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Chapter- 4 $\Rightarrow$ Agriculture

* Notes:-

- India is an agriculturally important country
- The two-thirds of its population is engaged in the agricultural activities.
- Agriculture is a primary activity, which produces most of the food that we consume.
- Agriculture is an age-old economic activity, over these years, cultivation methods have changed significantly depending upon characteristics of physical environment.
- Farming varies from subsistence to commercial type. At present, in different parts of India, the following systems are practised
 - Like primitive subsistence farming, commercial intensive subsistence farming act.
 - Rearing of silk worms for the production of silk fibre is known as sericulture.
 - Jute is also known as "Golden fibre".
- The FCI procures foodgrains from the farmers at the government announced minimum support price (MSP).

* Agriculture: The art & science of cultivating soil, raising crops & rearing livestock including fishing & forests.

* Commercial Agriculture: Farming in which farmer grows the crop with the aim of selling it in the market.

* Cash crops: - Cash crops are those which are grown by the farmers to sell in the market, e.g. tobacco & cotton.

* Dry Farming: - Dry farming is adopted in scanty rainfall areas, such types of crops are grown which require less irrigation facilities.

* Extensive Agriculture: - Agriculture in which the agriculturist tries to get the greatest output by bringing more & more barren land areas under cultivation.

* Fallow land: -> Leaving the field free without growing a crop for recuperation of soil fertility.

* Green Revolution: -> A breakthrough in seed technology which has led to a considerable increase in agricultural production, especially in wheat as a result of better inputs.

* Horticulture: - Intensive cultivation of vegetables, fruits & flowers.

* Intensive Agriculture: - Increase in the agricultural production by using scientific methods and better agricultural inputs.

* Kharif Season: - Kharif season starts with the onset of the monsoon, i.e., June-July and continues till the beginning of winter i.e., October. November. For e.g. rice, millets, etc.

* Zaid crops: -> These are crops which are sown b/w the rabi & the kharif crops. Watermelon, muskmelon, cucumber & vegetables are some examples of zaid crops.

* Biotechnology: -> Use of biological agents and processes for beneficial purposes is known as biotechnology.

* White Revolution: -> It is also known as 'Operation Flood' and is related to the increase in the production of milk.

* Subsistence Agriculture: -> Farming in which the main production is consumed by the farmer's household.

* Rabi Season: -> The crops which are grown in winter. From October to December and harvested in summer from April to June. Wheat, Barley, Peas, Gram are some ex. of rabi crops.

S. No.	Name of Crop	Type of Crop	India's Rank in the world	Cultivation season	Soil type	Temperature required	Major regions where grown.
1.	Rice	Staple food	2nd after the china	Kharif	dry or clay loam	about 25°C	Plains of north & both eastern India and hill region
2.	Wheat	Staple food	4th rank in world	Rabi	clay/loamy or black soil	10-15°C and 25°C-30°C depending	Ganga-Satlej plains (U.P., Haryana, P.C., Northern Rajasthan, M.P. & Bihar)
3.	Jowar	Coarse grains/millet	9th rank in the world	Any season	Black or alluvial	Average 26°-32°C	Eastern Maharashtra, western U.P., western M.P., Eastern Rajasthan, AP, Telangana, Tamil Nadu
4.	Bajra	Coarse grains/millet	4th rank in the world	Any season	Sandy or shallow black soil	20°-28°C	Rajasthan is major area, other areas of U.P., Gujarat, Telangana, Maharashtra
5.	Ragi	Coarse grains/millet	4th rank in the world	Any season	Sandy, dry, red black or shallow black soil	18°-25°C	Karnataka is the largest producer of Ragi followed by Uttarakhand, Tamil Nadu & Maharashtra
6.	Maize	Food & Fodder	9th rank in the world	Kharif	old alluvial soil	21°-32°C	Karnataka, M.P., AP, Bihar, Telangana, U.P., Rajasthan & Maharashtra
7.	Pulses	leguminous	1st rank in the world	Any season	Dry light soils	20°-30°C	M.P., U.P., Maharashtra, Rajasthan, etc.
8.	Sugarcane	Plantation	2nd after the Brazil	Annual	Fertile well drained soil	21°-27°C	U.P., Maharashtra, Tamil Nadu, Telangana, A.P.
9.	Oil seeds	Edible & raw materials	2nd (in 2008) after China	Kharif & Rabi both	Sand, loam & black	Depends on the type	A.P., Gujarat, U.P., M.P., West Bengal, Assam, Bihar, Haryana, Punjab, Rajasthan
10.	Tea	Plantation	3rd (in 2008) after China & Turkey	Annual	Deep & fertile well drained soil	10-30°C	Assam, West Bengal, Tripura, Kerala, Karnataka & Tamil Nadu
11.	Coffee	Plantation	3rd (in 2008) after China and Turkey	Annual	well drained soil, rich in humus	13°-28°C	Karnataka is major producer. Other areas include Nilgiri hills in Kerala & Tamil Nadu
12.	Horti-Culture crops	Fruits & Vegetables	2nd (in 2008)	Zaid/Any season	Variable		All over India

* Question-Answer

1. Distinguish b/w intensive subsistence & primitive subsistence farming.

Primitive Subsistence	Intensive subsistence
i) This type of farming is practised on small patches of land with the help of primitive tools like hoe, dao & digging sticks.	i) This type of farming is practised with the help of modern tools & modern inputs.
ii) Land productivity under this type of agriculture remains very low.	ii) Land productivity under this type of agriculture is high.
iii) This type of agriculture is practised in North East states.	iii) This type of agriculture is practised in northern plains.

2. What is commercial farming? Mention its major features.

⇒ Commercial farming is a type of farming under which farmers grow crops to sell in the market.

Features:-

- 1) Farmers use higher doses of modern inputs, e.g., high yielding variety (HYV) seeds, chemical fertilisers, insecticides etc.
- 2) The per hectare productivity is very high.
- 3) Rice, sugarcane, tea, coffee are the major crops which are grown under this.

3. What is plantation agriculture? Write some features of the plantation agriculture.

→ This is a type of agriculture which involves growing & processing of a single cash crop purely meant for sale. Rubber, tea, coffee, spices, coconut & fruits are some of the important crops which come under the category of plantation agriculture.

Features:-

- i) It is a single crop farming.
- ii) It is a capital intensive farming, i.e., a huge amount of capital is required.
- iii) It needs vast estates, managerial ability, technical know-how, sophisticated machinery, fertilisers, good transport facilities & a factory for processing.
- iv) This type of agriculture has developed in areas of north-eastern India, Sub-Himalayan region, West-Bengal & Nilgiri.

4. Explain the favourable geographical conditions required for the production of rice. Also mention the major rice producing states of India.

⇒ i) Temperature:- It is a kharif crop which requires high temperature and high humidity. This means monthly temperature of about 25°C with minor variations during the sowing, growing & harvesting season, is suitable for the growth of the plant.

ii) Rainfall: Rice needs abundant rainfall, i.e., more than 100 cm. It can grow in areas with less rainfall, but with assured irrigation. Rice is grown in Punjab & Haryana with the help of irrigation.

iii) Soil: Rice can grow in a variety of soils including silts, loams, & gravels, but it is grown best in alluvial soil with a sub-soil of impervious clay.

→ Areas of production: Rice is cultivated in a variety of almost all states of India, but most of its cultivation is concentrated in the river valleys, deltas of rivers & the coastal plains.

The main rice producing states are West Bengal, Andhra Pradesh, Uttar Pradesh, Bihar, Punjab, Odisha, Karnataka, Assam & Maharashtra.

5. Which type of climate is required for the cultivation of wheat? Name any four important wheat producing states of India.

Ans → i) Temperature: Cool & moist weather during growth, & warm & dry climate during ripening is needed.

ii) Rainfall: 50-75 cm rainfall is required. Rainfall is necessary & beneficial, 15 days after sowing, and 15 days before ripening. A few light winter showers or assured irrigation ensures a bumper harvest.

iii) Soil: Light (loam/loamy) soil is required. It can also be grown in black soil.

Important producers: Punjab, Haryana, western Uttar Pradesh & Madhya Pradesh as the main producers of wheat.

6. Describe the temperature & climatic conditions required for the cultivation of sugarcane. Name two leading producers.

⇒ i) Temperature: Sugarcane needs hot & humid climate with temperature ranging b/w 21°C to 27°C . Very high temperature is harmful for its growth, while low temperature slows its growth. It cannot withstand frost. Cool temperature is needed at the time of ripening.

ii) Rainfall: It grows best in areas receiving 75 cm to 100 cm of rainfall. Too heavy rainfall results in low sugar content.

iii) Soil: Sugarcane grows on well-drained fertile soil. It can grow on a variety of soils including black, alluvial, loamy & reddish loam.

Sugarcane: But the best soil is the alluvial soil of the Ganga Plain & the black soil of Southern India. Sugarcane exhausts the fertility of the soil. Hence, the use of manure is essential to ensure high yields.

→ Areas of Production:- Uttar Pradesh is the largest producer of sugarcane. The other state in the Ganga - Plain are Bihar, Punjab & Haryana.

7. Name the most important beverage crop of India. Describe the suitable climatic conditions required for its growth. Also mention the major states producing that crop.

⇒ Tea is the most important beverage crop of India.

→ Climatic Conditions:-

i) Temperature:- The tea plant grows well in tropical & sub-tropical climate. Tea bushes require warm & moist, frost-free climate all through the year. Tea bushes need temperature of more than 25°C .

ii) Rainfall:- Tea plant need heavy rainfall ranging b/w 150 cm to 250 cm. The rainfall should be well distributed throughout the year.

iii) Soil:- The plant requires a light loamy soil. The soil should be rich in humus and iron content. Tea is a soil exhausting crop, so frequent use of chemical fertilisers and manure is essential.

→ Producers:-

Major tea producing states are Assam, West Bengal, Hills of Darjeeling & Jalpaiguri Districts, Tamil Nadu & Kerala. Apart from these

Himachal Pradesh, Uttarakhand, Meghalaya, Andhra Pradesh & Tripura are also tea producing states in the country.

8. Explain the favourable climatic conditions required for the production of rubber. Also mention the states producing rubber.

⇒ i) Temperature:- It is a tree of the tropical forests, & requires a constant high temperature above 25°C . Thus the rubber tree cannot be grown at high altitudes.

ii) Rainfall:- It needs heavy & well distributed rainfall throughout the year. The plant needs rainfall more than 200 cm.

iii) Soil:- The plant requires alluvial or laterite soil.

Areas of Production:-

India ranks fifth among the world's natural rubber producers. The state of Kerala is the largest producer of rubber in India. Kerala accounts for about 91% of the total area under rubber plantation. Tamil Nadu, Karnataka and The Andaman & Nicobar Islands including the Garo Hills of the Himalayas are the other producers.

9. Differentiate b/w the commercial agriculture & the subsistence agriculture.

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Commercial Agriculture

i) Commercial agriculture is that practice of farming in which crops are grown for trade.

ii) This is practised on large farms.

iii) This is capital intensive.

iv) Modern technology and implements are used. eg. - The production of sugarcane in U.P.

Subsistence Agriculture

i) Subsistence agriculture is that practice of farming in which the farmer and his family raise crops for home consumption.

ii) This is practised on small farms.

iii) This is labour intensive.

iv) Old technology and old implements are used. eg. - The production of wheat in some parts of India.

10. Describe any five reforms brought in the Indian agriculture after independence through the efforts of the Indian government.

⇒ i) Institutional Reforms: To increase production in agriculture, the government has introduced some institutional measures which include collectivisation, consolidation of holding, co-operation & abolition of Zamindari system.

ii) Comprehensive land development programme:- In the 1980s & 1990s a comprehensive land development programme was initiated, which included both institutional & technical reforms. Provision for crop insurance against drought,

flood, cyclone, fire & disease, establishment of Grameen banks, cooperative societies and banks for providing loan facilities to the farmers at lower rates of interest were some important steps in this direction.

iii) Subsidies:- The government is providing huge subsidies on the agricultural inputs. At present, maximum subsidy is being given on fertilizers.

iv) HYV seeds & Agriculture Universities:- In order to enhance production, the government is providing HYV seeds to the farmers. Special seminars are also being held. Many new agricultural universities have been established.

v) Public Procurement System & Agriculture Price Commission:-

Agricultural Price Commission has been set up which declares the price of agricultural products in advance so that the farmers may know what they are going to get for their agricultural products. Government agencies like the F.C.I. (Food Corporation of India) purchase the agricultural products from the farmers.

vi) Crop Insurance & Agricultural finance:- As we are aware that the Indian Agriculture mainly depends on nature, as high risk crops are also being insured. The government has established special banks like the 'NABARD' to provide agricultural loans to farmers.