

Chapter 4: Agriculture

1. Introduction to Agriculture in India

Agriculture is the primary activity for 58% of the population in India.

It provides employment and raw materials for many industries like textiles, sugar, food processing, etc.

The contribution of agriculture to India's GDP has been decreasing, but it still remains crucial for the country's economy.

2. Types of Farming in India

1. Primitive Subsistence Farming:

Practiced on small patches of land with primitive tools like hoe, dao, and digging sticks.

Family labor is used, and the produce is mainly for self-consumption.

Dependent on monsoon and natural fertility of the soil.

Common in hilly and tribal regions of northeastern India.

Example: Slash and burn agriculture, known as Jhumming in the northeast.

2. Intensive Subsistence Farming:

Practiced in areas with high population pressure on land.

Uses more labor and inputs like fertilizers and irrigation to increase productivity.

Mainly involves the cultivation of food grains like rice and wheat.

Found in the densely populated regions of the Indo-Gangetic plains.

3. Commercial Farming:

Involves growing crops for sale in the market.

Uses modern inputs like high-yield variety seeds (HYV), chemical fertilizers, pesticides, and machinery.

Crops include cotton, sugarcane, jute, tea, coffee, and rubber.

Practiced in areas with good irrigation and infrastructure.

4. Plantation Farming:

A form of commercial farming where a single crop is grown on large areas.

Requires a lot of capital, technology, and skilled labor.

Examples: Tea in Assam, coffee in Karnataka, rubber in Kerala.

Crops are grown for export and also for domestic consumption.

3. Cropping Patterns in India

India has three main cropping seasons:

1. Kharif:

Grown with the arrival of the monsoon.

Sown in June-July and harvested in September-October.

Main crops: Rice, maize, jowar, bajra, cotton, and groundnut.

States: Punjab, Haryana, Uttar Pradesh, West Bengal (for rice).

2. Rabi:

Sown in October-November and harvested in March-April.

Requires cold weather for growth and warm, dry weather for ripening.

Main crops: Wheat, barley, peas, gram, mustard.

States: Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir (for wheat).

3. Zaid:

Grown in the short season between rabi and kharif.

Main crops: Watermelon, muskmelon, cucumber, fodder crops.

4. Major Crops in India

1. Rice:

A staple food crop for more than half of India's population.

Requires high temperature (above 25°C) and high humidity with annual rainfall above 100 cm.

Major producers: West Bengal, Uttar Pradesh, Punjab, and Andhra Pradesh.

2. Wheat:

The second most important cereal crop.

Requires a cool climate (10-15°C during growth) and bright sunshine during ripening.

Grown in rabi season.

Major producers: Punjab, Haryana, Uttar Pradesh, Madhya Pradesh.

3. Millets:

Includes jowar, bajra, and ragi.

These are coarse grains but highly nutritious.

Require less water and can grow in dry conditions.

Major producers: Maharashtra (jowar), Rajasthan (bajra), and Karnataka (ragi).

4. Pulses:

Major pulses include tur (arhar), urad, moong, masur, peas, and gram.

These crops restore soil fertility as most of them have nitrogen-fixing bacteria.

Major producers: Madhya Pradesh, Uttar Pradesh, Rajasthan, Maharashtra.

5. Sugarcane:

A tropical and sub-tropical crop.

Requires hot climate and irrigation for growth.

India is the second-largest producer of sugarcane after Brazil.

Major producers: Uttar Pradesh, Maharashtra, Tamil Nadu, Karnataka.

6. Cotton:

Requires high temperature, light rainfall, and 200 frost-free days.

Needs black soil (Deccan Plateau).

India is one of the largest producers of cotton.

Major producers: Maharashtra, Gujarat, Telangana.

5. Technological and Institutional Reforms

The Green Revolution in the 1960s introduced HYV seeds, chemical fertilizers, and irrigation techniques to increase productivity.

Government initiatives to support agriculture include:

Minimum Support Price (MSP).

Crop Insurance to protect farmers from natural calamities.

Kisan Credit Card (KCC) scheme and Personal Accident Insurance Scheme.

Land reforms such as abolition of zamindari, consolidation of landholdings, and cooperative farming.

6. Problems and Challenges in Indian Agriculture

Dependence on monsoon and lack of irrigation facilities.

Small and fragmented landholdings.

Low productivity due to traditional farming techniques.

Overuse of chemical fertilizers leading to soil degradation.

Debt burden and farmer suicides due to poor returns and rising input costs.

NCERT Textbook Exercise Questions and Answers

Q1. Multiple Choice Questions

i. Which one of the following describes a system of agriculture where a single crop is grown on a large area?

a. Shifting Agriculture

b. Plantation Agriculture

c. Horticulture

d. Intensive Agriculture

ii. Which one of the following is a rabi crop?

a. Rice

b. Millets

c. Gram

d. Cotton

iii. Which one of the following is the main source of irrigation in northern plains of India?

a. Canals

b. Wells and Tubewells

c. Tanks

d. Rainwater harvesting

Q2. Answer the following questions briefly:

i. Name one staple crop of India and the regions where it is produced.

ii. Enlist the various institutional reform programs introduced by the government in the interest of farmers.

iii. The land under cultivation has got reduced day by day. Can you imagine its consequences?

Q3. Distinguish between the following:

i. Rabi and Kharif crops

Answer:

KHARIF CROPS	RABI CROPS
Are planted in the start of rainy season.	Are planted during winter season.
They need huge amount of water	They need fewer amounts of water.
Grow in hot and wet conditions	Grow in cold and dry conditions
Are harvested around October/November.	Are harvested in March/April.
For example: Paddy, black gram, cotton.	For example: Wheat, gram and pea.

ii. Commercial Farming and Subsistence Farming

Q4. Explain the role of agriculture in the Indian economy.

Q5. What are the various factors affecting agriculture?

Q6. Discuss the importance of food security in India.