

Agriculture

- **Two-thirds** of Indians are engaged in **agricultural** activities
- Agriculture is a **primary activity**, which produces most of the food that we consume
- **Primitive subsistence agriculture** is practised on small patches of land with the help of primitive tools like **hoe, dao and digging sticks**, and family/ community labour
- **Primitive subsistence agriculture** depends upon **monsoon, natural fertility of the soil** and suitability of **other environmental conditions**
- **Primitive subsistence agriculture** is also known as '**Slash and burn**' agriculture
- **Land productivity** in Primitive subsistence type of agriculture is **low** as the farmer **does not use fertilisers or other modern inputs**.
- In **Primitive subsistence agriculture**, the farmers **clear a patch of land** and produce crops to sustain their family. When the soil fertility decreases, they clear a fresh patch of land for cultivation
- '**Slash and burn**' or Primitive subsistence agriculture is known as **jhumming** in **north-eastern states** like Assam, Meghalaya, Mizoram and Nagaland
- **Intensive Subsistence Farming** is practised in areas of **high population pressure on land**.
- **Intensive Subsistence Farming is labour intensive farming**, where high doses of biochemical inputs and irrigation are used for obtaining higher production
- The main characteristic of **Commercial Farming** is the use of higher doses of **modern inputs**
- Modern inputs of agriculture include **high yielding variety (HYV) seeds, chemical fertilisers, insecticides and pesticides** in order to obtain higher productivity
- **Rice** is a **commercial** crop in **Haryana** and **Punjab**
- **Rice** is a **subsistence** crop in **Odisha**

- **Plantation** is a type of **commercial** farming
- In **Plantation farming**, a **single crop** is grown on a large area
- The **plantation** has an **interface** of **agriculture** and **industry**
- **Migrant labourers** are employed for **Plantation** farming
- In India, **tea, coffee, rubber, sugarcane, banana**, etc.. are important plantation crops
- Tea is a plantation crop of Assam and North Bengal
- Coffee is a plantation crop of Karnataka
- Three cropping seasons in India are rabi, kharif and zaid
- Rabi crops are sown in winter from October to December and harvested in summer from April to June
- Some of the important rabi crops are wheat, barley, peas, gram and mustard
- Two factors in the growth / success of Rabi crops are :
 - (1) Availability of precipitation during winter months due to the western temperate cyclones.
 - (2) Green revolution in Punjab, Haryana, Western Uttar Pradesh and parts of Rajasthan
- Wheat requires **50 to 75 cm of annual rainfall** evenly distributed over the growing season
- Wheat requires a cool growing season and a bright sunshine at the time of ripening
- The two wheat-growing zones in India: Ganga-Satluj plains in the northwest and black soil region of the Deccan
- **Kharif crops** are grown with the onset of monsoon in different parts of the country and these are harvested in **September-October**
- Important **Kharif crops** are paddy (Rice), maize, jowar, bajra, tur (arhar), moong, urad, cotton, jute, groundnut and soyabean
- Three crops of paddy are grown in a year, **Aus, Aman** and **Boro**
- The **short season** during the **summer** months is known as the **Zaid season**
- **Jowar** is the **third** most important food crop with respect to area and production
- **Bajra** grows well on **sandy soils and shallow black soil**.
- **Ragi** is very rich in iron, calcium, other micro nutrients and roughage

- A crop which is used both as food and fodder is Maize
- Maize requires temperature between 21°C to 27°C
- Use of modern inputs such as HYV seeds, fertilisers and irrigation have contributed to the increasing production of maize
- Maize grows well in old alluvial soil.
- In states like Bihar, maize is grown in rabi season also.
- Sugarcane grows well in hot and humid climate with a temperature of 21°C to 27°C and an annual rainfall between 75cm and 100cm
- Pulses help in restoring soil fertility by fixing nitrogen from the air.
- Pulses are mostly grown in rotation with other crops as they help in restoring soil fertility by fixing nitrogen from the air.
- Tur (Arhar) is the leguminous crop which does not help in soil fertility by fixing nitrogen from the air
- Different oil seeds are grown covering approximately 12 per cent of the total cropped area of the country
- Main oil-seeds produced in India are groundnut, mustard, coconut, sesamum (til), soyabean, castor seeds, cotton seeds, linseed and sunflower
- Oil seeds are edible, used for cooking and also used for raw material in the production of soap, cosmetics and ointments
- Groundnut is a kharif crop and accounts for about half of the major oilseeds produced in the country.
- Gujarat was the largest producer of groundnut followed by Andhra Pradesh and Tamil Nadu
- Tea cultivation is an example of plantation agriculture
- Tea is an important beverage crop introduced in India initially by the British
- Tea is a labour-intensive industry
- In India, Arabica variety of Coffee initially brought from Yemen is produced
- Arabica variety of Coffee is in great demand all over the world.
- In India Coffee was initially cultivated in Baba Budan Hills and even today its cultivation is confined to the Nilgiri in Karnataka, Kerala and Tamil Nadu
- India was the second largest producer of fruits and vegetables in the world after China.

- India produces about **13** per cent of the world's vegetables
- **Rubber** is an **equatorial crop**, but it is also grown in tropical and sub-tropical areas.
- **Rubber** is an important **industrial raw material**.
- **Rubber** is mainly grown in Kerala, Tamil Nadu, Karnataka and Andaman and Nicobar islands and Garo hills of Meghalaya.
- In 2010-11 India ranked **fourth** among the world's natural rubber producers
- The four major fibre crops grown in India are Cotton, Jute, hemp and natural silk
- The **fibre crop** NOT grown in the soil is **silk**
- **Silk** is obtained from **cocoons** of the **silkworms** fed on green leaves specially, **mulberry**
- **Rearing** of **silk worms** for the production of silk fibre is known as **sericulture**
- The original home of the **cotton plant** is **India**
- India was second largest producer of **cotton after China**
- **Cotton** is a **kharif crop**
- **Jute** is known as the **golden fibre**
- **Jute** is used in making gunny bags, mats, ropes, yarn, carpets and other artefacts
- Due to its high cost, **Jute** is losing market to synthetic fibres and packing materials, particularly the nylon
- Collectivisation, consolidation of holdings, cooperation and abolition of zamindari, etc. were given priority to bring about institutional reforms in the country after Independence
- '**Land reform**' was the main focus of our **First Five Year Plan**
- Sustained uses of land without compatible techno-institutional changes have hindered the pace of agricultural development.
- collectivisation, consolidation of holdings, cooperation and abolition of zamindari, etc. were given priority to bring about institutional reforms in the country after Independence

- The agriculture reforms in **1960s and 1970s** include **Green Revolution based on the use of package technology and the White Revolution** (Operation Flood)
- Land development programme of **1980's and 1990's** include **provision for crop insurance against drought, flood, cyclone, fire and disease, 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
- In order to check / avoid the exploitation of farmers by speculators and middlemen, the government introduced minimum support price and remunerative and procurement prices for important crops.
- Mahatma Gandhi declared **Vinoba Bhave** as his spiritual heir.
- Vinoba Bhave was one of the votaries of Gandhi's concept of **gram swarajya**
- **Vinoba Bhave** started **Bhoodan** at **Pochampalli** in **Andhra Pradesh**
- **Shri Ram Chandra Reddy** of **Pochampalli** in **Andhra Pradesh** was instrumental in starting Bhoodan movement by Vinoba Bhave
- Some zamindars, owners of many villages offered to distribute some villages among the landless. It was known as **Gramdan**.
- **Bhoodan-Gramdan** movement initiated by Vinoba Bhave is also known as the **Blood-less Revolution**
- The share of Agriculture showed a declining trend in the Gross Domestic Product (GDP) from 1951 onwards
- ICAR stands for Indian Council of Agricultural Research
- In order to ensure availability of food to all sections of society, the government designed a national food security system.
- India's food security policy has a primary objective to ensure availability of food grains to the common people at an affordable price.
- The focus of the policy is on growth in agriculture production and on fixing the support price for procurement of wheat and rice, to maintain their stocks.

- The National food security system consists of two components (a) buffer stock and (b) public distribution system (PDS)
- Food Corporation of India (FCI) is responsible for procuring and stocking food grains
- Distribution of food grains is ensured by public distribution system (PDS)
- Public Distribution System (PDS) is a programme which provides food grains and other essential commodities at subsidised prices in rural and urban areas
- MSP stands for Minimum Support Price
- Consumers are divided into two categories: Below Poverty Line (BPL) and Above Poverty Line (APL)
- There has been a gradual shift from cultivation of food crops to cultivation of fruits, vegetables, oil-seeds and industrial crops. This has led to the reduction in net sown area under cereals and pulses.
- Genetic engineering is recognised as a powerful supplement in inventing new hybrid varieties of seeds. It is known as gene revolution