

23. AGRICULTURE OF INDIA

- 52 % of India's area is under agriculture.
- 52 % of total manpower in India is directly engaged in agriculture activities. Share of agriculture sector in total GDP in 2011-2012 was 13.9 %.

Crop	Producer
Rice	West Bengal, Andhra Pradesh, UP, Bihar, Punjab
Wheat	UP, Punjab, Haryana, Bihar, MP, Rajasthan
Jowar	Maharashtra, Karnataka, MP, Andhra Pradesh
Bazra	Gujarat, Rajasthan, UP
Pulses	MP, UP, Punjab, Haryana, Rajasthan
Oilseeds	Gujarat, MP, Bihar, UP, Rajasthan
Barley	UP, Rajasthan, Bihar, Punjab
Sugarcane	UP, Maharashtra, Tamil Nadu, Karnataka
Groundnut	Gujarat, Andhra, Tamil Nadu, Karnataka
Tea	Assam, West Bengal, Tamil Nadu
Coffee	Karnataka, Tamil Nadu, Kerala
Cotton	Gujarat, Maharashtra, MP, Punjab
Rubber	Kerala, Tamil Nadu, Karnataka, Assam
Jute	West Bengal, Bihar, Assam
Tobacco	Andhra Pradesh, Gujarat, Bihar
Black Pepper	Kerala, Karnataka, Tamil Nadu
Turmeric	Andhra Pradesh, Odisha, Tamil Nadu
Cashew	Kerala, Maharashtra, Karnataka, Andhra Pradesh

Different Crop Seasons in India

- There are three crop seasons in India :
 - (i) Rabi
 - (ii) Kharif
 - (iii) Zaid

Rabi :

- This season starts after the rainy season.
- Sowing begins in September-October and harvesting takes place in February-March.
- Rabi season is cooler and drier than the Kharif season.

- Wheat, barley, pulses and some oil seeds are grown in the Rabi season.

Kharif :

- The Kharif season begins with the onset of the monsoons in June-July.
- The crop grows in the rainy season and harvesting takes place after the retreat of monsoon in September-October. Rice, maize, millets, groundnuts, cotton and jute are grown in the Kharif season.

Zaid :

- This is the summer season for growing crops which remain till April, May and June.
- Products are mainly vegetables and fruits.

Green Revolution

- The increase in agriculture productivity of cereals that has taken place since the 1960s mainly as a result of introduction of high yielding varieties of wheat and rice and use of fertilizers, machines and irrigation etc., is known as green revolution.
- Green revolution has made us self-sufficient in food production.
- This had not only saved our much precious foreign exchange but has also made us self-reliant.
- But green revolution has proved more beneficial to rich farmers only, because it involves a lot of investment.

Types of Agriculture in India

Subsistence Farming:

- In this type of agriculture, farmers work hard to grow enough food to survive only.
- In this type of farming the produce is consumed mainly by farmer and his family.
- There remains no surplus to sell in the market.

Mixed Farming:

- The combination of agriculture and pastoral farming is called mixed farming.
- In this type of farming, cultivation of crops and rearing of animals are done together on the same farm.

Shifting Cultivation:

- This is a primitive form of agriculture, in which a plot of land is cultivated for a few years and then

is deserted.

- This slash and burn method of farming is carried on in jungles of north eastern part of India.
- A plot of land is cleared for cultivation. As the yield decreases after two or three years, the plot is abandoned and a fresh clearing is made.

Extensive Farming:

- This is a system of farming in which the cultivator uses a limited amount of labour and capital on a relatively large area.
- This type of agriculture is practised in countries where population size is small and land is enough.
- Here, per acre yield is low but overall production is in surplus due to less population.
- Agriculture is done with the help of machines.

Intensive Farming:

- This is a system of farming in which the cultivator uses a large amount of labour and capital on a relatively small area.
- In countries where the size of population is big but land is less, this type of farming is done.
- Annually two or three crops are grown due to the demand of food for the large size of population.
- Agriculture is done with the help of manual labour.

Plantation Agriculture:

- In this type of agriculture, trees or bushes are planted on huge estates.
- A single crop like rubber, sugarcane, coffee, tea or banana is grown.
- These crops are major items of export.

Problems of India Agriculture

- The low productivity of our agriculture is mainly due to the difficulties faced by our peasants.
- Indian agriculture is chiefly of subsistence type where a large manual labour is employed to work on farms to grow just enough food for the needs of the family and very little is left for marketing.
- A major part of the India soil has been impoverished because it has been under plough for the last 4000 or 5000 years.
- Deforestation, overgrazing and heavy rainfall have led to soil erosion.
- Divisions of land have led to fragmentation.
- The size of land holding is very small and uneconomic.

- They use primitive tools and out-dated method.
- They lack financial credit and investment.
- Good seeds, fertilizers and improved technology are not available to them.
- They lack irrigation facilities and are still on the mercy of nature.
- Most of the farmers have no security against crop failure or loss caused by nature.
- Generally farmers are uneducated and have no scientific approaches.

USES OF LAND

Uses of land	% put to use of land
Cultivated land	52.00
Forested area	19.03
Wasteland (acid, rocky and sandy areas)	13.01
Cultivable waste	6.04
Fallow land	5.00
Pastures and meadows	4.00

Water Resources and Their Utilization in India

- Water resources of India can be divided into two parts :
 - (i) Surface water Resources
 - (ii) Underground Water Resources.

Surface Water Resources :

- According to the estimate, India receives an average of 109 cm of rainfall annually.
- This rainfall amounts to 37,000 million cubic metres. Out of this, 12,500 million cubic metres evaporates and another 7,900 million cubic metres is absorbed by land. Only 16,600 million cubic metres water is available in our rivers.
- Out of this, only 6,600 million cubic metres of water can be used for irrigation.

Underground Water Resources :

- Out of total rainfall, only 7900 million cubic metres of water percolates inside / beneath the earth.
- Out of this, only 4300 million cubic metres of water is able to reach the upper layer of the soil.
- This water is more important for agricultural production.
- Rest 3600 million cubic metres reaches the impervious rocks which can be used by digging wells or Tube wells. Out of this only 2250 million cubic

metres of water is economically viable

Sources of Irrigation in India

There are various sources of irrigation which are :

- (a) Wells & Tubewells : 46% of total irrigation
- (b) Canals : 39% of total irrigation
- (c) Tanks : 8% of total irrigation
- (d) Other Sources : (Dongs, Kuhls, Springs etc.)

Power Resources of India

India uses a large amount of fossil fuels as a source of energy along with a number of renewable sources of energy, viz., hydroelectric power, thermal power, petroleum, nuclear or atomic power, solar energy, wind energy, tidal energy, bio-gas etc.

Multipurpose Projects of India

Multipurpose river valley projects, once referred to by Jawaharlal Nehru as 'Temples of Modern India', present an integrating system of controlling floods, generation of hydroelectricity, irrigation, development of fishery and tourists spots, boating, navigation, and draining away extra water. These projects aim at all round development of river valleys.

Shifting cultivation in different regions of India

- Jhoom North east
- Deepa Bastar (Chhattisgarh)
- Podu Andhra Pradesh
- Kumari Western coast hill area of Kerala
- Batra South-east Rajasthan
- Kamn, Vinga, Dhavi Orissa