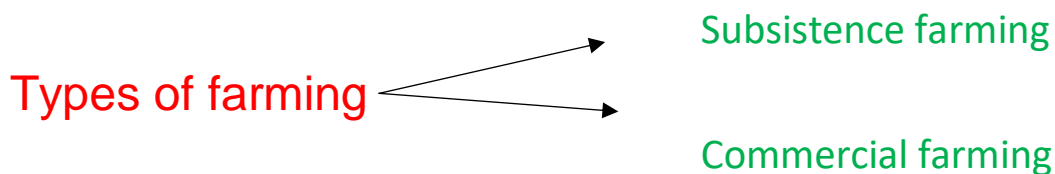


Class-X
Subject- Geography
Chapter-4 Agriculture
Reading material

Agriculture

India is an agrarian country and more than 60% of the people depends on it for their livelihood. It provides food grains, raw materials for industries and earns foreign money by exporting agricultural products.



Subsistence farming can be classified into two:

1. Primitive subsistence farming – Agriculture is done by making holes on the land by using primitive tools like hoe, dao, and digging sticks. Yield is very less. It is also known as slash and burn / shifting agriculture. A patch of forest is cleared and the trees are burnt. Then cultivation is done for two or three years. When once the fertility is over, a new area is cleared

for farming. It is practiced in hilly areas. Shifting agriculture is named differently at different places. For example it is known as **jhuming** in north eastern India, **Pamalou** in Manipur, **Dipa** in bastar.

- 1) **Intensive subsistence farming** – Most of the work is done with hand. Practiced in high population area. Land holdings are small because of 'right of inheritance' which has fragmented the land.

Commercial farming

- 1) **Commercial farming** - Machines are used in large scale. Farmers have big landholdings. Production is huge and surplus sold in the market. They use HYV seeds, fertilizers and water for irrigation. In USA commercial farming is undertaken in large area by clearing the prairies grassland.
- 2) **Plantations** – Single crop is grown in large area. It is a capital intensive agriculture with huge number of laborers working there. Mostly the area will have well developed transport system with a small industry within it. Example – Tea, coffee, rubber etc.

Cropping seasons – Rabi, Kharif and Zaid

- 1) **Rabi crop** – Sown in winter from October to December and harvested between April and June. It requires less rainfall. It is mainly grown in North western and northern part of the country. Example – wheat, barley, mustard etc.
- 2) **Kharif crop** – Sown in summer season with the onset of monsoon in the month of June and harvested in September – October. Needs more rainfall. During summer season the crop is grown all over the country. Main crops coming under this group are rice, maize, jowar, bajra etc.
- 3) **Zaid crop** – The crops are grown in-between rabi and kharif season from march to may. Light irrigation is also required. The main crops grown are watermelon, musk melon, cucumber etc.

Food crops – Rice and wheat

Rice – It is a kharif crop. Needs a temperature of **25°C** and a rainfall of more than **100 cm**. In less rainfall area, it grows with the help of irrigation. It is a **labour intensive crop**. It is grown almost all over the country. The main producing areas are northern plains, coastal areas,

North east and North west. It is the staple food of Indians. The main producing states are Tamilnadu, West Bengal, Andhra Pradesh, Bihar ,Punjab, Odisha, Uttar Pradesh etc

Wheat – It is grown during winter season and needs a temperature between **15°C to 25°C**. A rainfall of **20cm to 75 cm** is most suitable. The crop is confined to north India only and is grown in the states of Punjab, Haryana, Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh. In Punjab cultivation is done with the help of machines.

Millets—Jower, bajra and Ragi.

Millets has high nutritional values. **Jower** is the third most important food crop. It is a **rain fed crop** mostly grown in moist area. Producing States -Maharashtra followed by Karnataka, Andhra Pradesh and Madhya Pradesh.

Bajra grows well on **Sandy soil** and **shallow black soil**. Rajasthan is the leading producer followed by Uttar Pradesh ,Maharashtra, Gujarat and Haryana.

Ragi is a crop of dry region. It is very rich in iron, calcium, other micro nutrients and roughage. Karnataka is the leading producer followed by Himachal Pradesh, Uttaranchal, Sikkim, Jharkhand and Arunachal Pradesh.

Maize—it is used both as food and fodder. It grows well in old alluvial soil with a temperature between 21°C. to 27°C. Major producing states are Karnataka, Uttar Pradesh, Bihar, Andhra Pradesh and Madhya Pradesh.

Pulses—Largest producer and consumer of pulses. Major pulses produced in India are Tur, Urad, Moong, Masur, Peas and gram. It is grown both in Rabi season and Kharif season. Being leguminous crop it helps in restoring soil fertility by fixing nitrogen from the air. Main producing States are Madhya Pradesh, Uttar Pradesh, Rajasthan, Maharashtra and Karnataka.

Sugarcane—it grows in both tropical and sub-tropical region. It required in temperature between 21°C to 27°C and requires rainfall between 75cm to 100cm. It needs a great amount of manual labour. Uttar Pradesh is the leading producer followed by Maharashtra, Karnataka,

Tamilnadu, Andhra Pradesh, Bihar, Punjab and Haryana.

Oil seed – India is the largest producer of oil seeds in the world. Main oil seed types grown here are groundnut, mustard, coconut, sesamum, soyabean, castor seed, cotton seed and sunflower. Most of them are used for cooking purpose and are used as raw material in soap industries. Andhra Pradesh is the leading producer of groundnut.

Beverage crop-Tea and Coffee.

1. **Tea**-It grows well in tropical and sub-tropical climate. Well drained fertile soil rich in humus and organic matter is suitable for its growth. **Warm and moist frost free climate** is essential. It grows well in a temperature **between 20°C to 30°C with a rainfall of 150-300 cm.** uniformly distributed rainfall and large number of **skilled workers** are required. Main producers-Assam, West Bengal, Tamil Nadu, Kerala.

Coffee-It needs a hot climate with a temperature between **15°C to 28°C** and rainfall of **150 cm to 250 cm**.Its growth is confined to hilly areas of south India in the states of Karnataka, Kerala and Tamil Nadu. Karnataka leads in the production of coffee. **Arabica variety** of coffee is the best one which is grown in our country.

Horticulture (The art of producing fruits and vegetables is known as horticulture.)

India is the largest producer of fruits and vegetables in the world. Important fruits produced in India are mangoes, oranges, bananas, guava, pineapples, apples, pears, walnuts etc. Main producing states are Maharashtra, Andhra Pradesh, West Bengal, Kerala, Mizoram, Bihar, Jammu & Kashmir and Himachal Pradesh.

Rubber-It requires a temperature of 25 C and rainfall above 200cm.It is an equatorial crop and needs a moist and humid climate. Kerala is the leading producer followed by TamilNadu, Karnataka, Andaman and

Nicobar islands and Meghalaya. Major portion of the natural rubber is utilized by the tyre industries.

Fiber crop – Cotton and jute

Cotton – It grows well on the drier part of the **black soil** in the Deccan plateau. Needs high temperature **21°C to 30°C** of, **light rainfall, 210 frost free days** and bright sunshine. It takes 6 to 8 months to mature. Major producers of cotton are Maharashtra, Gujrat, Madhya Pradesh, Karnataka, Andhra Pradesh, Tamilnadu, Punjab, Haryana and Uttar Pradesh. Indian cotton clothes are of high demand all over the world.

Jute – It grows well on the well-drained fertile soil in the **flood plains**. The plant reduces the fertility of the soil, so it is cultivated in area where the soil is renewed every year, mostly in flood plains. **High temperature** is required for its growth. West Bengal is the leading producer followed by Bihar, Assam, Orissa and Meghalaya. Jute is mainly used for making ropes, mats etc. and also used as packing material.

Sericulture – Rearing of silkworm on mulberry plants for the production of silk fiber.

Technological and institutional reforms

Technological reforms:

1) Consolidation of landholdings to protect it from getting further fragmented.

2) Implementation of package technology or green revolution

Green revolution – Also known as package technology in which HYV seeds, fertilizers and water for irrigation was provided to the farmers, which helped them in increasing the production food grains.

3) Agricultural equipment were provided to the farmers at subsidized price.

Institutional reforms-

1) Grameen banks and co-operative banks were set up to provide loans to the farmers.

2) Crop insurance against flood , drought etc.

- 3) Providing kisan credit card (KCC) and personal accident insurance scheme (PAIS) to the farmers.
- 4) Setting up of agriculture offices, research centers to help them.
- 5) Weather forecasting and agriculture related programs on mass media to support it.
- 6) Minimum Support Price (MSP) was provided to the farmers by the Government.

White revolution— It is otherwise called as operation flood. Co-operative societies of milk producers were formed and they themselves managed the distribution of milk without the help of contractors who use to exploit them. Veterinary assistance, improvement in animal breeds, providing fodder at subsidized rate were taken up under white revolution.

Bhoodan Movements— Launched by Vinobha Bhave. He requested the people to distribute land among the poor landless farmers. Many landowners like Shri Ram Chandra Reddy supported the movement by offering 80

acres of his land to the poor farmers. This movement is also known as blood less revolution

Contribution of Agriculture –

It provides **employment** to more than 63 percent of the people. It **supplies raw materials** to the industries. Its contribution to GDP is showing a declined trend. It helps in earning foreign by exporting crops. **Indian Council of Research and Development (ICAR)** established by the government is providing support to agriculture by setting up agricultural universities, veterinary services, horticulture development and weather forecasting system. The growth rate in agriculture is declining because of the challenges from the international market and reduction in the financial help provided by the government like providing subsidy in fertilizers. Reduction in import duties and high labour cost is forcing the farmers to withdraw their investments in agriculture.

Food Security

Food Security is ensured by the government by using two measures -1) **Buffer Stock** 2) **Public Distribution**

System (PDS). FCI procures food grains from the farmers at **MSP** and it is distributed to the people through PDS. The **issue price** for APL and BPL are different but many BPL group are excluded and added to APL group which becomes an obstacle in ensuring food security.

Increase in food grains production should be on sustainable manner

- 1) There is a shift from the cultivation of food crops to cultivation of fruits led to reduction in net sown area.
- 2) Excessive use of fertilizers, pesticides and water declined the productivity of the land.
- 3) Inefficient water management has led to water logging and ground water depletion in states like Punjab.
- 4) Safety must be provided to small farmers.

Impact of Globalization on Agriculture

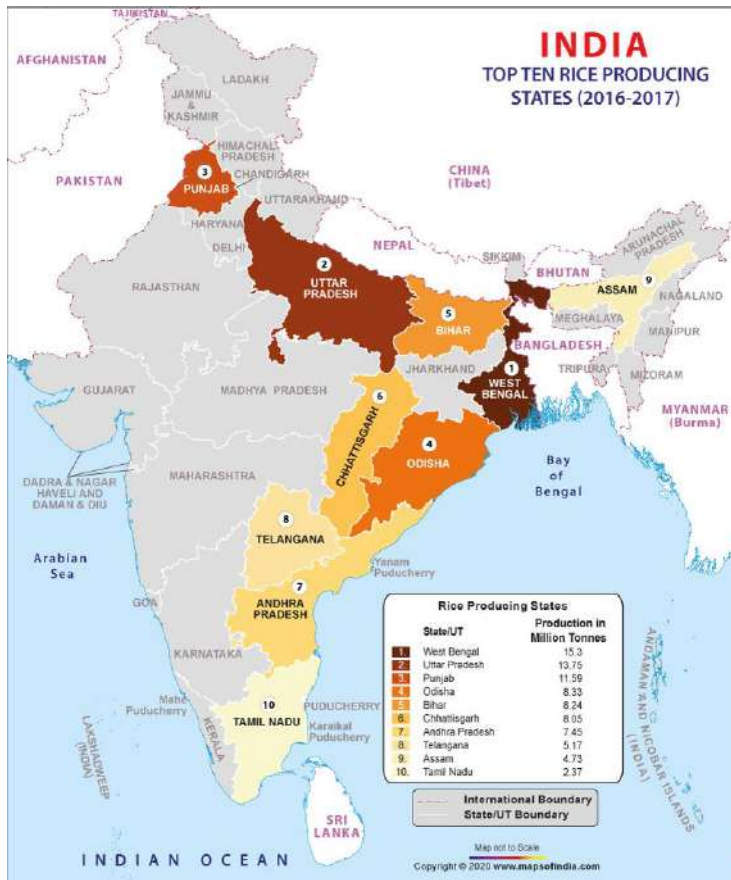
- 1) Under globalization, the farmers in India are **not able to compete** with the developed countries because of highly subsidized agriculture in their country.

- 2) To make agriculture successful proper support to be given to **small and marginal** farmers to compete with others
- 3) Modern agriculture has led to decline in **aquifers**.
- 4) **Small landholdings** leads to loss in agriculture.



WHICH STATE IS BIGGEST SUGARCANE PRODUCER?





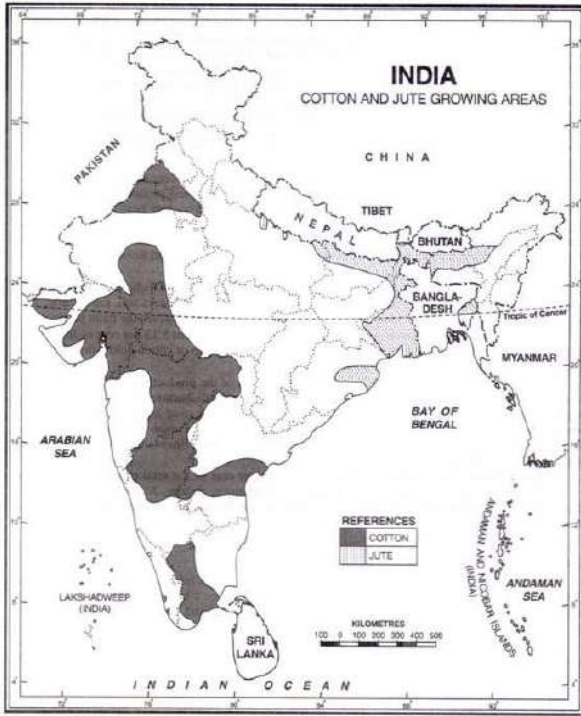


FIG. 24.3. India : Fibre Crops (Cotton & Jute)