Chapter 4

Land Resource and Agriculture

Nature has provided many natural resources free of cost to us, of which land is an important resource. Only about 11% land of the world is suitable for agriculture. There is a large disparity in population distribution among different parts of the world due to differences in land and climatic conditions. Uneven landscape, mountain terrain, wetland, desert region, dense forest etc. have less population density whereas fertile alluvial plains formed by rivers that are suitable for agriculture have more population density.

On the basis of ownership, land can be classified into two parts- Private and Community owned land. Population growth increases pressure on land because of limited land resources. There is qualitative difference in land according to their location and hence there is difference in land use. In ancient times, the land which was once used by human beings as grazing land, community forests and collecting ground for medicinal herbs, now days is being used for commercial activities, residence in urban areas & agriculture in rural areas by illegal interference, this is what we call as Land Use Change.

Wheat crop in a farm  A farmer grazing Goats in Thar Desert

Let us do-
Clarify the difference between the land uses in the above two pictures?

Importance of land resource depends on the nature of soil present in that region. Soil type changes with the change in topography. Soil is formed by minerals, biological substance & other elements found on land. It is formed by disintegration of large rocks into small particles. Proper composition of minerals and humus makes the soil fertile.

Do you Know-
Uppermost layer of land having unorganized substances which also contain Humus is known as Soil. Decomposed plant and animal remains are known as Humus.
Let us do-
Study the above soil Distribution map and answer.
1) Which type of soil found in your district?
2) Sandy soil is found in which districts of Rajasthan?
3) Alluvial soil is found in which districts of Rajasthan?
4) Which soil is found in Hadouti Plataeu region of Rajasthan?

Generally soil can be classified on two bases. Firstly on the basis of colour i.e-Black soil, Red soil, yellow soil, Brown soil etc. Secondly on the basis of nature of the soil i.e Doumat (Alluvial) soil, Sandy soil, Saline soil, basic soil etc. Alluvial soil is prominently deposited in north east region of our state, where as sandy soil is found in Thar Desert of western Rajasthan, Black soil is found predominantly in south-East Hadouti region. Black loamy and Red-Black soil is found in Aravali region. Basic soil is prominently found in canal irrigated region.
Let us do-

1. Collect the sample of soil from the farm of your city/village and with the help of your teacher distinguish them on the basis of colour.
2. If you ever have an opportunity to go outside your region then identify the colour of the soil of that region and find out which crops are grown in that region.

Agriculture

Art of growing crops in soil is known as Agriculture, and the land which is used for growing crops is known as Agricultural Land. Rajasthan's Economy is primarily considered as an agricultural Economy because agriculture is major source of employment and livelihood of the people. Population explosion causes decrease in size of agricultural land because of equal division of agriculture farms among the heirs; this causes the division of farm into many parts as per the number of brothers in a family.

Agriculture is a primary activity because primary activities include all those activities which are related to production and consumption of natural resources. Agriculture includes growing of crops, fruits, vegetables and animal rearing. For agricultural production favourable climate, topography and fertile soil is required.

Types of Agriculture

Different methods are used for agriculture in different regions of the world. On the basis of geographical condition, demand of product, labour and development of technology agriculture can be divided into two major types- Subsistent Agriculture and Commercial Agriculture.

Subsistent Agriculture- Agriculture which is meant to cater the needs of the family is known as Subsistent Agriculture. In this type of agriculture more work forces and less machinery is required. Subsistent agriculture is further classified as Primitive Subsistent and Intensive Subsistent Agriculture. Subsistent agriculture includes shifting agriculture and nomadic herding.
**Shifting Agriculture**- This type of agriculture is primarily performed by primitive tribes. In this type of agriculture the forests are converted to farm land by cutting the trees and putting them on fire as the ashes increase the fertility of the soil of that region. These farms are used for 2 to 3 years for agriculture, and then after reduction in fertility of the soil farmers move to another region for agriculture. This type of agriculture is known as 'walra' in south Rajasthan and 'jhoom' in north-east India.

**Intensive Subsistence Agriculture**- Is when farmers do cultivation on a small farm by using ordinary tools and hard labour. He may also grow two to three crops in one year. This agriculture is very common in densely populated monsoon regions.

**Nomadic Herding Agriculture**- Is the type of agriculture where cattlemen along with his cattle moves from one place to other for water and fodder for cattle. When water and fodder become scarce at one place they migrate to other place with their animals. Cattlemen primarily rear sheep, goat, camel, yak etc. from which they get milk, meat, wool, skin and other products by which they earn for their family. This type of agriculture is common in arid and semi-arid regions of central Asia and in some parts of India i.e. in Jammu-Kashmir and western Rajasthan.

**Commercial Agriculture**- Main objective of this type of agriculture is to sell the crop and animal product in market. In this extensive agriculture is done on large farms by using good quality seeds, fertilizer and big capital. In this type of agriculture most of the work is done with the help of new technology and machines. This agriculture is further classified into three types-commercial crop production, mixed agriculture and Horticulture.

In commercial crop agriculture mostly those crops are grown on which industries depends like Cotton, Sugarcane, Oilseeds, Tobacco etc., and major food crops are also grown like Wheat, Maize, Rice, Pulses etc. In mixed agriculture land is use for grains and fodder cultivation and animal rearing. Horticulture is a type of commercial agriculture in which with the aid of large amount of capital and labour, in large gardens cultivation of single crops like tea, coffee, rubber, etc. is done.

In order to fulfill their food requirement human being grows many types of crops. Agriculture provides raw material for many industries like cotton for cotton textile industry, sugar cane for sugar industry etc. Wheat, Rice, Bajra & Maize are major food crops. Gram, Lentil (Arhar, Moong, Udadh etc.) are pulse crops. Mustard, Groundnut, Soyabean etc. are oilseed crops. Cotton and Jute are fiber crops. Kahawa and tea are beverage crops.

**Agriculture Seasons**

Rajasthan has three season of agriculture, Kharif (Rainy season), Rabi (winter season) and Jayad (summer season). Bajra, Maize, Jawar, Groundnut, Rice etc. are Kharif Crops. Wheat, Jou, Gram, Mustured etc. Rabi crops and fruits, vegetables fodder, Baseem, etc. are Jayad crops. Wheat, Jau, Jwar, Bajra, Maize, and Pulses are the food crops of Rajasthan.
Let us do-
In rainy season, winter season and summer season which crops are grown by farmers in your area? List those crops and compare them with other students of your class.

With the expansion in irrigated facilities farmers are concentrating more on commercial crops. In last two decades there is a decrease in cultivated area of food crop, however there is an increase in cultivated area of oilseed crops. Because of commercial reasons presently there is an increase in soya bean cultivation in the state.

In present scenario division of crops in the above mentioned two categories is not right because presently farmer produces Wheat, Rice, Sorgham, Millet, Maize, Cotton, Tobacco, Gram, Oilseeds, Pulses etc. all type of crops. The only difference is that farmers Keep some portion of the production for their own use and sell remaining in market, but the whole produce of commercial crops like cotton, sugar cane, tobacco and oilseeds is meant for sell in the market.

Major crops of Rajasthan

**Wheat**- It is main food crop of the state. It needs medium temperature during sowing and intense sunlight during harvesting. Alluvial soil is suitable to it. Wheat is grown in winter season in Rajasthan. Sri Ganganagar, Hanumangarh, Kota, Bara, Bundi, Sawai Madhopur, Karauli, Chittorgarh, Udaipur, Bhilwara, Tonk, Pali, Ajmer, Dungarpur, Banswara etc. are the major wheat producing districts of Rajasthan. Uttar Pradesh is the largest wheat producing state of India. India is second largest producer in the world after China.

**Millet (Bajra)**- Arid climate and sandy soil of western Rajasthan is suitable for cultivation of Bajra because it can grow in high temperature and less rainfall. It is a major food crop of Rajasthan and it covers largest cultivated area of the state. Western Rajasthan, Jaipur, Dausa, Karauli, Bharatpur, Sawai Madhopur etc. are the major Bajra producing district. Rajasthan is the largest Bajra producing state of India.

**Rice**- It is staple food crop of the world, which is grown by the people living in hot tropical and subtropical region. It requires high temperature, high humidity and rainfall. Clayey alluvial soil and black soil that have capacity to retain water is best suitable for rice cultivation. India is a second largest producer of rice after China. Rice is kharif crop of Rajasthan. Hanumangarh, Sri Ganganagar, Banswara, Dungarpur, Kota, Bundi, Jhalawar, Bara, Udaipur, Chittorgarh etc. are rice producing districts of Rajasthan.

**Maize (Macca)** - It is a staple food of Rajasthan especially of Mewar region where it is fondly consumed during winter season. It suitably grows in Red-Black soil and requires high temperature and rainfall. Chittorgarh, Bhilwara, Rajsamand, Banswara, Dungarpur districts etc. are major producers of Maize.
Gram- It is an important pulse crop. Light sandy soil is suitable for Gram. Hanumangarh and Sri Ganganagar are the largest producer of Gram in state, beside these Alwar, Bharatpur, Jaipur, Dausa, Tonk, Karauli, Sawai Madhopur, Udaipur, Banswara, Kota, Jhalawar are also major producer of Gram. Beside gram- Moong, Moth, Udadh and Arhar are other pulse crop produced in state.

Mustard- Rajasthan is the largest producer of Mustard & because of this it is also known as “Mustard State”. National Mustard Research Centre is located in Sevar in Bharatpur district. Bharatpur, Alwar, Dholpur, Sawai madhopur and Karauli are the major producer of Mustard. Sri Ganganagar, Hanumangarh and Bikaner are the major mustard producing districts of North Rajasthan.

Ground Nut- Ground nut is an oilseed and commercial crop, which grows in Kharif season. This crop mostly depends on rainfall and it is cultivated on almost 3 lakh hectare land of the state. In last few years cultivation of Groundnut has increased a lot in Rajasthan. Sri Ganganagar, Hanumangarh, Chittorgarh, Jaipur etc. are other groundnut producing districts.

Cotton- This is an important industrial crop. It provides raw material to conventional as well as modern textile industries. It is a very important for traditional cotton textile industries of the state. Sri Ganganagar, and Hanumangarh are the major producer of cotton beside this it is also produced in Mewar and Hadouti region.

Let us do
- Which crops do you use in your daily routine life? Enlist them.
- Enlist major food, pulses and oilseed crops and their producer districts of Rajasthan.

Agriculture Development

Development of agriculture in Rajasthan is related to efforts made in this direction to increase agricultural production to meet the demands of increasing population. Increase in use of good quality seeds, increase in cultivated area, and development of irrigation facilities, use of fertilizers and pesticides and mechanized farming are some important measures for agricultural development. By these Methods food production can be increased and hence food security can be ensured. Numerous efforts are being made by the government for increasing employment opportunities by developing the various industries depending on agriculture products.

Modern Agriculture farm: Suratgarh

A mechanized farm has been established at Suratgarh in Ganganagar district. Here work is done on initiative experiments on crops and developing animal hybrid breeds. Number of crops and fruits are also grown in this farm. Here irrigation is facilitated by Indira Gandhi canal.
Let us do
1. Show different types of soils of Rajasthan in an outline Physical map of Rajasthan.
2. List agricultural based industries.
3. Collect information of Nomadic Herding in Rajasthan.

Glossary
Alkaline soil : Salty soil
Berseem : A type of grass

Exercise
1. Choose the correct options:
   1. Which of the following is an example of Kharif crop?
      (a) Wheat  (b) Mustard  (c) Gram  (d) Maize

2. Which of the following is on oil yielding crop?
   (a) Wheat  (b) Mustard  (c) Gram  (d) Maize

2- Fill in the blanks:
   1. Cotton is an important ___________ crop.
   2. Rajasthan is also called ___________ State due to highest production of mustard.
   3. The two main type of agriculture are : subsistence agriculture and ___________
   4. The right mixture of humus and mineral make soil ___________

3. What is commercial agriculture?
4. List Rajasthan's main crop seasons and their crops.
5. Write the names of soils found in Rajasthan.
6. Which are the main commercial crops of Rajasthan? In which districts are they grown?
7. Draw a flow chart of factors affecting soil production.
8. List the main food crops of Rajasthan and their producing districts.