

CHAPTER – 7

LAND USE AND AGRICULTURE IN INDIA

We learn about the following in this chapter:

- *The factors affecting the land.*
- *Types of Land use.*
- *Meaning and significance of agriculture*
- *Importance of agriculture* • *Types of agriculture*
- *Distribution of crops, factors affecting cropping patterns*
- *Food crops, commercial crops, fibre crops, beverage crops, horticulture, floriculture,*

Introduction: Land is the most important natural resource. Making use of land for various purposes like cultivation, forestry, grassland, fallow land, purposes other than agriculture etc., is called 'Land use'.

Factors affecting utilization of land:

Depending on the necessity and characteristics, land is utilized for different purposes. Many natural, economic and social factors influence the manner in which land is used. The natural factors are land forms, climate are influenced on characteristics of soil. Land holdings, population, demand for agricultural products, profession, attitude of people, social condition, marketing facilities are influenced on land use. Other factors like technology, irrigation facility, human capability, land ownership also have an effect on it.

Types of land use:

Land use as practised in India is divided into different types:

1.Net sown area 2.Forest area 3.Use of land for purposes other than cultivation 4.fallow land 5.grassland 6.uncultivated land.

1. Net sown area: It is the most important type of land use in India. As India is mainly an agriculture-based economy, major portion of the land is being used solely for cultivation. India

ranks second in the world with respect to the extent of area under cultivation, after the U.S.A. The total cultivation area in Punjab, Haryana, West Bengal, Uttar Pradesh and Bihar is more than 60%.

2. **Forest land:** According to a survey, the total area under forests in India is only 21.3%. It was 16.2% in 1950-51. According to the National Forest Policy, 33% of the area should be covered with forests. Hence attempts are being made to increase the area under forest.
3. **Land use for non-agricultural purpose:** Apart from cultivation and forest development, some of the land is used for purposes other than agriculture. It is used for construction of buildings, dams, industries, roads etc.
4. **Fallow land:** It is the land left uncultivated. With the increase in population, there is great demand for agricultural products, and as such, more and more land is being used for cultivation. Therefore, even fallow land is being utilized for agriculture with the help of technology.
5. **Grassland:** Grasslands are diminishing continually with the expansion of area being taken up for agriculture. Himachal Pradesh has the largest area under grasslands whereas Punjab and Haryana have the smallest grasslands.
6. **Other uncultivated land:** Land which was earlier used for agriculture is now left uncultivated due to certain changes in the chemical composition of the soil which have rendered it unsuitable.

AGRICULTURE

Agriculture is one of the ancient occupation of human beings, has engaged in it since the beginning of civilization. Agriculture has been described as 'the art of cultivating the land'. Cultivating or tilling the land and growing crops. Agriculture also includes fisheries, cattle-rearing and forestry.

Importance of Agriculture: Agriculture is the main occupation of Indians. It can be seen in all parts of the country in different forms,

and cultivating different crops. Farming supplies the food grains of the huge population of the country. It is a life-subsistence occupation and provides more employment opportunities than all other sectors of economy. There are many industries in India which depend on the raw materials provided by agriculture. Thus, indirectly, agriculture nurtures many industries. eg: chemical fertilizers, pesticides, insecticides, industries manufacturing farming equipment etc. Agriculture supports even many tertiary occupations like transport, trade, banking etc.

Different types of farming exist in India. They are: 1.Intensive farming 2.Subsistence farming 3.Commercial farming 4.Mixed farming 5.Horticultural farming

- 1. Intensive farming:** Growing 2-3 crops on the same plot in a year is called Intensive Farming. India's population being huge, there is large demand for on agricultural products. Hence this kind of farming is in practice in areas which are fertile and have huge population.
- 2. Subsistence farming:** Farmers growing crops for their own use is called Subsistence Farming. In this kind of farming, farmers grow food grains, oil seeds, vegetables etc. Subsistence farming are divided into two types a) sedentary farming b) shifting cultivation.
 - a. Sedentary Farming:** It is settled agriculture. The agriculture practices and seeds used are traditional ones, the produce is mainly used domestic consumption and in small holdings.
 - b. Shifting cultivation :** Sometimes people do not settle down in any particular area, but cut down forests and engage in farming. After one or two years', when the fertility of the soil reduces, they move on to other areas and start cultivation there. This is called shifting cultivation. It has been banned in the modern days.
- 3. Commercial Farming:** Agriculture practiced to commercial purpose is called Commercial Farming. Tobacco, sugarcane, cotton, tea, coffee, rubber etc. are commercial crops.

4. Mixed Farming: Mixed farming is the raising of crops and cattle-rearing, poultry, beekeeping, pig-rearing, silk farming, aquaculture etc. This is called Mixed Farming.

5. Plantation Farming: It refers to the cultivation of a single crop over a large area for exports. It is one of the important types of India agriculture. Coffee, Tea and Rubber are the important plantation crops of India.

Cropping Pattern: The cropping pattern of a region refers to the proportion of an area under different crops at a given point of time. The ratio of these crops is known as Cropping Pattern. The crop ratio includes Food Crops and Non-food or Commercial Crops. The cropping pattern of any area in India is mainly dependent on land forms, climate, soil, water availability, economic factors, social factors and technology.

Factors influencing cropping pattern: The Crop of any one region influenced by the natural, economic, social factors and the farmers' attitude of that area.

- 1. Natural factors:** Among the Physical factors, land forms climate and rainfall are important, and play a significant role in determining the cropping pattern of that region.
- 2. Economic factors:** Commercial crops are growing in vast holdings. Earning a huge profit is the main purpose of growing such crops.
- 3. Social factors:** Traditions, superstitions, illiteracy etc. play an important role in determining the cropping pattern.
- 4. Farmers' attitude:** This plays a very important role in the cropping pattern of an area. eg: Earlier, farmers in North Karnataka used to grow mainly jowar and wheat. However, now they are growing sunflower, groundnut, toor dal and onion which fetch a greater profit.

In addition to the above water availability, transport facilities, market hybrid seeds, chemical fertilizers, land development etc. influence cropping patterns.

Crop Seasons: In India agriculture is carried on throughout the year in different seasons. India has three cropping seasons, they are 1) Khariff or early monsoon crop. 2) Rabior post monsoon crop

3) Jade or summer crop. crops are grown in all seasons of the year in different parts. Thus, we see one or the other type of crop in one or the other place throughout the year. In our country, three types of crop seasons are seen: 1. South-west monsoon or kharif crops 2. North-east monsoon or rabi crops 3. Summer or jade crops.

- 1. Early monsoon or kharif crops:** The crops grown during the south-west monsoon season are called kharif crops. Seeds are sown in the month of June or July and crops are harvested during September and October. Maximum cropping area of the country is cultivated during this seasons. Paddy, ragi, cotton, jowar, maize and oil seeds like groundnut are the main crops grown during this season.
- 2. Post monsoon or rabi crops:** It is the important cropping seson in the receiving rain during winter months. North-western part compritive Punjab, Haryana, Jammu and Kashmir, Uttar Pradesh, and in the South Andhra Pradesh and Tamil Nadu are the states known for this cropping season. Wheat is the most important 'rabi' crop of the north-western states. During the winter months, the cool temperate with light rain is most suitable for the growth of wheat. The seeds are sown in October - November and the crops are harvested during February and March.
- 3. Summer crops:** In many areas of the country, during the period between kharif and rabi crops, crops and cultivated. This is called 'Jade farming'. Pulses like black gram, green gram, oil seeds and vegetables are grown in this season.

Major Crops: India is one of the most important agriculture-based countries. As a result of the green revolution, Indian agriculture has seen tremendous progress utilizing irrigation facility, modern agricultural implements, chemical fertilizers, high-yield Variety seeds, insecticides and pesticides. Besides, the country has become self-sufficient in the production of food grains. The most important crops grown in India are food grains, commercial crops, fibre crops and beverage crops.

1. Food crops:

Paddy: Paddy (Rice) is the most important food crop of India. India has the largest Paddy growing area in the world. Second place in the production. Majority of the people of the country use rice as

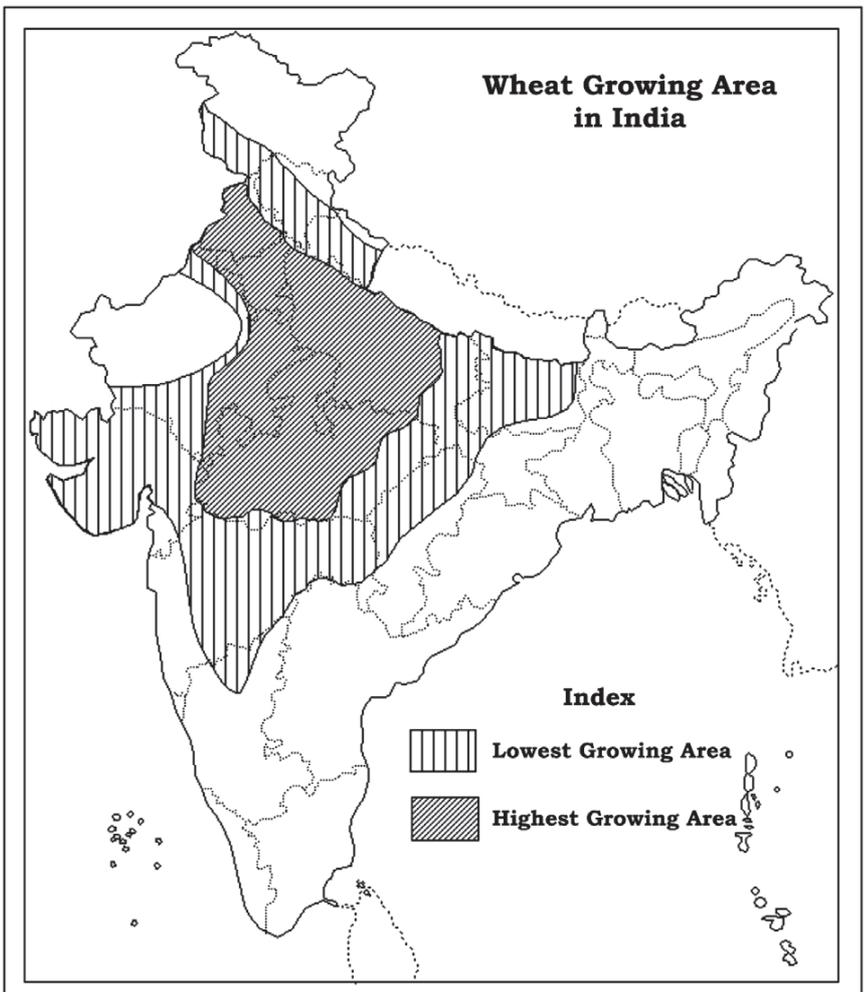
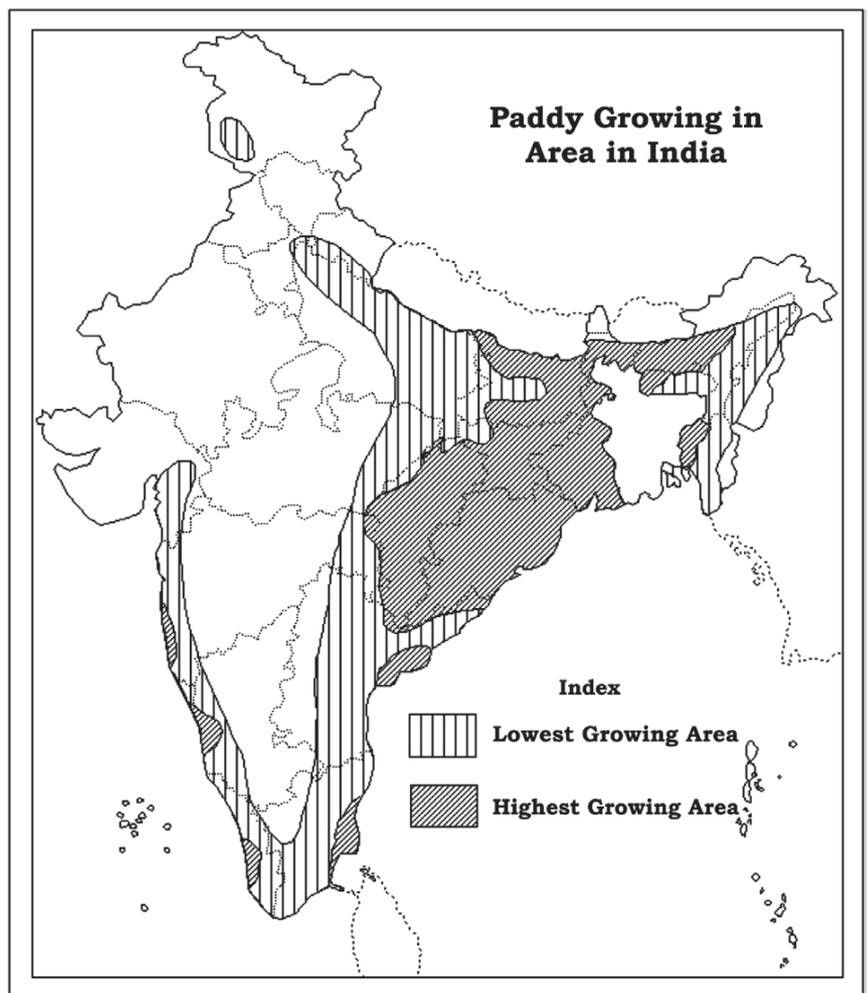
their staple food. Paddy is major kharif crop. About 25°C temperature and 100-200 cms of annual rainfall are necessary for the growth of paddy. Fertile alluvial soil and clayey soil is most suitable for the cultivation of paddy. It requires standing water till the crop is ready for harvesting, hence flat land is required. Wherever rainfall is less, irrigation is necessary.

West Bengal is the largest Paddy-producing state. Other states are Andhra Pradesh, Tamil Nadu, Orissa, Karnataka, Uttar Pradesh and Punjab are major producer of Paddy.

Wheat:

It is important Rabi crop of India. Our country has made a lot of progress in the production of wheat. India is one of the leading wheat exporting countries of the world. Wheat needs 10° to 15° C temperature and 50 to 70 cms annual rainfall for its growth. Wheat grows well in sand-mixed clay and black soil.

Wheat is largely grown in Northern plains of



Punjab, Haryana and Uttar Pradesh. Punjab is known as the granary of wheat. Madhya Pradesh, Bihar, Rajasthan, Gujarat, North Karnataka and Maharashtra are the other wheat growing states. Uttar Pradesh stands first in the production of wheat.

Commercial Crops:

1. Sugarcane: It is the most important commercial crop of India. In India, sugarcane cultivation has been in practice since ancient times. India is the place of origin of sugarcane. India occupies second place in the world. It is an annual crop and is growing in irrigated areas.

This crop needs a climate of high temperature and moisture. It needs a temperature of 21° to 26° celsius and 100-150 cms annual rainfall. Fertile loamy soil mixed with black soil is most suitable. Most of the states in India grow sugarcane. In the states of Uttar Pradesh, Maharashtra, Tamil Nadu, Karnataka, Gujarat and Andhra Pradesh, sugarcane is the most important commercial crop.

2. Tobacco: India stands third place in the production of tobacco. Tobacco is used in beedi, cigarettes, hukka, snuff, tobacco products, and is also consumed directly. Despite the wide-spread knowledge that tobacco is injurious to health, demand for tobacco products is on the increase every day. This is a tropical crop, which requires a temperature of 21° to 27° C. Regions of moderate rainfall with average 50 cms It grows well in sandy soil, it requires chemical fertilizers. Andhra Pradesh, Gujarat, Uttar Pradesh, Karnataka, Bihar, Tamil Nadu and Maharashtra are the producers of cultivate

Do you know this?

Varieties of wheat:

1. *Triticum Aesticum*
2. *Triticum durum*
3. *Triticum dico-cum*

Do you know this?

Sugarcane is a perennial plant belonging to the group afcinerum. The industries of sugar, khandasari sugar, jaggery-production and alcohol depend on sugarcane production. Besides, sugarcane bagasse pulp is the main raw material for manufacturing of paper.

Do you know this?

Ratoon system is widely used in the production of sugarcane in India. First crop is produced by planting small pieces of sugarcane horizontally. Subsequent crops are produced by cutting the sugarcane at the base leaving a small piece with the root in the soil. This is called 'Ratoon System'.

tobacco. Karnataka's Nipani town is the marketing center for tobacco.

Fibre crops:

Cotton and jute are the most important fibre crops grown in India and they support cotton textile and jute industries.

1. Cotton: Cotton is the most important fibre crop in India. Raw cotton is also used as raw material in cotton mills and a large quantity of cotton is exported, thereby earning foreign exchange. India ranks first in area under cotton cultivation, and second in production of cotton. Cotton is the tropical and sub-tropical crops. It grows well in areas where temperature is 20° to 25° C with a rainfall of 75 to 150 cms. Black soil and loamy soil support the growth of cotton. Black cotton soil which can hold moisture, is most suitable. This is grown as a kharif crop. Gujarat, Maharashtra, Andhra Pradesh, Haryana, Karnataka and Madhya Pradesh are cotton-growing areas.

Beverage Crops:

Coffee and tea are the most important beverage crops grown in India. India is also an important tea and coffee-producing and exporting country in the world.

Tea: Tea is the most popular drink not only in India but also the world. India has the largest production of tea in the world. For a long time, India had monopolized the export of tea in the international market. Tea production has gained lot of importance because it provides employment opportunity. Tea is a perennial crop growing in the evergreen tropical and sub-tropical regions. Average temperature of 21° C and rainfall of 100-200 cms are essential. It requires fertile soil with rich organic matter and hill slopes with sand-mixed black soil are required. Tea grows well at an altitude of 1200 to 2400 metres. Important tea growing states are Assam, West-Bengal, Tamilnadu and Kerala. India is famous for Tea export.

Do you know this?

Tobacco belongs to the group 'nicotiana'. Its place of origin is the Andes Mountains of in South America. Jean Nicot introduced tobacco to France. From France the Portuguese brought it to India in the 17th century.

Do you know this?

Tea contains a stimulant 'theine'. Tea gardens are found in Assam, West Bengal, Tamil Nadu, Kerala, Tripura, Himachal Pradesh, Karnataka, Arunachal Pradesh, Nagaland and Manipur.

Role of Horticulture and Floriculture in Development of Agriculture

India produces not only food crops, commercial crops and fibre crops, but also many horticultural and floricultural products. Horticulture and floriculture have progressed very well in recent years with the help of research centres.

1. Horticultural crops : Horticulture involves cultivation of fruits, vegetables and flowers. It consists of crops which yield harvest in a very short period. Horticulture is more intensive and commercial than other agriculture techniques.

India ranks first in the world in the production of mango, banana, chikoo and citric fruits. Due to this, the government is giving more importance to horticulture and this field is witnessing immense progress. This progress of the horticultural field is known as the '**Golden Revolution**'. India has all the facilities needed for horticulture like diverse conditions, land forms climate, soil, irrigation facility, labour, market, governmental encouragement etc.

Floriculture : Floriculture refers to the productions of flowers for marketing. India is known for the art of growing flowers from the ancient times. India produces flowers like jasmine, *champa*, marigold, chrysanthemum, *kanakambara*, rose and lily are very important. There is a lot of demand for cut flowers like rose, orchids, gladiolus, lily, carnation, anthurium etc., and their production has gained significant progress.

Floriculture is limited to a few states in India. Tamil Nadu, Karnataka, Maharashtra, Uttar Pradesh, West Bengal, Andhra Pradesh, Himachal Pradesh, Haryana, Rajasthan and other states are the major states engaged in floriculture. Floriculture in India is adopting variety in its produce. Thus there is a high potential for

Do you know this?

- Indian Council for Agricultural Research
- (ICAR) and National Institute of Horticultural Research of India
- (NIHR) are engaged in research work in the agricultural field.

Do you know this?

An ambitious project has been taken up to link the areas in which horticultural crops are grown with the market. This market has direct contact with the surrounding producing areas. This is called 'Terminal Market'.

development of agriculture. Both plantation crops and Floriculture crops have helped for the improvement in the condition of farmers.

EXERCISES

I Fill in the blanks with suitable words:

1. Utilising the land for a variety of purposes is known as _____.
2. Two-three crops growing in one agricultural at the same time on land is called _____.
3. Farmers growing crops only to sustain themselves is called _____ farming.
4. The commercial crop is _____ .
5. The state is the largest producer of paddy in India is _____.

II Answer the following after discussing them in groups:

1. What is meant by 'Land-use' ?
2. What are the factors that influence land use ?
3. What is 'Agriculture' ?
4. What are the types of Agriculture ?
5. What is 'kharif crop' ?
6. What is meant by 'rabi crop' ?
7. What are the factors essential for growing cotton?
8. Prepare a list of the flowers grown around you.

III Activities:

1. Collect samples of the various food grains and pulses in India.
2. Mark the Whet and paddy growing regions of India in the outline map of India.
3. Tobacco using is injurious to health. Collect the information from the near Doctor.

IV Project Work:

1. Collect pictures and information about the various crops grown in your neighbourhood.
2. Conduct a group discussion about floriculture and women empowerment.
3. Discuss about the support of floriculture in women's empowerment.

