activities or the functioning of an organisation. So that this policy give more importance on stimulating and strengthening co-operatives and local communities which will bring the desired development of the primary sector in developing countries. The policy makes provision for providing loans to small and marginal farmers for purchasing land and any other agricultural purpose. To give relief to the farmers, the policy aims to provide loans to the farmers for agricultural activities such as harvesting, spraying, sorting, grading, transporting etc.



CHECK YOUR PROGRESS

Q 3: What is meant by procurement price? (Answer in about 20 words)

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Q 4: Define the Minimum Support Price? (Answer in about 30 words)

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Q 5: How does agricultural price policy protect consumers? (Answer in about 40 words)

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6.5 AGRICULTURAL PRICE POLICY IN INDIA

Agricultural price policy is an instrument which provides incentives to the farmers and encourages them to invest in agriculture. In a developing country like India, majority of population is engaged in agriculture and people spend their income more on food or consumption. To protect the farmers as well as the consumers, every year the government announces support prices for essential agricultural products.

In India, agricultural price policy was introduced since independence. In 1947, the price policy was first introduced in India with the formation of Food Grains Policy Committee. The main aim of the price policy in India was to protect the interest of consumers, no attention was on providing incentive price to farmers. After that in 1964, a clear cut policy was set up by the government for providing incentive to the farmers. Agricultural Prices Commission was constituted by Government of India in 1965. The commission has announced the minimum support prices and procurement prices in order to guarantee minimum price to the farmers and for building adequate buffer stock to maintain public distribution system. The commission has also given importance on the adoption of improved technology and maximising agricultural production. In the year 1985, Agricultural Prices Commission was renamed as Commission for Agricultural Costs and Prices (CACP).

In 1965, The Food Corporation of India (FCI) was set up. The main aim of FCI is to ensure necessary procurement, storage and distribution of food grains through public distribution system and effective price support for safeguarding the interest of the farmers.

6.5.1 Features of Agricultural Price Policy in India

- **Raising Capital Formation:** The policy has given more importance to raise the rate of capital formation in India in agricultural or primary sector. It has introduced measures to reallocate the available resources for productive investment between agriculture and industrial sector.
- **Enhancing Public Investment:** The agricultural policy aims to raise the volume of public investment and take effective steps to create efficient infrastructure facilities for agriculture. Water conservation, soil conservation, use of alternative and renewable sources of energy for irrigation or for other agricultural activities have also been encouraged. It will reduce the regional disparities and generate more marketable surpluses.
- **Improving Agricultural Marketing:** One of the main features of new agricultural policy in India is to improve or develop the agricultural marketing and storage, agro-processing etc. It helps in moving an agricultural product from farms to the consumer.
- **Raising Agro-Exports:** The policy has laid emphasis on raising the level of exports of agricultural products such as vegetables, fruits, flowers, poultry and livestock products so as to raise the share of agricultural exports in India. It will help in raising the national income of our country.
- **Land Reforms:** The policy has undertaken some land reform measures like regulation of rents, ceiling on land holding, abolition of intermediaries etc. for the interest of small and marginal farmers so that it will raise agricultural output.
- **Crop Insurance Scheme:** The policy has introduced the crop and livestock insurance scheme in a broad manner so that the problems of crop failure and high risk of instability in production has reduced and the farmers can recover their losses.

6.5.2 Advantages of Agricultural Price Policy in India

- Agricultural price policy has helped to raise agricultural output by providing necessary incentives to the farmers. To protect the farmers, the minimum support price is determined by the government.
- The policy has provided necessary benefits to raise the agricultural output and as a result income of the farmers and their living standard has improved.
- One of the major advantages of the policy is the stabilisation of prices of agricultural products. The policy has successfully controlled the violent fluctuations of prices of agricultural products.
- The policy has provided benefits to the consumers by supplying the agricultural products at a reasonable price.
- The policy has made provision for supplying essential raw-materials for the agro-industry like cotton textile, sugar, vegetable oil etc at reasonable price.
- The agricultural price policy has resulted in a notable change in the cropping pattern of Indian agriculture. The production of wheat and rice has increased through the adoption of new technology.

6.5.3 Failures of Agricultural Price Policy in India

- There is an inadequate coverage of agricultural price policy in India. The official procurement facility reaches only a few farmers.
- The public distribution system in India is not fully effective. A large number of poor farmers are not getting benefits of this programme.
- Continuous rise in the prices of essential food products for last few years is a major failure of the policy. The policy is unable to control the wholesale price inflation in India.

- The issues relating to increase in transportation costs, over fragmentation of the distribution network etc. are not considered by this policy resulting in wide variation in prices for producers and consumers.
- The success of the policy depends on some inherent factors associated with the system of agricultural operation like cropping pattern, land holding, income distribution etc. However, the agricultural policy in India had failed to incorporate these factors as a result total or overall development of the agriculture sector is hampered.



CHECK YOUR PROGRESS

Q 6: State three features of agricultural price policy in India. (Answer in about 50 words)

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Q 7: Mention two advantages of agricultural price policy in India. (Answer in about 40 words)

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Q 8: State any two shortcomings of agricultural price policy. (Answer in about 40 words)

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6.6 LET US SUM UP

- Agricultural price policy plays an important role in the economic development of a country. It is an important tool for providing incentives to farmers and motivating them in the production oriented investment and technology.
- Agricultural price policy determines, regulate and control the prices of agricultural products.
- The main objective of agricultural price policy is to prevent frequent fluctuations in the prices of agricultural products and provide fair prices to the farmers.
- The policy aims to maintain a balance relationship between the prices of food grains and non-food grains and help to increase the agricultural production of developing countries. The policy had made provision for providing loans to small and marginal farmers for purchasing land and any other agricultural purpose.
- The main objective of price policy in India is to protect the interest of the consumers. The procurement price set by the government is usually higher than the minimum support price so that it can provide the proper incentive to the producer as well as reasonable price to the consumers.
- Government fixes the prices of agricultural products like rice, wheat, cotton, sugarcane, pulses etc to protect the farmers. In this regard, government sets the Minimum Support Price (MSP) to safeguard the farmers and helping them to get a minimum profit.
- MSP is a fixed price paid by the government to farmers whenever they procure a particular crop. This price is fixed prior to the sowing seasons which encourages high investment in agricultural production.
- Agricultural Prices Commission was constituted by Government of India in 1965. In the year 1985, Agricultural Prices Commission has renamed as Commission for Agricultural Costs and Prices (CACP).
- In 1965, The Food Corporation of India (FCI) was set up. The main

aim of FCI is to ensure necessary procurement, storage and distribution of food grains through public distribution system and effective price support for safeguarding the interest of the farmers.

- The policy has given more importance to raise the rate of capital formation in India in agricultural or primary sector. New agricultural policy aims to raise the volume of public investment and takes effective steps to create efficient infrastructure facilities for agriculture.
- The policy has laid emphasis on raising the level of exports of agricultural products such as vegetables, fruits, flowers, poultry and livestock products so as to raise the share of agricultural exports in India. It will help in raising the national income of our country.
- There is inadequate coverage of agricultural price policy in India. The public distribution system in India is ineffective. Continuous rise in the prices of essential food products for last few years is a major failure of the policy. The policy is unable to control the wholesale price inflation in India.
- The success of the policy depends on some inherent factors associated with the system of agricultural operation like cropping pattern, land holding, income distribution etc.



6.7 FURTHER READING

1) Dhar, P.K. (2008). *Indian Economy: Its Growing Dimensions*. Ludhiana: Kalyani Publisher

2) Agrawal, A.N.(2006). *Indian Economy: Problems of Development & Planning*. New Delhi: New Age International (P) Limited.



6.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Agricultural price policy refers to that policy which determines, regulate and control the prices of agricultural products. It is an important tool for providing incentives to farmers and motivating

them in the production oriented investment and technology.

Ans to Q No 2: The main objective of agricultural price policy is to prevent frequent fluctuations in the prices of agricultural products and provides fair prices to the farmers. The policy also aims to maintain the relationship between farmers and consumers so that they never suffer due to the prices of the food grains and to ensure a stable relationship between prices of agricultural products and manufactured goods and prices of food grain and non-food grain.

Ans to Q No 3: The procurement price of a commodity refers to the price at which the goverment purchases the commodity for maintaining the buffer stock in the public distribution system. Generally, procurement price is announced for food grains.

Ans to Q No 4: Minimum support price is a fixed price paid by the government to farmers whenever they procure a particular crop. This price is fixed prior to the sowing seasons which encourages high investment in agricultural production.

Ans to Q No 5: The agricultural price policy has provided considerable benefit to the consumers by supplying the essential agricultural products at reasonable prices regularly. The policy has also taken into consideration the provision for buffer stock of food grains for its distribution among the consumers through public distribution system. The procurement price set by the government is usually higher than the minimum support price so that it can provide the proper incentive to the producer as well as reasonable price to the consumers.

Ans to Q No 6: The features of agricultural policy in India are:

- **Raising Capital Formation:** The policy has given more importance to raise the rate of capital formation in India in agricultural or primary sector and introduces some measures to reallocate the available resources between agriculture and industrial sectors.
- **Raising Agro-Exports:** The policy has laid emphasis on raising the level of exports of agricultural products such as vegetables, fruits, flowers, poultry and livestock products so as to raise

the share of agricultural exports in India.

- **Improving Agricultural Marketing:** One of the main features of new agricultural policy in India is to improve or develop the agricultural marketing and storage, agro-processing etc.

Ans to Q No 7: The advantage of agricultural price policy can be stated as:

- Agricultural price policy has helped to raise agricultural output by providing necessary incentives to the farmers.
- One of the major advantages of the policy is the stabilisation of prices of agricultural products. The policy has successfully controlled the violent fluctuations of prices of agricultural products.

Ans to Q No 8: The failures of agricultural price policy can be stated thus:

- There is inadequate coverage of agricultural price policy in India. The official procurement facility reaches only a few farmers.
- The public distribution system in India is ineffective. A large number of poor people still do not receive the benefits of this programme.



6.9 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: Discuss the meaning of the following terms (a) Minimum Support Price (b) Procurement Price and (c) Buffer Stock as an element of agricultural price policy.

Q 2: Discuss the meaning and objectives of agricultural price policy in India.

Long Questions (Answer each question in about 300-500 words)

Q 1: Discuss the role of agricultural price policy in India.

Q 2: Explain the advantages and failures of agricultural price policy in India.

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Unit 7 : AGRICULTURAL MARKETING

UNIT STRUCTURE

7.1 Learning Objectives

7.2 Introduction

7.3 Objective of Agricultural Marketing

7.4 Need and Importance of Agricultural Marketing

7.5 Status of Agricultural Marketing in India

7.6 Let Us Sum Up

7.7 Further Reading

7.8 Answer to Check Your Progress

7.9 Model Questions

7.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- discuss agricultural marketing
- grasp objectives and importance of the agricultural marketing
- analyse the status of the agricultural marketing in India
- highlight the challenges faced by agricultural marketing in India

7.2 INTRODUCTION

Agricultural marketing system is the physical and institutional set up to perform all activities involved in the transfer of ownership of agricultural products from the producers to the consumers. Thus, agricultural marketing includes all the business activities such as assembling, handling, storage, transporting, processing, wholesale, retailing and export of agricultural commodities as well as accompanying supporting services such as market information, establishment of grades and standards, commodity trade, financing, price risk management and the institutions involved in performing these activities. Agricultural marketing comprises two words: agriculture and marketing. Agriculture means not only crop production; it includes production of crops and all the allied activities like forestry, fishery and animal

husbandry. Marketing is all the economic activities involved in facilitating the flow of produce from point of production to the point of final consumption. Thus, agricultural marketing involves the exchanges of both input and output of agriculture among buyers and sellers through the input markets and output markets respectively. The institutional set up that facilitates exchange activity among buyers and sellers is known as the market. Input market deals with the marketing of the inputs like machineries, tools, chemical fertilisers, pesticides, growth hormones etc. While in the output market, the agricultural products (like food grains, fruits, vegetables, meat, fish, eggs, milk, dairy products, processed products etc.) are traded among the buyers and the sellers. According to National Commission on Agriculture (NCA) in its XII report, Agricultural Marketing involves all aspects of agricultural market structure and system i.e., both functional and institutional aspects based on technical and economic considerations and includes post-harvest operations assembling, storing, transporting, distributing etc. According to it, "Agricultural marketing is a process which starts with a decision to produce saleable farm commodity and it involves all aspects of market structure of system both functional and institutional, based on technical and economic considerations and include pre-harvest and post-harvest operations, assembling, grading, storage, transportation and distribution."

According to Thomsen, "Agricultural marketing comprises all the operations, and agencies conducting them involved in the movement of farm produced foods, raw materials and their derivatives, such as textiles, from the farms to the final consumer and effects of such operations on farmers, middlemen and consumers."

In general, agricultural marketing involves: assembling, equivalisation and dispersion. Assembling is the process of collection of surpluses of individual farmer's produce. There are two types of assembling: primary assembling and secondary assembling. Equivalisation is the process of adjustment in the supply and demand as per the requirements based on time, place and quantity. Dispersion is the process of reaching the collected (assembled) agricultural produce through the market channels to the consumers.

In this section, we have placed emphasis on understanding of the preliminary concept of agricultural marketing. Now, let us proceed to the following sections of this unit to delve into other issues of agricultural marketing.

7.3 OBJECTIVE OF AGRICULTURAL MARKETING

The main objectives of agricultural marketing are as follows:

- To assure that selling and buying activities are conducted at a favourable time, place and price
- To ensure consumers' satisfaction as well as buyers' satisfaction
- Providing facility to choose better marketing channels to distribute agricultural produce in the most cost- effective way
- To help in mobilisation of resources among buyers and sellers or among the agricultural and non-agricultural sectors of an economy
- To widen the product range which allows consumers to select products from a wide variety of the same product
- To help in development of backward areas through spread effect of the infrastructural development in the agriculture of the rural areas and increases transport connectivity (road connection is more common) with the developed areas
- To increase overall productivity of the economy by generating better return for the farmers and the other stakeholders which motivates the farmers to produce more with existing resources scientific technologies
- To mitigate the risks associated with the agriculture as it also deals with the risk management techniques
- To reduce the price differences between the primary producer and ultimate consumer which help in curbing food inflation?
- To get financial aid and credit easily as per the farmers' requirements
- To enable the primary producers to get the best possible returns
- To provide facilities for lifting all produce of the farmers to sell at an incentive price
- To facilitate scientific storage with better management.



CHECK YOUR PROGRESS

Q 1: What do you mean by agricultural marketing?

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Q 2: What do you mean by a market?

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Q 3: Mention any two objectives of Agricultural marketing?

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7.4 NEED AND IMPORTANCE OF AGRICULTURAL MARKETING

During of independence, the Indian economy had an image of begging bowl economy which signified that the agricultural production was not adequate to feed total population of India. At that time, Indian economy was dependent on the agricultural imports for meeting the food requirements as well as the inputs requirements for the industry. Therefore, during the planning periods, special emphasis was said on the attainment of self-sufficiency in the agricultural production. For this purpose, agricultural productivity had to be increased. The success of green revolution resulted in increase of food production. However majority of the Indian farmers were small and marginal farmers and they produced limited quantities only. They mainly confined their produce to the local markets and sold their products at very low prices. They even did not have money to go to the urban markets to sell their products at higher prices. Thus, they were exploited by middlemen and brokers. Thus, the agricultural marketing is important to provide the best agricultural practices to the farmers. The basic procedures (assembling, equivalizing and distributing) of agricultural products are needed to help the marginal and small farmers to reach the larger markets in the urban centres.

As Agricultural Marketing comprises of all the procedures assembling, storing, grading, transporting, buying, selling, standardising processing, sales promotion, advertising etc., Thus, Agricultural Marketing acts as a link between the producer and consumers of agricultural products. India had witnessed the introducing of several revolution such as the green revolution, yellow revolution, white revolution, blue revolution, pink revolution, brown revolution, red revolution, golden revolution, grey revolution and silver revolution. This had resulted in manifold increase in the agricultural production. As a result of these revolutions in Indian agriculture, there were oversupplies of the agricultural production. Thus, India exported these surpluses to the other countries. These was a need for marketing channels to facilitate the international trade for agricultural produce. Again, most of the agricultural products were perishable in nature and thus, the importance of scientific storage facility was recognised. Standardisation and grading were considered as almost necessary to gain reputation in the international markets. Thus, these types of issues regarding the export of agricultural products to the other countries signalled the need and importance of proper and efficient Agricultural Marketing.

To keep pace with the increased domestic as well as foreign demands for agricultural products, productions need to increase with greater speed. The introduction of science and technology in the field of agriculture is vital in this aspect. The scientific methods of agricultural production like use of machines (tractors, power tiller, pump sets), high yielding variety seeds, chemical fertilisers, pesticides etc. imply higher demands for inputs. As the agricultural marketing also includes the marketing of inputs through inputs market, increasing demand for inputs signifies the need and importance of agricultural market.

The presence of disguised unemployment is common in Indian agriculture. Hence the incomes of the farmers are low. For increase in the productivity, the expensive scientific techniques are required. Thus, the farmers require financial support. This issue also signifies the importance of agricultural marketing for fulfilment of finance that is required for investment in agriculture. Again, the farmers and the ranchers are highly unorganised. Agricultural marketing is the organised system of marketing.

Thus, agricultural marketing is needed for transforming unorganised farmers to organised one.

There is uncertainty as well as risks associated with agricultural production. The Agricultural Marketing provides the way on how one could talce up trade risk. Generally, the risks that are associated with agriculture are physical risks, price risks and institutional risks. To reduce or manage the risk, one can insures against risk. Though insurance is the most common method of bearing risk, but all risks cannot be insured. Market information is vital to take decisions. The information regarding price is crucial for making decision about what to produce and how much to produce. It also helps in deciding in which time the agricultural produce should be traded in order to gain maximum market margins. Now-a -days, Market Intelligence based marketing and Artificial Intelligence-based production techniques are gaining popularing. In the e- trading platform, Artificial Intelligence plays a crucial role in the marketing of agricultural product. Along with these, the role of government is also important for the management or minimisation of the risks. The fixation of maximum and minimum prices for major products and also allowing the fluctuation of prices within a definite range by the government is utmost important. This will protect farmers as well as consumers from abrupt price fluctuations. Again, the practices like speculation and hedging are used to treat risks. Speculation is the process of buying and selling with the motive of then selling or buying and thus making a profit, if prices and exchange rates change (according to the definition provided by *Macmillan Dictionary of Modern Economics*). While hedging is the action taken by a buyer or seller to protect his income against a rise in the prices in the future (according to the definition provided by Macmillan Dictionary of Modern Economics). In India, agriculture is considered as gambling due to existence of risks. Indian agriculture is also prone to uncertainties like bad weather, pests, disease etc. The overwhelming effects of risks and uncertainty result in indebtedness and in many cases lead to suicides of the indebted farmers. Thus, it is utmost important to manage the risks and uncertainty associated with the agricultural production. This also reveals the need and importance of

agricultural marketing as it includes the methods of risks management.

Agricultural Marketing also provides the marketing channels. Marketing channels is the chain of intermediaries through which all the agricultural commodities are exchanged among producers and consumers. The role of marketing channel is very crucial for the success of agricultural marketing. The marketing channels differ from product to product. For example, the marketing channel for food grains are different from that of poultry. Again, marketing channels are different for the small farmers to large farmers even for the same agricultural produce. The development of the markets for agricultural produce facilitates the marketing channels for the agricultural commodities. The main objective of the marketing channel is the movement of agricultural produce from the producers to the final consumers. Such movements involve marketing costs in the form of cost, freight, tax, cess etc. Marketing cost vary across the marketing channels. For example, packaging cost, transportation cost, processing cost, costs associated with loading and unloading activities etc different for different marketing channels even for a same commodity. The difference between the price of the commodity and the marketing cost of that commodity is the marketing margin. Estimation of marketing margin is essential for the efficiency of a marketing channel and hence of a marketing system. Thus, there is a need for the Agricultural Marketing as it provides insight for cost- margin analysis of a marketing system.

Agricultural Marketing is important for the numerous functions that it provides. The functions are classified as (a) function of transfer of ownership of a product (b) function of physical movement of a product (c) function of transforming a product and (d) facilitating functions. The function of transfer of ownership of a product involves selling, buying, creation of demand for the product through the sale promotion activities like distribution of free sample, offer discounts, exhibition sales etc. and determination of price of a product. Determination of a price reveals that each and every intermediary of a marketing channel should be awarded. Thus, the price determination and price discovery are important. The price is determined by the forces of demand for and supply of the product while price discovery involves the determination of price at each stage in the marketing channel.

Intermediary determines the price on the basis of the availability and the demand for the commodity. Discovery prices at each stage helps to clear the supplies at each stage so that the distribution of commodities flow smoothly among the persons who need them. Function of physical movement includes transportation and storage of agricultural produce. Function of transforming a product involves standardisation, grading and packaging. Facilitating functions involves functions like market financing, risk bearing etc. All these have proved the importance of agricultural marketing.

Agricultural Marketing plays an important role not only in stimulating production and consumption, but also ensuring development of remote areas. Suppose in a remote area there is a huge agricultural production, after meeting the local demand, there is a huge surplus. Then the farmers need transportation facility to sell their surpluses in a town market. As most of the agricultural produce are perishable in nature, there is also a require for storing facility. It requires a huge expenditure and the farmers need financial support. After all these expenditures, there are also risks associated with prices as the farmers are not aware about the conditions of the town market. However, if these activities are done by different individuals at each stage, then the cost is reduced. These different individuals are the intermediaries and are known as market channels. Agricultural Marketing facilitates such market channels for betterment of the farmers. Even the government has role in the agricultural marketing such as setting MSP, providing subsidies, distribution of free seeds, fertilisers, power tillers, tractors, establishment of roads for transportation, warehouse facilities etc. Therefore, with a well-established marketing structure, not only the conditions of farmers have developed, but the area also undergoes new development. In this way, Agriculture Marketing is important for economic development of the rural areas.



CHECK YOUR PROGRESS

Q 4: Match the following:

1. Grey revolution	a. Milk

2. White revolution	b. Oilseeds
3. Silver revolution	c. Fertiliser
4. Yellow revolution	d. Eggs

Q 5: What is Speculation?

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Q 6: Define risk?

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Q 7: What is hedging?

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7.5 STATUS OF AGRICULTURAL MARKETING IN INDIA

In India, agricultural production was at subsistence level in the early years. The condition of farmers was very poor. They produced for the personal consumption and whatever was in surplus sold at prices below the remunerative prices. Thus, in the early years distress selling of agricultural output was common everywhere. The lower level of educational attainment or the illiteracy among the farmers were the main reason behind the farmers' exploitation by the middlemen. However, over the years the consequent increase in the productivity as well as government's investment on the agriculture and allied activities resulted in the development Agricultural Marketing. The development in the Agricultural Marketing are the efforts of farmers, government and middlemen of several years. In the process of the development of agricultural marketing, government's intervention is remarkable in the context of India. Over the years Government has taken many steps to improve the agricultural marketing. Now-a-days, agricultural marketing is more than merely linking the producer with consumer. The concept of agricultural marketing has expanded with the extension of the functions it provides for the overall development of the agricultural sector including

creation of favourable economic environment for farmers to keep them productive as well as efficient by introducing many new forms like regulated marketing, co-operative marketing, group marketing, contract marketing, future trading, direct marketing and e-commerce etc.

Let us discuss the status of Agricultural Marketing in India under the following heads:

- **Marketing Institutional Infrastructure:** The Agricultural Marketing is a complex process with the involvement of a large number of activities, a variety of agricultural commodities as well as intermediaries. The agricultural products are different in their sizes, characters like perishability, quality etc. All these demand different marketing channels for different commodities. It has been witnessed that there are forced sales or distress sales of agricultural commodities due to the financial obligation of the farmers. The National Planning Committee on rural marketing and finance reveals that the farmers in general sell their produce at both an unfavorable place and price. In India, a large percentage (nearly 50%) of the total agricultural produce are sold at the village markets at prices below than the remunerative prices. A small part of the surplus production is sold in nearby town or weekly village markets. A part of agricultural surplus is sold in the 'mandis'. And rest are sold through co-operative marketing facilities. The presence of co-operative markets at primary, state and national level help farmers to find best markets and best prices for their products. For the improvement of Agricultural Marketing in India, institutional infrastructure has been created by the government of India. Among the various steps taken for improvement in the agricultural marketing, the establishment of the regulated markets and the co-operative marking are most important. Let us discuss separately each of these markets in some details.
- **Regulated Markets:** The regulated market is the market whose main purpose is to eliminate unhealthy market practices, to reduce marketing charges and to ensure fair prices. Under this market, food grains prices are stabilised by the government on the basis of the

recommendation provided by the Agricultural Prices Commission. In 1886, the Karanjia Cotton Market was established. It was the first regulated market in India. A regulated market is established for either single commodity or for a group of commodities. A regulated market is managed by market committees. The members of the market committees are the representatives of the state government, legal bodies, traders, commission agents and farmers. It ensures that no 'broker' represents the buyer and the seller. The market committee is responsible for enforcement of the rules and regulations. Some of the major functions of this committee are as follows:



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- Market Area: The area from which the produce naturally and abundantly flows to a commercial center, i.e., the market, and which assures adequate business and income to the market committee
- Principle Assembling Market: It is the main market which is declared as a principal market yard on the basis of transactions and income generated for the market committee
- Sub-Market Yard: It is sub yard of the principle assembling market. This is a small market and does not generate sufficient income to declare as a principal assembling market
- Market Yard: This is a specified portion of the market area where the sale, purchase, storage and processing of any of the specified agricultural commodities are carried out.

- To provide marketing facilities for notified crops in the notified area
- To provide regulation on the marketing of notified crops
- To establish market yards with the required infrastructural facilities
- To grant or deny licenses to market functionaries and renew, suspend or cancel such licenses or set conditions for licenses
- To provide incentive prices to farmers for inducing them to

increase the production both in quantitative and qualitative terms

- To determine market practices and market charges, prevent adulteration, promote standardisation and grading, collect and disseminate information of markets, ensure right weighmen of agricultural produce, implement the government's directions for development of the markets etc.

The functioning of these markets is supervised by the Director of Agricultural Marketing.

In India, there were more than 200 regulated markets in 1951. This number has been increased to 7001 in 1998 and to 7249 during 2010-11. All the states have regulated markets and the number of regulated markets in geographically larger states is higher than the smaller states.

The benefits of the regulated markets are given below:

- It prevents the exploitation of farmers
- It encourages the farmers to bring their produce directly to the markets
- It settles the disputes between the producers and traders. The market committee hears all the complaints, settles the disputes and arranges for arbitration for disputes
- It prevents unauthorised deduction of price received by the farmers and ensures better prices for the produce
- It also provides the platforms for marketing, storage and warehousing facilities, rest house, car parking etc
- It provides the information about markets to the producers and provides open auction trading
- It is vested with the powers to punish those who involved in fraudulent practices

- **Co-operative Marketing:** Co-operative Marketing is one of the major steps taken for the improvement in agricultural marketing in India. Co-operative Marketing societies are established for the purpose of collectively marketing the products of the member farmers. Co-operative Marketing is defined as the organised sales of the agricultural

produce on the non-profit basis to protect the interests of the farmers. Thus, Co-operative Marketing societies are associations of producers for the collective marketing of their produce with the objective of securing the benefits of large-scale business which is higher than benefits obtained from marketing of small marketable surplus of an individual producer. Co-operative Marketing society is organised by the farmers themselves and hence the control of the organisation is in the hands of the farmers. The profit earned by the Co-operative Marketing is distributed among the farmer-members on the basis of the quantity of the produce marketed by them. The main functions of Co-operative Marketing societies are:

- To collect the produce from all the members and non-members who are willing to sell their produce at fair prices
- To provide the opportunity of collective bargaining as a substitute for individual bargaining. This will result in attainment of fair prices as collective bargaining is more powerful than individual bargaining
- If the prices of the produce are not favourable and there is an expectation of price rise in the future, then these societies advance credits to the farmers which enable farmer to wait for better prices. They also provide credits to farmers for other purposes
- They have own storing and warehousing facilities.They can also arrange facilities for the scientific storage of the members' produce and reduce the damages
- To provide the facilities of grading and market information which may help them to get a good price for their produce and this way it can encourage farmers to produce graded output and also discourage them from adulterating their produce
- To arrange quick transport with lower cost. Sometimes, it has its own vehicle for providing less expensive transportation facility.
- To act as an agent of the government for the procurement of food grains and for the implementation of the price support policy.

It can have control on the flow of supply and thus can have influence on prices.

- To supply the inputs that required by the farmers, such as improved seeds, fertilisers, pesticides, machines etc.
- To arrange for the export of the produce of the members which reduces the cost associated with it.
- To check malpractices by reducing the number of unnecessary middlemen which also increase farmers' income to a great extent.

Thus, the co-operative credit societies can link credit, farming, marking and processing that farmers are able to get best advantages. Again, safeguarding the farmers from excessive marketing costs and malpractices, the formation of Co-operative Marketing society is probably the best step. It also opens the path for the development of rural areas.



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- The history of co-operative marketing in India dates back to 1912, when the Cooperative Marketing Societies Act of 1912 was passed.
- The first Co-operative Society was formed in Hubli in 1915 to encourage cultivation of improved cotton and to sell it collectively.
- The First Five Year Plan (1951-56) laid stress on the establishment of agricultural marketing and processing co-operative societies.
- In 1958, the National Agricultural Co-operative Marketing Federation (NAFED) was established as the apex body of Co-operative Marketing.
- In 1963, the National Cooperative Development Corporation (NCDC) was set up for promoting programmes relating to co-operative societies.
- Frederic Nicholson, known as 'Father of the Cooperative Movement' in the country.

The types of co-operative marketing society are as follows:

- **On the Basis of Number of the Commodities:**
  - **Single Commodity Co-operative Marketing Societies:**This type of marketing societies deals in the marketing of single agricultural commodity. Examples: sugarcane co-operative marketing society, cotton co-operative marketing Society, Oilseed Growers Co-operative Marketing Society etc.
  - **Multi-Commodity Co-operative Marketing Societies:** In this type of societies, a large number of commodities produced by the members, such as food grains, oilseeds and cotton. This is the most common type of co-operative marketing society in India.
  - **Multi-purpose, Multi-commodity Co-operative Marketing Societies:** These societies deal not only marketing of a large number of commodities but also performs additional functions like providing credit to members, arranging for the supply of the inputs required by them, and meeting their requirements of essential domestic consumption goods.
- **On the Basis of Operational Structure:** The Co-operative Marketing societies may have two-tier, three-tier and four-tier structures. In the two-tier system, marketing takes place at two levels: at the base level, there are marketing societies at 'taluka' level and at the apex level there are 'state' level cooperative marketing societies. In three tier structure, the marketing takes place at three levels: at the base level, there are primary co-operative marketing societies, at the middle level (i.e., at the district or regional level) there are central co-operative marketing societies and at the apex level, there are State Co-operative Marketing Societies or Federations. However, in India, most of the Co-operative Marketing has four-tier structures. It consisting of primary marketing societies, district or regional cooperatives, state Marketing Federations and National Level Marketing Cooperatives.

  There are two types of membership in a co-operative marketing society: Ordinary members and Nominal members. Ordinary members are those who have the right to participate in the

deliberations of the society, share in the profits and participate in the decision-making process of the cooperative marketing society. It includes Individual farmers, co-operative farming societies and service societies of an area. Nominal members are those who do not have the right to participate in decision making and share in the profits of the societies. It includes traders with whom the society establishes business dealings.

Some of the most important co-operative marketing societies in India are: National Agricultural Cooperative Marketing Federation (NAFED), National Cooperative Development Corporation (NCDC), Tribal Cooperative Marketing Federation (TRIFED), National Dairy Development Board, State Cooperative Marketing Federations (general as well as commodity specific), Tobacco Growers Federation Ltd. etc.

There are also public sector organisations for the agricultural marketing in India. The role and functions of the different public sector organisations are different. For example, the main function of the Central and State Warehousing Corporations is to privatise the storing facilities for the agricultural commodities while for the FCI, one of the prime objectives is food security. Some important public sector organisations are Food Corporation of India (FCI), Cotton Corporation of India (CCI), Jute Corporation of India (JCI), Commodity Boards: Tea, Coffee, Cardamom, Rubber, Tobacco, Spices, Areca nut, Horticultural Crops, Dairy Products (NDDB), Indian Silk Export Promotion Council (ISEPC), Agricultural and Processed Food Products Export Development Authority (APEDA),State Trading Corporation (STC),Marine Products Export Development Authority (MPEDA), Commission for Agricultural Costs and Prices (CACP), Directorate of Marketing and Inspection(DMI), Departments of Food and Civil Supplies, Council of State Agricultural Marketing Boards (COSAMB), Agricultural Produce Market Committees (APMCs), Central and State Warehousing Corporations, and Agricultural Produce Market Committees etc.



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- NAFED was established in October 1958 as an apex organisation of marketing cooperatives with primary objective of strengthening cooperative marketing structure in the country.
- FCI (Food Corporation of India) was set up under the Food Corporation Act 1964, with the objectives of to promote effective price support operations for safeguarding the interests of the farmers and distribution of food grains throughout the country by public distribution system.

- **Storage Facility:** Most of the agricultural produce are perishable in nature. Thus, storing or warehousing is an important component of Agricultural Marketing. It stores and preserves the commodities from decaying and damaging by pests, rodents, weather conditions, humidity, volatile temperatures etc. from the period of harvesting to the period of consumption.Therefore,it is crucial for maintaining a continuous flow of commodities in the market throughout the year (from the period of harvesting to the next harvesting) particularly for the seasonal commodities. It is important to maintain a balance between the demand for and supply of the commodity to keep agricultural prices almost stable.The existing storage facility of India has three-tier structure: local/ village level, district level and state/ national level. At the local or village level, co-operatives provides the storage facilities at primary and marketing society's level, at the district/ state level, State Warehousing Corporations (SWCs) provides the storage facilities and at the national level, the Central Warehousing Corporations (CWCs) provides the same. Food grains are procured and stored by Food Corporation of India (FCI) that are collected for the distribution and buffer stock. FCI is the single largest agency with the storing capacity of 26.62 million tones. The storing capacity of FCI, CWCs and SWCs are used for the storage of food grains procured for government agencies for the central pool. As per the recommendation of All India Rural Credit Survey Committee of

Reserve Bank of India to strengthen the rural credit and marketing, Government of India, enacted the Agricultural Produce (Development and Warehousing) Corporation Actin1956. The main provisions of this act were: establishment of Central Warehousing Corporation (which was set up in 1957), the state Warehousing Corporation in various states (set up in 1957). In 1962, this act was divided into two parts: National Co-operative Development Corporation Act (1962) and Warehousing Corporation Act (1962) with the following objectives: to provide scientific storage facility to protect the agricultural produce and prevents quality and quantity loss, to bear the cost of the warehouse by the depositors of the commodities in the warehouse, to stabilise the price through balancing the demand for and supply of agricultural commodity, to provide market information to the buyers and sellers, to develop buying and selling strategies etc. The 'Warehousing Development and Regulation Act,' 2007 is the latest act till date which came into effect from 25 October, 2010. It introduced the negotiable receipt system in India for the first time with the presumption that farmers would get better credits and reduce the cost of credit. It authorised the registration and the issue of negotiable warehouse receipts in electronic format. According to the National Commission on Agriculture (NCA), the agricultural produce is commonly stored in dwelling houses, tins, drums, earthen wares, underground mud-walled cellars, RCC bins, kottu, puri, bamboo structures, cement bins, cement based puris etc.

Cold storage is also very important for the proper storage of agricultural produce. It had been calculated that India needs cold storage of capacity of 350 lakh tonnes, till October, 2019, India has a total cold storage capacity of 226.7 lakh tonnes.



CHECK YOUR PROGRESS

Q 8: What is the full form of NAFED?

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Q 9: What do you mean by Regulated markets?

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Q 10: What do you mean by Co-operative Marketing?

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Q 11: What do you mean by Warehouse?

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Q 12: Who is known as 'Father of the Cooperative Movement' in India?

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- **Marketing Channels:** The marketing channels are the middlemen in the process of transfer of agricultural output from producers to the final consumers. The common types of marketing systems exist in India are represented by arrow diagram as follow:
  - Farmer → Consumers
  - Farmer → Retailer → Consumers
  - Farmer → Village Merchant → Wholesale -cum- Processor → Fair price shops → Consumers
  - Farmer → Village Merchant → Wholesale -cum- Processor→ Retailer → Consumers
  - Farmer → Food Corporation of India → Civil Supplies Corporation → Fair Price shops → Consumers etc.

  Selection of marketing channels is based on the marketing margins associated with each marketing channel. Marketing margins is the difference between the price paid and the price received by an intermediary during the marketing of a commodity.

  In the last few years, the share of the total market surpluses that received by the farmers had continually decrease with the involvement of the intermediary increases over time. With the expansion in the demand for value-added services as well as the geographic expansion

of markets, length of the marketing channels has also increased over the recent years. Along with extension of the marketing channels, there is also a specialisation of the traders both in terms of commodity and marketing function in Agricultural Marketing have increased. Thus, the specialised intermediaries keep significant portions of the return which reduces the income of the farmers. The marketed surpluses handled by the co-operatives as well as public agencies are less as compared to the private counterpart. In view of the exploitation of the farmers by the middlemen, there is an initiative for the direct marketing of perishable agricultural commodities by the farmers. Many states have taken initiative to eliminate middlemen and encourage direct marketing by farmers, and established farmers' market. For example: April Mandi (Punjab), Kisan Mandi (Rajasthan), Hadaspur Vegetable Market (Pune), Rythu Bazaars (Andhra Pradesh), Krushak Bazaars (Orissa) etc. These farmers' markets are beneficial for both the farmers as well as consumers as these ensure increase in the share of farmers' income and the curtailment the stiff price inflation.



LET US KNOW

- **Mandi:** Mandis are secondary and assembly markets for agricultural produce.
- **Mandi- tax:** it is the fee of a market (mandi).

- **Grading and Standardization:** Grading is the process of categorisation of products into dissimilar groups, on the basis of significant characteristics (for example: quality, size, type, weight etc.) that the agricultural produce possesses. In this process, agricultural produce of different characteristics is divided into groups or lots such that agricultural produce of same characteristics is grouped under same grade or lot.The grading should be simple, clear and easily understandable.Grading is an important function of standardisation. It implies that on the basis of prescribed standards, the division of products into classes are made.

  The main objectives of grading are:

- It helps to ascertain the quality of the agricultural produce for sale or purchase that the farmer gets the proper price for his produce.
- It protects consumers from unfair trade practices by traders or farmers. Again, it protects farmers from the greedy and dishonest middlemen by enabling farmers to get price as per quality and grade of his agricultural produce.
- It helps in fixing different prices for different categories of the product.

Standardisation is the process of fixing certain rules for the product that helps in grading tham into different groups. Standardisation process involves the specification of the agricultural produce on the basis of the size, colour, form, weight, taste, shape, quality etc. It helps in comparisons of the different products. The term of 'standardization' is used in a broader context than the term 'grading'. In standardization process, certain standard is provided to goods for the purpose of marketing. After standardisation, grading is done. Thus, standardisation is the base for grading and without it, there may be confusion and unfairness.To reduce the dissimilarities in the standards of same product offered by different sellers, the rules for specification of the product are given by the authority, customs, or by some traditions. Thus, the main purpose of standardisation is to make quality specification of a grade universal for both the sellers and buyers. The benefits of standardisation are as follows:

- It enhances the confidence of the consumers as it facilitates homogeneity and consistency in quality of the agricultural produce.
- It gives better returns to both buyers and sellers as it provides grading wise differentiation of the products.
- It helps in market expansion through the increase in the production of the agricultural produce by mitigating the risks associated with the selling and buying activities as well as increase the confidence of the consumers.

- As standardisation of the products build up, confidence among financial institutions and money lenders helps in receiving financial assistance easily.

In India, AGMARK is a certification mark for agricultural produce. It ascertains that the product satisfies certain standard specified by the Directorate of Marketing & Inspection (DMI), Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture & Farmers Welfare under Agricultural Produce (Grading Marking) Act, 1937.These standards differentiate between quality and prescribed 2 -3 grades for each commodity. Till date, grade standards for 222 agricultural commodities have been notified. These include fruits, vegetables, cereals, pulses, oilseeds, vegetable oils, ghee, spices, honey, creamery butter, wheat, atta, besan, etc. While framing the standards, the existing standards in the Food Safety and Standards Act, 2006, Codex Alimentarius Commission, International Organisation for Standardisation, etc. are considered. Trade Associations, Research Institutions, etc. are also consulted. The AGMARK certification, for the most part, is a voluntary certification, unless expressly made compulsory as per the provisions of the Food Safety and Standards (Prohibition and Restriction on Sales) Regulations Act, 2011.The Government of India, through its agency, Directorate of Marketing and Inspection (DMI), lays down standards for agricultural products which is implemented at State level.The AGMARK certification is considered as a necessity for both domestic as well as international marketing of Indian agricultural produce as it assures authenticity and the quality of the products. In order to compete in the international markets, the grading standards are fixed, keeping in mind the requirements of the World Trade Organisation.



CHECK YOUR PROGRESS

Q 13: What is a marketing channel ?

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Q 14: Define Grading

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Q 15: What do you mean by Standardization?

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Q 16:  Identity this logo.

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- **Futures Trading in India:** A lot of uncertainties are associated with the agriculture. Thus, to mitigate the risks and uncertainties related to agriculture, futures contracts are introduced in the field of agriculture. Futures contracts are the hedging instruments in agricultural commodities. The futures market in India are regulated by the Forward Markets Commission (FMC) which was established in 1953. FMC was merged with Securities and Exchange Board of India (SEBI) with effect from September 28, 2015.

  The government of India, permitted the futures trade in agricultural commodities from 2003. The futures market for agricultural produce is in nascent stage because most of the farmers in India are marginal and small farmers and they are not confident to trade their limited produce through futures market. They have considered the future market as gambling. Thus, Farmer Producer Organisation (FPO) plays a major role in collecting and accumulating the produce of the farmers and traded them through futures market.In 2014, the Ram Rahim Pragati Producer Company of Madhya Pradesh hedged Soyabean price risk on the NCDEX with the help of FPO. This is recognised as the first future trade in the history of Indian Agriculture by an FPO. From 2014 to 2018, the total number of FPO had been increased to 69. However, only 55 amongst 69 FPOs traded only once. The government of India, have realised the importance of the FPO in the futures trading and thus announced that there would be 1000 FPOs by 2024.Thus, it opens the path for NCDEX to link with

FPOS and expands the futures trading of agricultural produce in India.

The number of national level commodity exchanges and regional commodity exchanges are 6 and 20 respectively. The national level exchanges are MCX, NCDEX, NMCE, ICEX, ACE and UCX. These 26 commodity exchanges carry out futures trading. Currently 43 of the 113 commodities that are notified for futures trading are actively traded in 4 national exchanges and 6 commodity-specific exchanges trading in the commodities. The major agricultural commodities traded in futures exchanges are guar seed/gum, gram, soya oil, sugar, raw cotton, jaggery, castor seed, rubber, wheat, rice and other oilseed / edible oils.



LET US KNOW

- **National Commodities and Derivatives Exchange (NCDEX):** It is an online commodities exchange, dealing primarily in agricultural commodities in India. It is the largest agricultural commodity exchange in India
- **Farmer Producer Organization (FPO):** An FPO is a legal entity formed by primary producers (farmers, milk producers, fishermen, weavers, rural artisans, craftsmen etc.). FPO is used to form effective alliance of producers, especially small and marginal farmers so as to collectively address many challenges of agriculture. The FPO can be a production company, a cooperative society or any other legal form which provides for sharing of benefits among the members.

- **Processing Infrastructure:** Processing in agriculture is the method of the biological, physical, mechanical, and biochemical transformation of the original agricultural produce. Thus, processing involves many steps to manipulate original products into consumer finished products. India's Food Processing sector is one of the largest sectors in terms of production, growth, consumption, and export. The Indian food processing industry is primarily export-oriented. India has geographical

advantage for the export of the countries of Europe, the Middle East, Japan, Singapore, Thailand, Malaysia, Korea and also to the countries of the gulf regions. The food processing sector of India covers mainly fruits, vegetables, spices, meat, poultry, milk and milk products, alcoholic beverages, fish and fish products, processed grains and other consumer product groups like confectionery, chocolates and cocoa products, soya-based products, mineral water, high protein foods etc. India's exports of Processed Food were Rs. 31,204.78 Crores in 2019-20.

There are several food processing units like bakeries, mills for processing of different types of agricultural produce etc. At present, there are over 516 flour mills, 568 fish processing units, 5293 fruits & vegetable processing units, 429 sugar mills, 725 solvent extraction plants and 1.50 lakh rice mills, 35,088 modern rice mills, more than 15,000 pulse mills etc. in the organised sector. There is more scope for the enlargement of the food processing units in India to meet the growing domestic as well as foreign demands.

- **Agricultural Export Zones (AEZs) and Food Parks in India:** In March 2001, Government of India announced a policy of setting up of Agri Export Zones (AEZs) across the country to boost agricultural exports from India. For this purpose, the Central Government has sanctioned 60 AEZs comprising 40 for agricultural commodities. AEZs are spread across 20 states in the country. The main objectives of these AEZs are to provide facility for enhancing exports of various agricultural commodities from India and the efforts have been made by the central and state governments to fulfil this objective. Both the Central and State governments work on convergence and co-ordination to utilise all the on-going schemes of various Central and State governments agencies to cover the entire value chain from farm to consumers. For the purpose of developing and sourcing raw materials, their processing /packaging, and finally exporting of a particular product that is located in a geographically contiguous area, the AEZ considers a comprehensive concept. The major components

of this comprehensive concept are:

- Cluster approach of identifying the potential products and geographical region in which these products are grown.
- Adopting an end-to-end approach of integrating the entire process, right from the stage of production to the consumption stage.
- Integrating the activities of various agencies connected with the product department.

The anticipated benefits of AEZs are strengthening of backward linkages with a market-oriented approach, product acceptability and its competitiveness both in foreign and domestic markets, value addition to basic agricultural produce, reduction in the cost of production by enhancing economies of scale, better price for agricultural produce, quality improvement, packaging and standardisation of agricultural commodities, promote trade-related research and development, increase in employment opportunities etc.

Certain activities like cleaning, washing, grading, packaging, refrigerated transportation etc. needs to be undertaken in conformity to international trade. To address these problems, Agricultural and Processed Food Products Export Development Authority (APEDA) has implemented a scheme for catering Export Oriented Agri- Zones. Under this scheme, there have been 111 grading and packing houses established. Total amount of investments is shared by the Central, State governments and Private entrepreneurs in various proportions. The amount of investment also varies between ¹ 3.5 crore - ¹ 212.65 crores. The farmers can accrue benefits from AEZs only if they organise into groups and are linked with players in AEZs directly or through contract farming arrangements.

In the last six years the performance of the overall AEZs failed to fulfil the targets. To enhance the performance, there should be an increase in the investment and marketing should be to extended to the horticulture growing areas as well.

- **Mega Food Park:** The Mega Food Park is a scheme based on

"Cluster" approach. Its aim is to provide a mechanism that links agricultural production to the market by bringing together farmers, processors and retailers to ensure maximisation of value addition, minimisation of wastage, increase of farmers income and creation of employment opportunities particularly in rural sector. It envisages creation of support infrastructure in a well-defined agri / horticultural zone for setting up of modern food processing units in the industrial plots provided in the park with well-established supply chain. Mega food park typically consists of supply chain infrastructure including collection centers, primary processing centers, central processing centers, cold chain and around 25-30 fully developed plots for entrepreneurs to set up food processing units. At present, there are 19 Mega Food Parks are operational in India. Some of these are Srini Mega Food Park, Godavari Mega Aqua Park, North East Mega Food Park, Gujarat Agro Mega Food Park, Integrated Mega Food Park, Indus Mega Food Park, Zoram Mega Food Park, Greentech Mega Food park, Smart Agro Mega Food Park, Tripura Mega Food Park, Patanjali Food and Herbal Park etc. Besides these, food parks have also been established in the country with a view to give exposure to farmer – producer. There have been 56 food parks available in the 20 states in the country.

- **Transportation Facilities:** Transportation plays a crucial role in the Agricultural Marketing. Good transport system is critically important for efficient Agricultural Marketing. The modes of transportation within India are roadways, railways, airways, inlands waterways like riverways for domestic transportation of agricultural goods. Roadway transportation is vital in the domestic transportation of agricultural commodities in the context of India. For the international trade, the modes of transportation are also roadways, airways, waterways and railways. However, the modes of transportation are selected on the basis of the distance, nature of the commodity traded, warehouse facility at the airport, port, railway stations and the cost of transportation.
- **Centre for Perishable Cargo in India:** Export of perishable

agricultural commodities requires a well-equipped Cargo centres. Perishable commodities are at a very high risk of damage as they are vulnerable to the extreme and frequent fluctuations of temperature, weather conditions, humidity, poor and inefficient handling. Thus, there is requirement for the well-equipped and efficient cargos for the supply of perishable agricultural produce from domestic farmers to the foreign consumers. Thus, the APEDA (Agricultural and Processed Food Products Export Development Authority) has established six Centres for Perishable Cargos (CPCs) at Bangalore, New Delhi, Chennai, Thiruvananthapuram, Hyderabad, and Mumbai of varying capacities. Cargo means goods carried by a large vehicle. The word 'cargo' originates from the Latin word 'carricare' which means 'to load on a cart, or wagon'. The prescribed charges for users vary from Rs 0.35 per kg to Rs 2.29 per kg. APEDA also provides walk-in type cold rooms facilities at Kolkata, Agartala, Guwahati, Lucknow, Coimbatore and Ahmedabad. India's first perishable cargo-handling center in an airport was set up at Kempegowda International Airport, Bengaluru and it started operating from 1st October, 2016. The center is operated by Air India SATS Airport Services Pvt. Ltd. (AISATS). AISATS is a 50:50 joint venture between Air India Limited, and SATS Limited, a leading gateway services and food solutions provider in Asia. It has 11,000 sq. m area to facilitate services for handing perishable cargo such as pharmaceuticals, fruit, vegetables, flowers, meat and seafood.

- **Market Information and Market Intelligence:** Now-a-days, Market Information and market Intelligence are crucial to enable farmers and traders to make informed decisions about what to grow, when to harvest, produce to be sent to whice markets and whether to store it or not etc. The term 'market information' is simply the data of prices, demands and supplies of agricultural product for different dimensions of time. While the term 'market intelligence' signifies the decision made on the basis of the available market information. Both these concepts are used to make informed decisions such as: what to grow, when to harvest, where to markets the produce, whether to store it or not,

which marketing channel to be used for marketing, how much to produce, the cost transport for the product, in which market the price is higher etc. These help in reducing the risks and volatility in incomes of the stake holders. The most important Marketing Intelligence is t Price Intelligence. Price Intelligence leads to the arbitrages.

In India, agricultural Market Information Services (MIS) are used to receive information. However, the information is not adequate to always make right decisions. In India, farmers gather information through the information provided by the APMCs, SAMBs, state departments of Agricultural Marketing, field staff of Directorates of Economics and Statistics and Departments of agricultural marketing, field staff of Directorates of Economics and Statistics and Department of Food, open auctions, display boards in market yards, personally from other farmers, middlemen, traders etc. Farmers also gather information via Radio, TV and Newspapers. However, there is a lack of a farmer friendly, easily accessible market intelligence system in India which results in imbalances in the market mechanisms.

Agricultural Marketing Information Network (AGMARKNET) was launched in March 2000 by the Union Ministry of Agriculture which provides web- based information of the daily arrivals and prices of commodities in the agricultural produce markets across the country. It is the largest network in India to provide market information across the country. Some of the other sources of market information in India are Market Research and Information Network (MRIN), ITC's e-choupals, Gramdoot project etc. There is a vast scope for extension of sharing of market information with the help of Information Technology.

- **e-NAM: National Agriculture Market:** The NAM is a unified market where farm goods are being sold without any 'mandi tax'. It's primary objective is to make the food inflation moderate and remove price differentials across the country. With this in view the Prime Minister of India, Shri Narendra Modi had integrated 21 wholesale markets electronically as National Agriculture Market (NAM) on 14 April, 2016

in India. There have been 21 'mandis' selected as electronic trading platforms for trading of one or more agricultural commodities. As on 1 July, 2018, 497 mandis of 14 states have been integrated with e-NAM where 90 agricultural commodities are traded electronically. A total trade volume of 2.25 crore tonnes of agricultural commodities worth of ₹ 58,930 crore was traded on e-NAM portal till 31 December, 2018 in India.

There have been improvements in the Agricultural Marketing system in India over the years. However, these improvements are not adequate to address all the challenges that hinder the development of farmer and consumer friendly efficient agricultural marketing system in India. There have been a lot of scopes for further improvements in agricultural marketing in the near future.



CHECK YOUR PROGRESS

Q 17: In which year the Ram Rahim Pragati Producer Company of Madhya Pradesh hedged Soyabean price risk on the NCDEX with the help of FPO?

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Q 18: How many AEZs are established in India till now?

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Q 19: What is the full form of APEDA?

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Q 20: What is the prime objective of e-NAM in India?

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7.6 LET US SUM UP

- Agricultural Marketing includes all the business activities such as

assembling, handling, storage, transporting, processing, wholesaling, retailing and export of agricultural commodities as well as accompanying supporting services such as market information, establishment of grades and standards, commodity trade, financing and price risk management and the institutions involved in performing all the activities.

- To assure that selling and buying activities are conducted at a favourable time, place and price; to ensure consumers' and buyers' satisfaction; facility to choose better marketing channel; to ensure mobilisation of resources among buyers and sellers or agricultural and non-agricultural sectors of an economy; to widen product range; development of backward areas; increase productivity of agriculture; management of risks are some of the primary objectives of agricultural marketing.
- The need and importance of agricultural marketing has been increasing with the expansion of agricultural output. The introduction of various types of revolutions such as green revolution, yellow revolution, white revolution etc extends the need for an efficient agricultural marketing for both input and output of agriculture.
- As all the activities related to marketing of agricultural produce extended with the requirement of the society, the overall importance of the agricultural marketing has increased.
- A lot progress have been made in the agricultural marketing system of India. The role of government is remarkable in this case. The introduction of the regulated markets, cooperative banks, NABARD, e-NAM, scientific storage facility etc are remarkable. However, there are still many challenges that pave the formation of efficient agricultural marketing in India.



7.7 FURTHER READING

1) Govt. of India (n.d.). Retrieved from *APEDA Agri Xchange: the changing face of agri business*. (n.d.). Retrieved from APEDA: http://

agriexchange.apeda.gov.in/Ready%20Reckoner/AGRI%20EXPORT.aspx

2) Narvariya, R. K. (2021) "Regulated Markets-Definition-Important Features of Regulated Markets, Function, Progress and Defects. Retrieved from http://www.jnkvv.org/PDF/04042020184018REgulated.pdf.

3) Sastry, S. S., & Devi, I. B. (2020). *Agricultural Economics* (2nd ed.). New Delhi: CBS Publishers & Distributors Pvt. Ltd.

4) Soni, R. (2002). *Leading Issues Agricultural Economics* (Fifth ed.). Vishal Publishing Co. Jalandhar, India.

5) Ministry of Food Processng Industries, Government of India. (https://mofpi.nic.in/Schemes/mega-food-parks)

7.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: "Agricultural marketing comprises of all the operations, and agencies conducting them involved in the movement of farm produced foods, raw materials and their derivatives, such as textiles, from the farms to the final consumer and effects of such operations on farmers, middlemen and consumers."

Ans to Q No 2: The institutional set up that facilitates exchange activity among buyers and sellers is known as the market.

Ans to Q No 3:

- To assure that selling and buying activities are conducted at a favourable time, place and price.
- To reduce the price differences between the primary producer and ultimate consumer which helps in curbing food inflation.

Ans to Q No 4: 1-c, 2-a, 3-d,4-b.

Ans to Q No 5: When did Agricultural Marketing Information Network (AGMARKNET) launched in India?

Ans to Q No 6: Risk refers to a situation where there is more than one possible outcome to a decision and the probability of each specific

outcome is known or can be estimated.

Ans to Q No 7: Hedging is the action taken by a buyer or seller to protect his/her income against a rise in the prices in the future.

Ans to Q No 8: National Agricultural Cooperative Marketing Federation.

Ans to Q No 9: A market in which food grains prices are stabilised by the government on the basis of the recommendation provided by the Agricultural Prices Commission.

Ans to Q No 10: Co-operative marketing is defined as the organised sales of the agricultural produce on the non-profit basis to protect the interests of the farmers.

Ans to Q No 11: A "warehouse" is a premise (including any protected place) conforming to all the requirements including manpower specified by the Authority by regulation wherein the warehouse-man takes custody of the goods deposited by the depositor and includes a place of storage of goods under controlled conditions of temperature and humidity.

Ans to Q No 12: Frederic Nicholson.

Ans to Q No 13: A marketing channel is an intermediary in an agricultural marketing.

Ans to Q No 14: Grading is the process of categorisation of products into dissimilar groups, on the basis of significant characteristics (for example: quality, size, type, weight etc.) that the agricultural produce possesses.

Ans to Q No 15: Standardisation is the process of fixing certain rules for the product that helps in grading the products into different groups.

Ans to Q.16: This is 'AGMARK' logo, recognises as the certification mark for quality of agricultural products in India.

Ans to Q.17: In 2014.

Ans to Q.18: 60 AEZs.

Ans to Q.19: Agricultural and Processed Food Products Export Development Authority.

Ans to Q.20: The prime objective is to moderate the food inflation and remove the price differential across the country.



7.9 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: What is the definition of Agricultural market as provides by the National Commission on Agriculture (NCA) in its XII Report?

Q 2: Why do storage and warehouse use for agricultural products?

Q 3: What are the objectives of FCI?

Q 4: What is the acronym for FPO?

Q 5: What do you know by Agricultural Export Zones (AEZs)?

Q 6: How many Mega Food Parks in India? Give examples.

Long Questions (Answer each question in about 300-500 words)

Q 1: What are the functions that included under the purview of agricultural marketing?

Q 2: Discuss about the need and importance of the agricultural marketing in the present times.

Q 3: Do you think the regulated markets are beneficial for both the farmers and consumers? Explain.

Q 4: Discuss about the status of cooperative marketing in India.

Q 5: How do the market information and market intelligence help in taking informed decisions by farmers? How does a farmer in India gather market information? What are the sources of market information in India?

Q 6: Explain about the grading and standardisation of agricultural produce in India.

Q 7: Write short notes on the following topics:

a) e-NAM
b) Marketing Channel
c) Market Intelligence
d) Centre for Perishable Cargo
e) AEZs
f) Mega Food Park

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UNIT 8 : AGRICULTURAL FINANCE

UNIT STRUCTURE

8.1 Learning Objectives

8.2 Introduction

8.3 Need and Importance of Agricultural Finance

8.4 Sources of Credit

- 8.4.1 Co-Operative Banks
- 8.4.2 Rural Banks
- 8.4.3 NABARD
- 8.4.4 Microfinance-SHG-NGOs

8.5 Problems of Capital Formation

8.6 Let Us Sum Up

8.7 Further Reading

8.8 Answers to Check Your Progress

8.9 Model Questions

8.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- grasp the Need and Importance of Agricultural Finance
- discuss different sources of credits for agricultural finance
- describe the problems of capital formation in a developing country like India

8.2 INTRODUCTION

Agriculture plays an important role in the mainstay of developing economy like India. One of the priority concerns in this sector as a whole entails improving input delivery mechanism to enhance farm productivity. Indian agriculture is characterised by low savings, low investment and uncertain returns. Farmers' requirement of adequate capital is inevitable to increase the productivities of various resources used in farm production. Both organised and unorganised agencies provide finances to the farm

communities in India. However, most of the time, farmers remain unaware of and unable to access various sources of affordable credits, which in turn impede their productivity.

8.3 NEED AND IMPORTANCE OF AGRICULTURAL FINANCE

With modernisation, the agricultural sector, in general, has gradually become more competitive. Consequently, it requires a proper combination of money, management and marketing for development of agriculture. Money, as an important ingredient, more often comes from credit and contributes in capital formation. Only small sections of the farming community have their own capital to invest in agriculture. In fact, a major portion of the farming community needs capital to meet various expenditures both in the short run and the long run. Those farmers have to search for various sources which supplies farm credits. Also, majority of the farming communities in India are marginal and small who cultivate their own consumption needs and have rather low marketable surpluses. For those farmers, proper farm finance policy is needed as they are in need of more consumption credit and unable to offer security due to small size of holding. Farmers need credit support to have access to the resources on time as well as to maintain proper capital acquisition. However, care should be taken in utilising the credit for productive purposes, so that it becomes a lever for the development. Institutional credit support network is, therefore, extremely crucial in the interest of the farming community with a timely monitoring mechanism to ensure an adequate financial flow to the agriculture sector.

Agricultural finance is as important as other inputs in agricultural sector. It is important for agro-socio-economic development both at micro and macro levels. Agricultural finance plays a catalytic role in enhancing resources' productivity and increase the farm income. Adoption of new and improved technology is imperative to augment agriculture as a business venture. We can call it as a supportive infrastructure set up, for instance a combination of new potential seeds with other inputs like fertilisers, irrigation facility, plant

protection measures, modern and improved post harvesting techniques, market intelligence and connectivity etc. Starting from sowing to post harvest measures to marketing, every step in agribusiness needs adequate amount of capital to increase the productivity and efficiency. Proper framework of agricultural finance provides all necessary capital to create a strong resource back up at each and every step of farm business on timely basis not only in supplying of quality inputs; agricultural finance is equally important for farm output managements. Large scale financial investment activity entails asset and farm supportive infrastructure to increase farm income and overall improvement in the living standard of the farm community. Agricultural finance can also contribute in minimising regional imbalances and inter farm variations between rich and poor. Importance of farm finance in both forward and backward linkages at micro and macro level is crucial and significant. In a country like India, where agriculture is still subsistence and stagnant in nature, agricultural finance is important to adopt new science and technology to speed up the overall development in farming. Moreover, massive investment is also necessary to carry out micro and macro level projects on irrigation, energy and electrification; installation of chemical fertiliser plants, biogas plants, storage infrastructure, food processing plants; improved road and other connectivity; marketing infrastructure including an efficient market intelligence network; execution of socio economic development schemes and projects etc. Hence, a good framework of agricultural finance is necessary for overall development in agriculture and to promote welfare in the society.



CHECK YOUR PROGRESS

Q 1: Discuss the need of finance in Indian agriculture.

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Q 2: What is the importance of agricultural finance in a country like India?

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8.4 SOURCES OF CREDIT

In India, Agricultural credit can be availed by the farming communities from various sources. Both short term and long term agricultural credit requirements of farming community are usually met by both government sector and private sector- organised and unorganised. Sources of agricultural credit can be broadly classified into two categories, i.e., institutional and non-institutional sources. Non-Institutional sources include moneylenders, traders and commission agents, relatives and landlords; and institutional sources include co-operatives, commercial banks, RBI and NABARD. In this section, the various institutional sources of agricultural credit are discussed briefly.

8.4.1 Co-Operative Banks

Co-operative banks are an important segment of the Indian banking system. Co-Operative Banks are relatively small financial institutions that offer lending facilities to small businesses/ entrepreneurs and individuals in both urban and rural areas. Cooperative banks have been organised under the provisions of the co-operative society's law which is based on the principles of cooperation. A co-operative bank is a financial institution which is established on the cooperative basis and belongs to its members, who are at the same time the owners and the customers of their bank. A Cooperative bank deals in ordinary banking business and like other banks, these are founded by collecting funds through shares, accepting deposits and granting loans.

According to Huber Calvert, "Co-operation is a form of organisation, wherein persons voluntarily associate together on the basis of equality for the promotion of common economic interest of themselves".

A financial cooperative (co-op) is a type of financial institution that is owned and operated by its members. The goal of a financial cooperative is to act on behalf of a unified group as a

traditional banking service. Cooperative banks are the type of financial cooperatives which follows various principles of cooperation. A co-operative bank is a financial entity which belongs to its members, who are at the same time the owners and the customers of their bank. It is often established by people belonging to the same local or professional community having a common interest. It is formed to uplift the financially weaker section of the society and to protect them from the clutches of money lenders who provide loans at an unreasonably high-interest rate to the needy. The co-operative structure is designed on the principles of cooperation, mutual help, democratic decision making and open membership. It follows the principle of 'one shareholder, one vote' and 'no profit, no loss'.

The history of Indian cooperative banking began with the passing of Cooperative Societies Act in 1904. These are monitored and regulated by the Reserve Bank of India (RBI) and come under the Banking Regulations Act, 1949 as well as the banking laws act, 1965. Cooperative banks differ from commercial banks on the grounds of organisation, governance, interest rates, scope of functioning, objectives and values.

- **Structure of Cooperative Banks in India:** The co-operative banking system, with two broad segments viz. urban cooperative banks and rural co-operative credit institutions. While the urban co-operative banking system has a single tier comprising the Primary Co-operative Banks (commonly known as urban co-operative banks – UCBs), the rural co-operative credit system is divided into long-term and short-term co-operative credit institutions which have a multi-tier structure. Here, we will discuss only rural cooperative credit structure as it is dominated by agricultural credit institutions.

  The short-term co-operative credit institutions has a three-tier structure comprising State Co-operative Banks (SCBs), Central Co-operative Banks (CCBs), and Primary Agricultural

Credit Societies (PACSs) which are not banks but only societies. The long-term co-operative credit institutions have generally a two tier structure comprising the Central Land Development Bank (CLDB) and Primary Land Development Banks (PLDB), now known as State Cooperative Agriculture and Rural Development Banks (SCARDBs) and Primary Cooperative Agriculture and Rural Development Banks (PCARDBs).

- **State Cooperative Banks (SCBs):** These are the apex credit organisations existing at the state level. District cooperative central banks (DCCBs) and primary agricultural cooperative credit societies act as members of these banks. These SCBs supervise the activities of the member banks and mobilise and deploy the financial resources among the member banks.
- ***Functions of State Cooperative Banks:***
  - SCBs help the state governments in formulating developmental plans pertaining to cooperative institutions and also to coordinate the cooperatives with the government.
  - SCBs formulate and implement uniform credit policies pertaining to cooperative development in the state.
  - SCBs act as bankers' bank to District Cooperative Central Banks (DCCBs) and grant subsidies for the smooth functioning of DCCBs
  - Similar to any other commercial bank, they also perform the normal banking operations.
- **District Cooperative Central Banks (DCCBs):** DCCBs act as link between state cooperative banks and primary agricultural cooperative credit societies. They also undertake normal banking functions like accepting of deposits from public, collection of bills, cheque and drafts etc. and also provide required credit for needy persons. Membership of DCCBs is open to individuals and other societies falling under its area of

operation, *viz*., marketing societies, consumers' societies, farming societies, urban banks and PACS.

- ***Functions of District Cooperative Central Banks:***
  - Supervising and inspecting the activities and functions of PACS and help them to function smoothly.
  - Apart from providing guidance they also provide leadership to PACS
  - Undertaking non-credit activities like supply of seeds, fertilisers and also consumer items like sugar, kerosene etc.
  - Providing requisite credit for societies under their control.
  - Accepting deposits from the member societies as well as from public.
- **Primary Agricultural Cooperative Credit Societies (PACS):** With the enactment of Cooperative Societies Act of 1904, Primary Agricultural Cooperative Credit Societies (PACS) came into existence following the guidelines of Raiffeissen model cooperatives as practiced in some of the countries of the Europe. PACS are framed bases on cooperative principles like limited liability, limited area of operation, honorary management, voluntary participation of villagers etc**.** These societies function at village level providing the farmers the required short term and medium term loans as well as supply of other agricultural inputs and essential consumer items. PACS also help in formulating and implementing the agricultural developmental plans.
- Functions of Primary Agricultural Cooperative Credit Societies:
  - Borrowing adequate and timely funds from DCCBs and help its members by providing required finances.
  - Inculcating the habit of thrift to generate local savings of members towards share capital and mobilising deposits from the villagers.
  - Supervising the end use of credit.

- Distributing fertilisers, seeds and pesticides to the needy farmers and supply consumer goods like rice, wheat, sugar, kerosene, clothes etc, at fair prices.
- Providing machinery to the farmers on hire basis.
- Helping the farmers in marketing of farm produce.
- Providing storage facilities and marketing finance.
- Helping in formulating plans and programmes meant for the socio-economic development of the village.

➢ **Central Land Development Bank (CLDB):** Central Land Development Bank is an apex bank in the two-tier cooperative credit structure providing long-term credit to PLDBs and its subsidiary/affiliated branches. The branches of CLDBs, PLDBs and individual entrepreneurs are the members of CLDB. National Bank for Agriculture and Rural Development (NABARD) and Life Insurance Corporation (LIC) subscribe for its debentures. NABARD is a refinancing agency to the CLDBs. CLDB is a link between NABARD and government in long-term transactions.

➢ **Functions of CLDB:**

- CLDB inspects, supervises and guides PLDBs in their banking operations.
- It floats debentures for raising the necessary funds.
- It inculcates the spirit of thrift among the members by mobilising savings and stimulating capital formation i.e. asset creation.
- It provides loans to the member banks for the redemption of old debts, development of land, purchase of machinery and equipment, development of minor irrigation etc.

➢ **Primary Land Development Banks (PLDBs):** PLDBs operate at district level with branches at block / taluk level. All the PLMBs are federated into Central Land Development Banks at the state level. They receive massive support from institutional agencies like RBI, SBI, LIC and NABARD to direct their lending policies

towards small and marginal farmers emphasising agricultural development.

- **Functions of PLDBs are:**
  - Providing long-term credit to the needy farmers for the land development, increased agricultural production and productivity of land.
  - Providing loans for minor irrigation, purchase of land and for redemption of old debts.
  - Finance farmers in purchase of tractors, machinery and equipment.
  - Providing finance to farmers for the construction of farm buildings.
  - Mobilising rural savings, etc.

8.4.2 Rural Banks

The Regional Rural Banks were established on the recommendations of Narasimham Committee on Rural Credit. As per the recommendations, the regional rural banks were established in 1975 for supplementing the commercial banks and co-operatives in supplying rural credit. Considering the recommendations of the committee, the Government of India passed Regional Rural Banks Act 1976. The **first Regional Rural Bank** was set up in 1975 itself by the name **Prathama Grameen Bank**. After passing the Act, within a year, as many as, 25 RRBs were established in different parts of India. As on 1 April 2020, there are 43 RRBs in India.

The Regional Rural Banks were established with a view of serving primarily the rural areas of India with basic banking and financial services. The Regional Rural Banks Act, 1976 provide for incorporation, regulation and winding up Regional Rural Banks with a view to develop rural economy by providing credit and other facilities, particularly to the small and marginal farmers, agricultural labourers, artisans and small entrepreneurs. The act is also endowed

with the purpose for developing of agriculture, trade, commerce, industry and other productive activities in the rural areas.

- **Objectives of Regional Rural Banks (RRBs):**
  RRBs were established with the following objectives to:
  - Bridge the credit gap in rural regions in India
  - Check rural credit outflow to urban areas and develop measures which could restrict such outflow
  - Reduce regional imbalances in terms of availability of financial facilities
  - Increase rural employment generation
- **Area of operation of RRBs:** Regional Rural Banks (RRBs) are Indian Scheduled Commercial Banks operating at regional level in different states of India. However, RRBs may have branches set up for urban operations and their area of operation may include urban areas too.

  The Regional Rural Banks are required to function within a limited area where they are established. The area of operation of RRBs is limited to the area as notified by Government of India covering one or more districts in the State.

  The area of functioning of RRBs is decided by central government in consultation with NABARD and the Sponsor Banks by way of a notification issued in this regard.
- **Ownership of RRBs:** The equity of RRBs is held by the stakeholders in fixed proportions shares of 50:15:35 distributed among Central Government- 50%, State Government-15%, and the Sponsor Bank (any commercial bank can sponsor the regional rural banks) - 35% share.
- **Functions of RRBs:**
  - Providing banking facilities to rural and semi-urban areas
  - Encouraging the saving habits among the rural and semi urban population.
  - Granting of loans and advances to small and marginal farmers and agricultural labourers, whether individually

or in groups, and to co-operative societies, agricultural processing societies, co-operative farming societies, primarily for agricultural purposes or for agricultural operations and other related purposes

- Granting of loans and advances to artisans, small entrepreneurs and persons of small means engaged in trade, commerce and industry or other productive activities
- Carrying out government operations like disbursement of wages of MGNREGA workers, distribution of pensions etc.
- Providing Para-Banking facilities like locker facilities, debit and credit cards, mobile banking, internet banking, Unified Payments Interface (UPI) system etc.

8.4.3 NABARD

National Bank for Agriculture and Rural Development (NABARD) is a development bank focusing primarily on the rural sector of the country. It is the apex banking institution to provide finance for agriculture and rural development. NABARD's head-quarter is located in Mumbai.

The importance of institutional credit in boosting rural economy has been clear to the Government of India right from its early stages of planning. The Reserve Bank of India (RBI) at the insistence of the Government of India, constituted a Committee to Review the Arrangements for Institutional Credit for Agriculture and Rural Development (CRAFICARD) to look into these very critical aspects on 30 March 1979, under the Chairmanship of Shri B. Sivaraman, former member of Planning Commission, Government of India.

On recommendation of the committee report (1979), NABARD (National Bank for Agriculture and Rural Development) was set up in 1982 as a statutory body under National Bank for Agriculture and Rural Development Act, 1981. NABARD came into existence by

transferring the agricultural credit functions of RBI and refinance functions of the then Agricultural Refinance and Development Corporation (ARDC). Its initial paid up capital was Rs. 100 cr. contributed with 50:50 by government of India and Reserve Bank of India. Its paid up capital stood at Rs.14,080 crore as on 31 March 2020. Consequent to the revision in the composition of share capital between Government of India and RBI, NABARD today is fully owned by Government of India.

- **Functions of NABARD:** The mission of NABARD is to promote sustainable and equitable agriculture and rural development through participative financial and non-financial interventions, innovations, technology and institutional development for securing prosperity.

  In order to achieve the above mission, NABARD undertakes a number of functions/ activities:

  The major functions of NABARD include promotion and development, refinancing, financing, planning, monitoring and supervision. We can broadly divide the functions into two categories:

- **Non-credit Related:**
  - Credit Planning and Monitoring, Coordination with various agencies and institutions.
  - Assist in policy formulation of GoI, RBI and State Governments on matters related to agricultural credit and rural development
  - Institutional development and capacity building of Cooperatives and Regional Rural Banks (RRBs) to strengthen the rural credit delivery system. Statutory inspection of Regional Rural Banks (RRBs), State Cooperative Banks (SCBs) and District Central Cooperative Banks (DCCBs), voluntary inspection of State Cooperative Agriculture and Rural Development Banks (SCARDBs) and their off-site surveillance

- Promotional and developmental initiatives in the areas of farm, off-farm, micro-finance, financial inclusion, convergence with government sponsored programmes.
- Supporting the financial inclusion efforts of Regional Rural Banks and Cooperative Banks
- Thrust on promotion of livelihood opportunities and Micro Enterprises
- Capacity Building of Personnel and Board Members of Credit Cooperatives and Staff of Rural Financial Institutions.
- Support to research and development, rural innovations, etc.

➢ **Credit Related:**

- Refinance to Rural Financial Institutions for investment credit (long term loan) and production and marketing credit (short term loan) purposes for farm and off-farm activities in rural areas.
- Loans to State Governments for developing rural infrastructure and strengthening of the Cooperative Credit Structure
- Loans for warehousing infrastructure to State Governments, State/ Central government owned/ assisted entities, Cooperatives, Federation of Cooperatives, Farmers' Producers Organizations (FPOs), Federations of Farmers' Collectives, Primary Agricultural Credit Societies (PACS)/ Cooperative Marketing Societies (CMS) or similar institutions, Corporate/ Companies, Individual entrepreneurs, etc.,
- Direct lending to Cooperatives and Producers' Organisation, support to State owned institutions / corporations under NABARD Infrastructure Development Assistance and direct lending to individuals, partnership firms, corporate, NGOs, MFIs, Farmers' collectives etc.

under Umbrella Programme for Natural Resource Management (UPNRM)

- Pass through agency of select Government of India Capital Investment Subsidy Schemes.

8.4.4 Microfinance-SHG-NGOs

Microfinance is the provision of savings accounts, loans, insurance, money transfers and other banking services to customers that lack access to traditional financial services, usually because of poverty. The Microfinance is the cluster of banking services, relatively of lower monetary amounts, designed specifically to meet the banking requirements of an unemployed or low-income people. It is not just about giving micro credit to the poor rather it is an economic development tool whose objective is to assist poor to work their way out of poverty. It covers a wide range of services like credit, savings, insurance, remittance and also non-financial services like training, counselling etc. Nobel Laureate Muhammad Yunus is credited with laying the foundation of the modern Microfinance Institutions (MFIs) with establishment of Grameen Bank, Bangladesh in 1976.

- **Salient Features of Microfinance**
  - Borrowers are from the low income group
  - Loans are of small amount – micro loans
  - Short duration loans
  - Loans are offered without collaterals
  - High frequency of repayment
  - Loans are generally taken for income generation purpose
- **Channels of Micro Finance**

In India microfinance operates through two channels:

- SHG – Bank Linkage Programme (SBLP)
- Micro Finance Institutions (MFIs)

- **SHG – Bank Linkage Programme (SBLP):** This is the bank-led microfinance channel which was initiated by NABARD in

1992. Under the SHG model the members, usually women in villages are encouraged to form groups of around 10-15. The members contribute their savings in the group periodically and from these savings small loans are provided to the members. In the later period these SHGs are provided with bank loans generally for income generation purpose.

- **Micro Finance Institutions (MFIs):** Those institutions which have microfinance as their main operation are known as micro finance institutions. MFIs lend through the concept of Joint Liability Group (JLG), i.e., an informal group that consists of 5-10 members who seek loans either jointly or individually. Microfinance Institutions (MFIs) in India exist as NGOs (registered as societies or trusts), Section 25 companies and Non-Banking Financial Companies (NBFCs). Commercial Banks, Regional Rural Banks (RRBs), cooperative societies and other large lenders have played an important role in providing refinance facility to MFIs.



CHECK YOUR PROGRESS

Q 3: Mention the institutional sources of agricultural credits in India? (Answer in about 30 words)

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Q 4: What are the functions of primary agricultural cooperative credit societies? (Answer in about 120 words)

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Q 5: Mention the distribution of equity of Regional Rural Banks? (Answer in about 30 words)

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Q 6: What are the non credit functions of NABARD? (Answer in about 150 words)

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Q 7: What are the salient features of Microfinance? (Answer in about 30 words)

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8.5 PROBLEMS OF CAPITAL FORMATION

Capital is the major driver of agricultural productivity and growth, which is a very important element of economic development. According to Ragnar Nurkse, “Society uses its present production not only for the satisfaction of its consumption but also uses a part of it on capital goods that is making machines, transport facilities or other production equipment, which is regarded as capital formation”. Capital formation means accumulation of capital goods or creation of real assets and we should understand that it does not mean to increase in the money capital. Moreover, capital formation does not only refer to the increase in physical goods but

also to the development of human capital. Hence in other words, capital formation implies creation of both tangible physical goods like machinery, factories, transport equipment, bridges, power projects, dams, irrigation systems, etc and intangible goods like education, health, developing skills, living standard etc.

For Capital accumulation, saving and investment are essential components. In order to make addition to the stock of capital goods, a part of the current consumption has to be sacrificed in form of savings and savings must be invested in order to have capital goods. However, in a modern economy, saving and investment are done mainly by two different classes of people, there must be certain means or mechanism whereby the savings of the people are obtained and mobilised in order to give them to the businessmen or entrepreneurs to invest in capital. Hence, the process of capital formation is not as simple as it may seems to be.

- **The Process of Capital formation Occurs in Three Stages.**
  - **Creation of Savings:** Creation of savings out of the total income by curtailing a part of consumption expenditure is the first step of moving towards capital formation. An increase in the volume of real savings helps to release resource for further investment.
  - **Mobilisation of Savings:** Created savings need to be effectively mobilised and made available to businessmen and entrepreneurs for investments. A prompt finance and credit mechanism as for example banks, insurance companies, improvement trusts, finance corporations, etc., play a very important role in bringing individual savers and investors together for mobilisation of savings.
  - **Investment of Savings:** The saving must be invested properly in order to produce capital goods by the entrepreneurs in different productive systems like agriculture, industry, trade, communication network etc.
- **Reasons for Slow Growth of Capital Formation in India:** Unlike the advanced countries, the rate of capital formation in India is very low. The reasons behind the slow pace of capital formation in India

are many, some of the important reasons are mentioned below:

- **Low Saving Ability:** The people in India have the willingness to save and possess all those factors such as old age considerations, family affection, socio-political influence. However, due to lower per capita income people end up with low savings which lead to lower rate of capital formation.
- **Habit of Hoarding:** Most of the people have little capacity to save, and have a habit of hoarding their savings in their houses. Unless these hoardings are utilised for any productive purposes, these savings are of no use as far as capital formation is concerned.
- **Inflation:** Due to an inflationary trend, the prices of commodities rise very high and it is thus becomes increasingly impossible for the majority of middle-class to contribute savings and investment.
- **Inadequate Investment Channels:** The banking and financial facilities are still inadequate in many parts of our country, especially in remote areas. Lack of improved transport and communication facilities in those remote areas hinder financial development, which adversely affect the mobilisation and investment of savings.
- **Taxation Policy:** High level of taxes on property in India, affect the savings and accumulation of capital adversely. The new taxation policies are still in the way to gain momentum in India.
- **Socio Political Issues:** Many parts of the country have little functioning of law and order which is why there is no adequate security of life and property to start new industries in those areas. Frequent failure of companies due to many socio economic issues also creates a fear of big private investment.
- **Lack of Infrastructure Facilities:** Lack of infrastructure facilities such as power, engineering industry, technical training, public health systems and measures restrict the expansion and widening of market and also reduce productivity of workers.

- **Unequal Distribution of Income and Wealth:** Real investment in the economy is restricted due to unequal distribution of income and wealth which results in low rate of capital formation.



CHECK YOUR PROGRESS

Q 8: What are the stages of capital formation?

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Q 9: Mention any five reasons for slow growth in capital formation in India?

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8.6 LET US SUM UP

- India is a country where agriculture is still subsistence and stagnant in nature. Vast majority of the farming community need credit support to have access to the resources on time as well as maintain proper capital acquisition. Agricultural finance acts as a supportive infrastructure set up, which play a catalytic role in enhancing resource productivity and increase the farm income.
- Sources of agricultural credit can be broadly classified into two categories, i.e., institutional and non-institutional sources. Non-Institutional sources include moneylenders, traders and commission agents, relatives and landlords; and institutional sources include co-operatives, commercial banks, RBI and NABARD.
- Co-operative banks are important segment of the Indian banking system. Cooperative banks have been organised under the provisions of the co-operative society's law which is based on the principles of cooperation.
- The cooperative credit structure has short and medium term as well as long term cooperative credit institutions. The short-term co-operative credit institutions have a three-tier structure comprising

State Co-operative Banks (SCBs), Central Co-operative Banks (CCBs), and Primary Agricultural Credit Societies (PACSs) which are not banks but only societies. The long-term co-operative credit institutions generally have a two-tier structure comprising the State Co-operative Agriculture and Rural Development Banks (SCARDBs) and the Primary Co-operative Agriculture and Rural Development Banks (PCARDBs).

- Regional Rural Banks were established in 1975 for supplementing the commercial banks and co-operatives in supplying rural credit. The Regional Rural Banks were established with a view of serving primarily the rural areas of India with basic banking and financial services. The first Regional Rural Bank was set up in 1975 by the name of Prathama Grameen Bank. As of 1 April 2020, presently there are 43 RRBs in India.
- The equity of RRBs is held by the stakeholders in fixed proportions shares of 50:15:35 distributed among Central Government- 50%, State Government-15%, and the Sponsor Bank (any commercial bank can sponsor the regional rural banks) - 35% share.
- NABARD (National Bank for Agriculture and Rural Development) established in 1982 is the apex banking institution to provide finance for Agriculture and rural development in the country. The major functions of NABARD include promotion and development, refinancing, financing, planning, monitoring and supervision of agricultural finances.
- Microfinance is the cluster of banking services, relatively of lower monetary amounts, designed specifically to meet the banking requirements of an unemployed or low-income people. In India microfinance operates through two channels: 1) SHG – Bank Linkage Programme (SBLP) and 2) Micro Finance Institutions (MFIs)
- Capital formation means accumulation of capital goods or creation of real assets, tangible and intangible. For Capital accumulation, saving and investment are essential components. The process of capital formation occurs in three stages: creation of savings, mobilisation of

savings and investment of savings.

- Unlike the advanced countries, the rate of capital formation in India is very low. The reasons behind slow pace of capital formation in India are less ability to save, hoarding habit of people, inflation, inadequate investment channels, socio-political issues, lack of infrastructure facilities, income and wealth imbalances etc.



8.7 FURTHER READING

1) Reddy, S.S. and Ram P.R. (2018) *Agricultural Finance and Management*, Oxford & IBH Publishing Co Pvt. Ltd.

1) Reddy S.S. (2006) *Agricultural Economics*, Oxford & IBH Publishing Co Pvt. Ltd.



8.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Investment in capital plays an important role in agricultural development. However, only small portions of farming communities have their own capital to invest in agriculture. Since major portion of the farming communities in India are marginal and small and they need capital to meet various expenditures both in short run and long run. Farmers need credit support to have access to the resources on time as well as maintain proper capital acquisition. However, care should be taken in utilising the credit for productive purposes, so that it becomes a lever for the development. Institutional credit support system network is essential in the interest of the farming community with timely monitoring system mechanism to ensure a healthy financial system in agriculture.

Ans to Q. No. 2: Agricultural finance is important for agro-socio-economic development both at micro and macro level of a country. It plays a catalytic role in enhancing resource productivity and increase the farm income. Proper framework of agricultural finance provides all

necessary capital to create a strong resource back up at each and every step of farm business on timely basis. Agricultural finance is also important for farm output managements. Large scale financial investment activity entails asset and farm supportive infrastructure to increase farm income and overall improvement in the living standard of the farm community. Agricultural finance can also contribute in minimising regional imbalances and inter-farm variations between rich and poor. A good framework of agricultural finance is necessary for overall development in agriculture and to promote welfare of the society.

Ans to Q. No. 3: Institutional sources credits: Government, Co-operative banks, Commercial banks, RRBs, RBI and NABARD.

Ans to Q. No. 4: Functions of Primary Agricultural Cooperative Credit Societies are

- Borrowing adequate and timely funds from DCCBs and help its members by providing required finances.
- Inculcating the habit of thrift they attract local savings of members towards share capital and deposits from the villagers.
- Supervising the end use of credit.
- Distributing fertilisers, seeds and pesticides to the needy farmers and supply consumer goods like rice, wheat, sugar, kerosene, clothes etc, at fair prices.
- Providing machinery to the farmers on hire basis.
- Helping the farmers in marketing of farm produce.
- Providing storage facilities and marketing finance.
- Participating in formulating plans and programmes meant for the socio-economic development of the village.

Ans. To Q.No. 5: The equity of RRBs is held by three stakeholders in fixed proportions shares of 50:15:35.

- Central Government- 50%,
- State Government-15%,
- Sponsor Bank (any commercial bank can sponsor the regional rural banks) - 35%.

Ans. To Q.No. 6. Non credit functions of NABARD are:

- Credit Planning and Monitoring, Coordination with various agencies and institutions.
- Assistance in policy formulation of GoI, RBI and State Governments on matters related to agricultural credit and rural development
- Institutional development and capacity building of Cooperatives and RRBs to strengthen the rural credit delivery system. Statutory inspection of RRBs , State Cooperative Banks and District Central Cooperative Banks, voluntary inspection of State Cooperative Agriculture and Rural Development Banks and their off-site surveillance
- Promotional and developmental initiatives in the areas of farm, off-farm, micro finance, financial inclusion, Convergence with government. sponsored programmes.
- Supporting the financial inclusion efforts of RRBs and Cooperative Banks
- Promotion of livelihood opportunities and micro enterprises
- Capacity Building of Personnel and Board Members of Credit Cooperatives and Staff of Rural Financial Institutions.
- Support to research and development, rural innovations, etc.

Ans. To Q.No. 7. Salient features of microfinance are:

- Borrowers are from the low income group
- Loans are of small amount – micro loans
- Short duration loans
- Loans are offered without collaterals
- High frequency of repayment
- Loans are generally taken for income generation purpose

Ans. To Q.No. 8. The process of capital formation occurs in three stages.

- **Creation of Savings:** Creation of savings out of the total income by curtailing a part of consumption expenditure is the first step of moving towards capital formation.
- **Mobilisation of Savings:** Created savings need to be

effectively mobilised and made available to businessmen and entrepreneurs for investments.

- **Investment of Savings:** The saving must be invested properly in order to produce capital goods by the entrepreneurs in different productive systems like agriculture, industry, trade, communication network etc.

Ans. To Q.No. 9. Reasons for slow growth in Capital formation:

- Low Saving Ability: The people in India have the willingness to save which lead to lower rate of capital formation.
- Inflation: Due to inflationary trend, the prices of commodities go very high and it is becoming increasingly impossible for the majority of middle-class to contribute savings and investment.
- Inadequate Investment Channels: The banking and financial facilities are still inadequate in many parts of our country, especially in remote areas.
- Socio political Issues: Many parts of the country have little functioning of law and order which is why there is no adequate security of life and property to start new industries in those areas.
- Lack of Infrastructure Facilities: Lack of infrastructure facilities such as power, engineering industry, technical training, public health systems and measures restrict the expansion and widening of market and also reduce productivity of workers.



8.9 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: What do you mean by microfinance? What are the channels of microfinance in India?

Q 2: When did the Regional Rural Banks (RRBs) come into existence? Mention the objectives of RRBs.

Q 3: What do you mean by cooperation and financial cooperative? When did the first cooperative society act was passed?

Long Questions (Answer each question in about 300-500 words)

Q 1: Describe the need and importance of agricultural finance in Indian context.

Q 2: What is the full form of NABARD? Explain various functions of NABARD.

Q 3: Explain elaborately about the problem of capital formation in Indian Agriculture.

Q 4: Describe the structure of cooperative banks in India briefly

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