

Agriculture - Class 10 Social Science Notes

Chapter Overview

Agriculture is the backbone of the Indian economy, employing about 50% of the workforce and contributing significantly to the GDP. This chapter covers types of farming, cropping patterns, technological changes, and government policies.

1. Types of Farming

A. Primitive Subsistence Farming

- **Definition:** Traditional farming practiced on small plots using primitive tools
- **Characteristics:**
 - Slash and burn agriculture (Jhum cultivation)
 - Low productivity
 - Depends on monsoons
 - Family labor is used
- **Regions:** Northeastern states, parts of Madhya Pradesh, Chhattisgarh, and Odisha
- **Crops:** Maize, rice, millets

B. Intensive Subsistence Farming

- **Definition:** Labor-intensive farming on small landholdings with high inputs
- **Characteristics:**
 - High use of biochemical inputs
 - Irrigation facilities available
 - Higher productivity per hectare
 - Multiple cropping practiced
- **Regions:** Dense population areas like Punjab, Haryana, Western Uttar Pradesh
- **Crops:** Rice, wheat, sugarcane

C. Commercial Farming

- **Definition:** Farming for market and profit
- **Characteristics:**
 - Large-scale production
 - Use of modern technology
 - Single crop specialization

- Well-developed transportation
- **Types:**
 - **Commercial Grain Farming:** Wheat in Punjab, Haryana
 - **Plantation Agriculture:** Tea, coffee, rubber, sugarcane

2. Cropping Seasons

Kharif Season (June-October)

- **Timing:** Sown with monsoon rains, harvested in autumn
- **Major Crops:**
 - **Rice:** West Bengal, Punjab, Uttar Pradesh, Andhra Pradesh
 - **Cotton:** Maharashtra, Gujarat, Andhra Pradesh
 - **Sugarcane:** Uttar Pradesh, Maharashtra, Karnataka
 - **Jute:** West Bengal, Assam, Odisha

Rabi Season (November-April)

- **Timing:** Sown in winter, harvested in spring
- **Major Crops:**
 - **Wheat:** Punjab, Haryana, Uttar Pradesh, Rajasthan, Madhya Pradesh
 - **Barley:** Rajasthan, Uttar Pradesh, Haryana
 - **Peas:** Uttar Pradesh, Madhya Pradesh
 - **Gram:** Madhya Pradesh, Uttar Pradesh, Rajasthan

Zaid Season (April-June)

- **Timing:** Summer season cultivation with irrigation
- **Major Crops:** Watermelon, muskmelon, cucumber, fodder crops

3. Major Crops of India

A. Food Crops

Rice

- **Climatic Conditions:** High temperature (above 25°C), high humidity, annual rainfall 100cm+
- **Soil:** Alluvial clayey soil
- **Leading Producers:** West Bengal, Uttar Pradesh, Punjab, Andhra Pradesh, Tamil Nadu
- **Features:** Staple food for 50% population, requires flooded fields

Wheat

- **Climatic Conditions:** Cool growing season, bright sunshine at harvest
- **Soil:** Well-drained fertile alluvial soil
- **Leading Producers:** Uttar Pradesh, Punjab, Haryana, Rajasthan, Madhya Pradesh
- **Features:** Second most important cereal crop

Millets (Jowar, Bajra, Ragi)

- **Climatic Conditions:** High temperature, low rainfall, drought-resistant
- **Soil:** Sandy and shallow black soil
- **Leading Producers:** Maharashtra, Karnataka, Andhra Pradesh, Rajasthan
- **Features:** Known as coarse grains, nutritious

Maize

- **Climatic Conditions:** Temperature 21-27°C, moderate rainfall
- **Soil:** Well-drained fertile soil
- **Leading Producers:** Uttar Pradesh, Bihar, Andhra Pradesh, Karnataka
- **Uses:** Food, fodder, industrial raw material

B. Cash Crops

Cotton

- **Climatic Conditions:** High temperature, light rainfall, bright sunshine
- **Soil:** Black cotton soil (regur)
- **Leading Producers:** Gujarat, Maharashtra, Andhra Pradesh, Punjab
- **Features:** Known as "White Gold", raw material for textile industry

Jute

- **Climatic Conditions:** High temperature, heavy rainfall, humid climate
- **Soil:** Well-drained fertile soil in delta areas
- **Leading Producers:** West Bengal, Bihar, Assam, Odisha
- **Features:** Known as "Golden Fibre", used for making ropes, mats, bags

Sugarcane

- **Climatic Conditions:** Hot and humid climate, annual rainfall 75-100cm
- **Soil:** Rich alluvial soil
- **Leading Producers:** Uttar Pradesh, Maharashtra, Karnataka, Tamil Nadu
- **Features:** Tropical and subtropical crop, main source of sugar and gur

C. Plantation Crops

Tea

- **Climatic Conditions:** Cool climate, well-distributed rainfall
- **Soil:** Well-drained fertile soil, hill slopes
- **Leading Producers:** Assam, West Bengal (Darjeeling), Tamil Nadu, Kerala
- **Features:** Labor-intensive, mainly for export

Coffee

- **Climatic Conditions:** Warm and wet climate, hill slopes
- **Soil:** Well-drained fertile soil
- **Leading Producers:** Karnataka, Kerala, Tamil Nadu
- **Features:** Shade-loving plant, mainly Arabica and Robusta varieties

4. Food Security

Definition

Food security means availability, accessibility, and affordability of food to all people at all times.

Dimensions of Food Security

1. **Availability:** Sufficient food production and stock
2. **Accessibility:** People's capacity to buy food
3. **Affordability:** Food should be within economic reach

Government Initiatives

- **Public Distribution System (PDS):** Subsidized food through ration shops
- **Mid-Day Meal Scheme:** Free meals in schools
- **Integrated Child Development Services (ICDS):** Nutrition for children and mothers
- **Food Corporation of India (FCI):** Procurement and storage of food grains

5. Agricultural Development

Green Revolution (1960s-1970s)

- **Objective:** Achieve self-sufficiency in food production
- **Features:**
 - High Yielding Variety (HYV) seeds
 - Increased use of fertilizers and pesticides

- Expansion of irrigation facilities
- Agricultural credit and marketing support

Impact of Green Revolution

Positive Effects:

- Increased food production
- Self-sufficiency in food grains
- Reduced imports
- Improved farmer income in some regions

Negative Effects:

- Regional disparities (benefited mainly Punjab, Haryana, Western UP)
- Environmental degradation
- Decreased soil fertility
- Displacement of traditional crops

Second Green Revolution

- Focus on eastern India (Bihar, West Bengal, Odisha, Assam)
- Emphasis on sustainable agriculture
- Promotion of organic farming
- Crop diversification

6. Agricultural Problems

Traditional Problems

1. **Dependence on Monsoons:** 60% agriculture is rain-fed
2. **Small and Fragmented Holdings:** Average holding size 1.41 hectares
3. **Lack of Capital:** Poor farmers cannot afford modern inputs
4. **Inadequate Storage and Transportation:** Post-harvest losses
5. **Lack of Marketing Facilities:** Farmers forced to sell at low prices

Modern Challenges

1. **Climate Change:** Irregular rainfall, extreme weather events
2. **Soil Degradation:** Overuse of chemicals, erosion
3. **Water Scarcity:** Declining groundwater levels
4. **Price Volatility:** Fluctuating crop prices

- 5. **Farmer Distress:** Increasing debt burden, suicides

7. Government Policies and Schemes

Minimum Support Price (MSP)

- Guaranteed price for farmers' produce
- Protects farmers from price fluctuations
- Ensures food security

Crop Insurance Schemes

- **Pradhan Mantri Fasal Bima Yojana:** Comprehensive crop insurance
- Provides financial support during crop failure

Agricultural Credit

- **Kisan Credit Card:** Easy access to credit
- Priority sector lending by banks

Organic Farming Initiatives

- **Paramparagat Krishi Vikas Yojana:** Promotes organic farming
- Reduces chemical inputs, improves soil health

8. Sustainable Agriculture

Principles

1. **Maintaining Soil Health:** Crop rotation, organic manure
2. **Water Conservation:** Drip irrigation, rainwater harvesting
3. **Biodiversity Conservation:** Traditional seed varieties
4. **Integrated Pest Management:** Biological pest control

Practices

- **Crop Rotation:** Prevents soil nutrient depletion
- **Mixed Cropping:** Growing multiple crops together
- **Agroforestry:** Combining trees with crops
- **Organic Farming:** Chemical-free agriculture

Key Terms to Remember

- **Subsistence Agriculture:** Farming for family consumption
- **Commercial Agriculture:** Farming for market

- **Intensive Agriculture:** High input, high output farming
- **Extensive Agriculture:** Large areas, low input per hectare
- **Horticulture:** Cultivation of fruits, vegetables, flowers
- **Sericulture:** Rearing of silkworms for silk
- **Pisciculture:** Fish farming
- **Viticulture:** Grape cultivation

Important Facts and Figures

- India ranks 2nd in agricultural output globally
- Agriculture employs about 50% of India's workforce
- Contributes about 17-18% to India's GDP
- India is the largest producer of pulses, spices, tea, cashew, jute
- Leading producer of rice, wheat, cotton, sugarcane
- Net sown area: 142 million hectares (43% of total land area)

Sample Questions for Practice

1. Distinguish between subsistence and commercial farming.
2. Explain the geographical conditions required for rice cultivation.
3. What is Green Revolution? Discuss its impact on Indian agriculture.
4. Analyze the problems faced by Indian farmers.
5. Suggest measures to make agriculture sustainable in India.

Tips for Exam Preparation

- Learn the distribution of crops with states
- Understand climatic and soil requirements for major crops
- Practice map work showing agricultural regions
- Remember important statistics and government schemes
- Focus on current agricultural policies and their impacts