

For XAT , CMAT , SNAP , MAT , IIFT Exam

AGRICULTURE IN INDIA

SOILS

- Soil is the finest particle found on the earth surface.
- Soil is the uppermost layer of the land surface, usually composed of minerals, organic matter, living organisms, air and water
- Alluvial soil, black soil, red soil and laterite soil are the major types of soil in India
- Khadar- Newer alluvium soil found in valley flooded almost every year
- Bhangar- Older alluvium soil found in 30 mts above flood level

SOIL TYPES AND THEIR DISTRIBUTION IN INDIA

Soil Type	Distribution	Crops growing
Alluvial soil	Ganga and Brahmaputra river valleys; Plains of Uttar Pradesh, Uttarakhand, Punjab, Haryana, West Bengal and Bihar	Rice, Wheat, Sugarcane and Oilseeds
Black soils	Maharashtra and Malwa plateaus, Kathiawar peninsula, Telangana and Rayalaseema region of Andhra Pradesh and northern part of Karnataka	Cotton, Millets, Tobacco and Sugarcane
Red soils	Eastern parts of Deccan plateau, southern states of Kerala, Tamil Nadu, Karnataka and Chota Nagpur plateau (Jharkhand)	Wheat, Rice, Cotton, Sugarcane and Pulses
Laterite soils	Assam hills, hill summits of Kerala and Karnataka and eastern Ghats and region of Odisha	Coffee, Rubber, Cashew nut and Tapioca
Forest and mountain soils	Coniferous forest belts of Jammu and Kashmir, Himachal Pradesh, Uttarakhand and Sikkim. Eastern and Western Ghats	Coffee, tea, rice, maize, potato, barley, tropical fruits and various types of spices
Arid and desert soils	Rajasthan, Northern Gujarat and southern Punjab	millets, barley, cotton, maize and pulses
Peaty and marshy soils	Kottayam and Alappuzha districts of Kerala; and coastal areas of Odisha and Tamil Nadu, Sundarbans of West Bengal, in	Paddy, jute

	Bihar and Almora district of Uttarakhand	
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IRRIGATION

- The main sources of irrigation used in different parts of the country are Canal irrigation ,Well irrigation and Tank irrigation
- Canal irrigation is the second most important source of irrigation in our country. Percentage of area under canal irrigation in our country is 24%
- Well irrigation is the most important source of irrigation as it contributes about 62 percent of net irrigated area in India
- A tank is a natural or man-made hollow on the surface developed by constructing a small bund around it across a stream

TYPES OF FARMING

- Agriculture is an age-old economic activity in our country. Over these years, cultivation methods have changed significantly depending upon the characteristics of physical environment, technological know-how and socio-cultural practices. Farming varies from subsistence to commercial type.

Primitive Subsistence Farming

- It is a ‘slash and burn’ agriculture. Farmers clear a patch of land and produce cereals and other food crops to sustain their family. When the soil fertility decreases, the farmers shift and clear a fresh patch of land for cultivation. This type of shifting allows Nature to replenish the fertility of the soil through natural processes; land productivity in this type of agriculture is low as the farmer does not use fertilisers or other modern inputs.
- It is known by different names in different parts of the country
- It is jhumming in north-eastern states like Assam, Meghalaya, Mizoram and Nagaland; Pamlou in Manipur, Dipa in Bastar district of Chhattishgarh, and in Andaman and Nicobar Islands.

Jhumming

- The ‘slash and burn’ agriculture is known as ‘Milpa’ in Mexico and Central America, ‘Conuco’ in Venezuela, ‘Roca’ in Brazil, ‘Masole’ in Central Africa, ‘Ladang’ in Indonesia, ‘Ray’ in Vietnam.
- In India, this primitive form of cultivation is called ‘Bewar’ or ‘Dahiya’ in Madhya Pradesh, ‘Podu’ or ‘Penda’ in Andhra Pradesh, ‘Pama Dabi’ or ‘Koman’ or Bringa’ in Odisha, ‘Kumari’ in Western Ghats, ‘Valre’ or ‘Waltre’ in South-eastern Rajasthan, ‘Khil’ in the Himalayan belt, ‘Kuruwa’ in Jharkhand, and ‘Jhumming’ in the North-eastern region.

Intensive Subsistence Farming

- This type of farming is practised in areas of high population pressure on land. It is labour intensive farming, where high doses of biochemical inputs and irrigation are used for obtaining higher production.
- Plantation is also a type of commercial farming. In this type of farming, a single crop is grown on a large area. The plantation has an interface of agriculture and industry

Commercial Farming

- The main characteristic of this type of farming is the use of higher doses of modern inputs, e.g. high yielding variety (HYV) seeds, chemical fertilisers, insecticides and pesticides in order to obtain higher productivity.
- In India, tea, coffee, rubber, sugarcane, banana, etc.. are important plantation crops.
- Tea in Assam and North Bengal, coffee in Karnataka are some of the important plantation crops grown in these states.

CROPPING SEASONS IN INDIA

- India has three cropping seasons — Rabi, Kharif and Zaid
- The kharif season largely coincides with Southwest Monsoon under which the cultivation of tropical crops, such as rice, cotton, jute, jowar, bajra and tur is possible.
- The rabi season begins with the onset of winter in October-November and ends in March-April. The low temperature conditions during this season facilitate the cultivation of temperate and subtropical crops such as wheat, gram and mustard.
- In between the rabi and the kharif seasons, there is a short season during the summer months known as the Zaid season. Some of the crops produced during ‘zaid’ are watermelon, muskmelon, cucumber, vegetables and fodder crops.
- Sugarcane takes almost a year to grow.

Cropping Seasons	Major crops cultivated in Northern States	Major crops cultivated in Southern States
Kharif Season June–September	Rice, Cotton, Bajra, Maize, Jowar, Tur	Rice, Ragi, Maize, Jowar, Groundnut
Rabi Season October–March	Wheat, Gram, Rapeseeds, Mustard, Barley	Rice, Maize, Ragi, Groundnut, Jowar
Zaid Season April–June	Vegetables, Fruits, Fodder	Rice, Vegetables, Fodder

MAJOR CROPS CULTIVATED IN INDIA

- A variety of food and non-food crops are grown in different parts of the country depending upon the variations in soil, climate and cultivation practices. Major crops grown in India are rice, wheat, millets, pulses, tea, coffee, sugarcane, oil seeds, cotton and jute, etc.

RICE

- It is the staple food crop of a majority of the people in India.
- India 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.
- The first 10 leading rice producing states are West Bengal (First in India) Uttar Pradesh, Punjab, Tamil Nadu, Andhra Pradesh, Bihar, Chhattisgarh, Odisha, Assam, and Haryana.

WHEAT

- This is 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 and a bright sunshine at the time of ripening
- The major wheat-producing states are Uttar Pradesh, Punjab, Haryana, Rajasthan and Madhya Pradesh.

MILLETS

- Jowar, bajra and ragi are the important millets grown in India
- Jowar is the third most important food crop with respect to area and production
- Jowar is essentially a crop of the Peninsular India
- Major Jowar producing States were Maharashtra, Karnataka, Andhra Pradesh and Madhya Pradesh
- Bajra grows well on sandy soils and shallow black soil
- Bajra is a crop of dry region.
- Rajasthan is the largest producer of bajra followed by Uttar Pradesh, Haryana, Gujarat and Maharashtra
- Ragi is a crop of dry regions and grows well on red, black, sandy, loamy and shallow black soils.
- Major Ragi producing states are: Karnataka, Tamil Nadu, Himachal Pradesh, Uttarakhand, Sikkim, Jharkhand and Arunachal Pradesh.

MAIZE

- It is a kharif crop which requires temperature between 21°C to 27°C and grows well in old alluvial soil
- Major maize-producing states are Karnataka, Uttar Pradesh, Bihar, Andhra Pradesh, Telangana and Madhya Pradesh

PULSES

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

- The major pulse growing areas are Madhya Pradesh, Uttar Pradesh, Rajasthan, Maharashtra and Andhra Pradesh

SUGARCANE

- India is the second largest producer of sugarcane only after Brazil
- Uttar Pradesh is the leading producer of sugarcane in India followed by Maharashtra, Karnataka, Tamil Nadu and Gujarat
- It grows well in hot and humid climate with a temperature of 21°C to 27°C and an annual rainfall between 75cm. and 100cm
- Irrigation is required in the regions of low rainfall.

OIL SEEDS

- Main oil-seeds produced in India are groundnut, mustard, coconut, sesamum (til), soyabean, castor seeds, cotton seeds, linseed and sunflower
- 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
- Linseed and mustard are rabi crops.
- Sesamum is a kharif crop in north and rabi crop in south India.
- Castor seed is grown both as rabi and kharif crop.

TEA

- Tea cultivation is an example of plantation agriculture. It is also an important beverage crop introduced in India initially by the British. Today, most of the tea plantations are owned by Indians
- Tea is an evergreen plant that mainly grows in tropical and subtropical climates
- India is the second largest producer of tea after China in the world.
- Assam is the larger producer of tea in India. Other states are Tamil Nadu, Kerala and West Bengal.

COFFEE

- Coffee is a tropical plantation crop. Its seeds are roasted, ground and are used for preparing a beverage. There are three varieties of coffee i.e. arabica, robusta and liberica. India mostly grows superior quality coffee, arabica, which is in great demand in International market. Initially its cultivation was introduced on the Baba Budan Hills and even today its cultivation is confined to the Nilgiri in Karnataka, Kerala and Tamil Nadu.
- India is the 7th largest producer of coffee globally.
- Karnataka is the leading producer of coffee in India. It produces 71% in India, and 3.14 % in the world
- Karnataka alone accounts for more than two-third of total production of coffee in the country.

SPICES

- Pepper, chillies, turmeric, ginger, cardamom, clove and areca nut are the major spices cultivated in India.

HORTICULTURE CROPS

- It refers to the cultivation of fruits, flowers and vegetables
- India was the second largest producer of fruits and vegetables in the world after China
- India contributes about 13% of the world's production of vegetables.

Non-Food Crops

RUBBER

- Rubber plantation were first established in Kerala in 1902
- 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.
- Rubber is an important industrial raw material. 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. The first three are derived from the crops grown in the soil, the latter 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.

COTTON

- India is believed to be the original home of the cotton plant.
- India ranks second next to China in the production of cotton
- Top cotton producing countries are Gujarat, Maharashtra, Andhra Pradesh and Punjab
- Cotton is the most important cash crop of India. It provides raw material to the largest industry of India
- It is a kharif crop and requires 6 to 8 months to mature
- India grows both short staple (Indian) cotton as well as long staple (American) cotton called 'narma' in north-western parts of the country. Cotton requires clear sky during flowering stage.

JUTE

- It is a tropical fibre crops, grows well in the alluvial soil
- West Bengal is the leading state both in cultivation and production of jute. The other cultivators of jute are Bihar, Assam and Meghalaya.
- It is known as the golden fibre
- It is used in making gunny bags, mats, ropes, yarn, carpets and other artefacts.