

4. Agriculture

Introduction

- India is an agriculturally important country as two-thirds of its population is engaged in agricultural activities.

Types of Farming

- There are various types of farming systems in different parts of India are:
 - Primitive Subsistence Farming: It is a 'slash and burn' agriculture. It is done with the help of primitive tools like hoe, dao and digging sticks, and family/community labour. The farming depends upon monsoon, natural fertility of the soil and suitability of other environmental conditions to the crops grown.
 - Intensive Subsistence Farming: This type of farming is labour-intensive farming, where high doses of biochemical inputs and irrigation are used for obtaining higher production. This method is commonly done where less land holding is available.
 - Commercial Farming: This type of farming is done using higher doses of modern inputs, e.g. high yielding variety (HYV) seeds, chemical fertilisers, insecticides and pesticides in order to obtain higher productivity.
- Plantation is also a type of commercial farming.
 - In this type of farming, a single crop is grown on a large area.

Cropping Pattern

- India has three cropping seasons
 - Rabi - Rabi crops are sown in winter from October to December and harvested in summer from April to June. Important rabi crops are wheat, barley, peas, gram and mustard.
 - Kharif - Kharif crops are grown with the onset of monsoon in different parts of the country and these are harvested in September-October. Important crops grown during this season are paddy, maize, jowar, bajra, tur (arhar), moong, urad, cotton, jute, groundnut and soyabean.

→ Zaid - In between the rabi and the kharif seasons, there is a short season during the summer months known as the Zaid season. Important crops grown are watermelon, muskmelon, cucumber, vegetables and fodder crops.

Major Crops

- Major crops grown in India are rice, wheat, millets, pulses, tea, coffee, sugarcane, oil seeds, cotton and jute, etc.

- Rice:

- Staple food crop

- Our country is the second largest producer of rice in the world after China.

- It is a kharif crop which requires high temperature, (above 25°C) and high humidity with annual rainfall above 100 cm.

- It is grown in the plains of north and north-eastern India, coastal areas and the deltaic regions.

- Wheat:

- The second most important cereal crop.

- It is the main food crop, in north and north-western part of the country.

- This rabi crop requires a cool growing season with 50 to 75 cm of annual rainfall and a bright sunshine at the time of ripening.

- Wheat growing regions are the Ganga-Satluj plains in the north-west and black soil region of the Deccan.

- Millets:

- Jowar, bajra and ragi are the important millets grown in India.

- These have very high nutritional value.

- Pulses:

- India is the largest producer as well as the consumer of pulses in the world.

- Major source of protein in a vegetarian diet.

- These need less moisture and survive even in dry conditions.

- Major producing states in India are Madhya Pradesh, Uttar Pradesh, Rajasthan, Maharashtra and Karnataka.

Food Crops other than Grains

- Sugarcane:

- It is a tropical as well as a subtropical crop.

- It grows well in hot and humid climate with a temperature of 21°C to 27°C and an annual rainfall between 75 cm. and 100 cm.

- Major producing states are Uttar Pradesh, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Bihar, Punjab and Haryana.

- Oil Seeds:

- The oil seeds covers approximately 12 percent of the total cropped area of the country.

- These are used as cooking mediums as well as used as raw material in the production of soap, cosmetics and ointments.

- Tea:

- Tea cultivation is an example of plantation agriculture.

- It is an important beverage crop introduced in India initially by the British.

- It requires warm and moist frost-free climate with frequent showers all through the year.

- Major producing states are Assam, hills of Darjeeling and Jalpaiguri districts, West Bengal, Tamil Nadu and Kerala.

- Coffee:

- Indian coffee is known in the world for its good quality.

- Its cultivation is confined to the Nilgiri in Karnataka, Kerala and Tamil Nadu.

- Horticulture Crops:

- India is a producer of tropical as well as temperate fruits.

- India produces about 13 percent of the world's vegetables.

Non-Food Crops

- Rubber:

- It is an equatorial crop, but under special conditions, it is also grown in tropical and sub-tropical areas.

→ It requires moist and humid climate with rainfall of more than 200 cm. and temperature above 25°C.

→ It is mainly grown in Kerala, Tamil Nadu, Karnataka and Andaman and Nicobar islands and Garo hills of Meghalaya.

- Fibre Crops:

→ Cotton, jute, hemp and natural silk are the four major fibre crops grown in India.

→ Rearing of silk worms for the production of silk fibre is known as sericulture.

- Cotton:

→ It is a kharif crop grows well in drier parts of the black cotton soil of the Deccan plateau.

→ It requires high temperature, light rainfall or irrigation, 210 frost-free days and bright sun-shine for its growth.

→ Major producing states are – Maharashtra, Gujarat, Madhya Pradesh, Karnataka, Andhra Pradesh, Tamil Nadu, Punjab, Haryana and Uttar Pradesh.

- Jute:

→ It grows well on well-drained fertile soils in the flood plains where soils are renewed every year.

→ Major jute-producing states West Bengal, Bihar, Assam, Odisha and Meghalaya.

→ It is used in making gunny bags, mats, ropes, yarn, carpets and other artefacts.

Technological and Institutional Reforms

- More than 60 percent of India's population depends on agriculture.

- After independence, major institutional reforms such as Collectivisation, consolidation of holdings, cooperation and abolition of zamindari, etc. were given priority.

- In 1960s and 1970s, technical reforms such as Green Revolution and White Revolution also introduced to improved the condition of agriculture.

- In 1980s and 1990s, various provisions for crop insurance, establishment of

Grameen banks, cooperative societies and banks for providing loan facilities to the farmers at lower rates of interest.

- Kissan Credit Card (KCC), Personal Accident Insurance Scheme (PAIS) are some other schemes introduced by the Government of India for the benefit of the farmers.
- Special weather bulletins and agricultural programmes for farmers were introduced on the radio and television.
- Minimum support price, remunerative and procurement prices for important crops to check the exploitation of farmers by speculators and middlemen.

Contribution of agriculture to the national economy, employment and output

- In 2010-11 about 52 percent of the total workforce of India was employed by the farm sector.
- India's GDP growth rate is increasing over the years but it is not generating sufficient employment opportunities in the country.

Food Security

- The government designed national food security system to ensure the food security to every citizen:
 - It consists of two components
 - (a) buffer stock and
 - (b) public distribution system (PDS)
- Food Corporation of India (FCI) is responsible for procuring and stocking foodgrains, whereas distribution is ensured by public distribution system (PDS).
- PDS is a programme which provides food grains and other essential commodities at subsidised prices in rural and urban areas.
- The primary objective of national food security are:
 - Ensure availability of foodgrains to the common people at an affordable price.
 - The poor should have access to food.
 - Growth in agriculture production

→ Fixing the support price for procurement of wheat and rice, to maintain their stocks.

Impact of Globalisation on Agriculture

- Globalisation is present at the time of colonisation.

→ During the British period, cotton was exported to Britain as a raw material for their textile industries.

- After 1990, the farmers in India have been exposed to new challenges under globalisation.

→ The agricultural products of India are not able to compete with the developed countries because of the highly subsidised agriculture in those countries.

- Genetic engineering is revolutionising the agricultural production now a days.

- Organic farming is also in fashion these days because it is practised without factory made chemicals such as fertilisers and pesticides. Hence, it does not affect environment in a negative manner.

- Indian farmers should diversify their cropping pattern from cereals to high-value crops which will increase incomes and reduce environmental degradation simultaneously.