

Chapter- 4

AGRICULTURE**STUDY NOTES**

Two-thirds of India's population is engaged in agricultural activities. Agriculture is a primary activity, which produces most of the food raw material for various industries. In Geography Chapter 4 - Agriculture, you will study about the various types of farming, cropping patterns and major crops grown in India. In the end, you will know how much Agriculture contributes to the National Economy, Employment and Output.

Types of Farming

The cultivation methods depend upon the characteristics of the physical environment, technological know-how and socio-cultural practices. Farming varies from subsistence to commercial type. In different parts of India, the following farming systems are practiced.

1. Primitive Subsistence Farming

It is a 'slash and burn' agriculture. Farmers clear a patch of land and produce cereals and other food crops. When the soil fertility decreases, the farmers shift and clear a fresh patch of land for cultivation. It is known by different names in different parts of the country. It is known as **jhumming** in north- eastern states.

- Land productivity is low in this type of agriculture.
- This type of farming depends on monsoon.
- This farming is practiced in few parts of India.

2. Intensive Subsistence Farming

- This type of farming is practiced in areas of high population pressure on land.
- It is labor-intensive farming, where high doses of biochemical inputs and irrigation are used for higher production.

3. Commercial Farming

This type of farming uses higher doses of modern inputs such as high yielding variety (HYV) seeds, chemical fertilizers, insecticides and pesticides to obtain higher productivity.

Plantation is a type of commercial farming in which a single crop is grown on a large area. Plantations cover large tracts of land, using capital intensive inputs, with the help of

migrant laborers. All the produce is used as a raw material in industries.
E.g.: Tea, Coffee, Rubber, Sugarcane, Banana.

Cropping Pattern

India has three cropping seasons:

1. Rabi
2. Kharif
3. Zaid

	Rabi	Kharif	Zaid
Sowing Season	Winter from October to December	Beginning of the rainy season between April and May	In between the rabi and the Kharif seasons, there is a short season during the summer months known as the Zaid season (in the months of March to July)
Harvesting Season	Summer from April to June	September-October	
Important Crops	Wheat, Barley, Peas, Gram and Mustard.	Paddy, Maize, Jowar, Bajra, Tur (Arhar), Moong, Urad, Cotton, Jute, Groundnut and Soyabean.	Watermelon, Muskmelon, Cucumber, Vegetables and Fodder crops

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Major Crops in India

A variety of food and non-food crops are grown in different parts of India 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
- Jute

We will discuss all of these one by one, in detail.

Rice

1. It is a kharif crop.
2. It requires high temperature and high humidity with annual rainfall above 100 cm.
3. India is the second largest producer of rice in the world after China.
4. It is grown in the plains of north and north-eastern India, coastal areas and the deltaic regions.

Wheat

1. This is a rabi crop.
2. It requires a cool growing season and bright sunshine at the time of ripening.
3. It requires 50 to 75 cm of annual rainfall evenly distributed over the growing season.
4. The Ganga-Satluj plains in the north-west and black soil region of the Deccan are two main wheat-growing zones in India.
5. It is the second most important cereal crop and main food crop, in the north and north-western part of India.

Millets

1. Jowar, Bajra and Ragi are the important millets grown in India.
2. These are known as coarse grains and have very high nutritional value.

Jowar	Bajra	Ragi
3rd most important food crop with respect to area and production.	Grows well on sandy soils and shallow black soil.	It is a crop of dry regions.
It is a rain-fed crop mostly grown in the moist areas.		Grows well on red, black, sandy, loamy and shallow black soils.
Mainly produced in Maharashtra, Karnataka, Andhra Pradesh and Madhya Pradesh.	Major producing states are Rajasthan, Uttar Pradesh, Maharashtra, Gujarat and Haryana.	Major producing states are Karnataka, Tamil Nadu, Himachal Pradesh, Uttarakhand, Sikkim, Jharkhand and Arunachal Pradesh.

Maize

1. It is a Kharif crop.
2. It requires temperature between 21°C to 27°C and grows well in old alluvial soil.
3. It is used both as food and fodder.

4. Major maize-producing states are Karnataka, Madhya Pradesh, Uttar Pradesh, Bihar, Andhra Pradesh and Telangana.

Pulses

1. India is the largest producer and consumer of pulses in the world.
2. Pulses are the major source of protein in a vegetarian diet.
3. Major pulses grown in India are Tur (Arhar), Urad, Moong, Masur, Peas and Gram.
4. Pulses are mostly grown in rotation with other crops so that the soil restore fertility.
5. Major pulse producing states are Madhya Pradesh, Rajasthan, Maharashtra, Uttar Pradesh and Karnataka.

Food Crops other than Grains

Sugarcane

1. It is a tropical as well as a subtropical crop.
2. It grows well in hot and humid climates with a temperature of 21°C to 27°C and annual rainfall between 75cm to 100cm.
3. It can be grown on a variety of soils.
4. Needs manual labour from sowing to harvesting.
5. India is the second largest producer of sugarcane only after Brazil.
6. Sugarcane is the main source of Sugar, Gur (Jaggery), Khansari and molasses.
7. The major sugarcane-producing states are Uttar Pradesh, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Telangana, Bihar, Punjab and Haryana.

Oil Seeds

Different oil seeds are grown covering approximately 12% of the total cropped area of India. Main oil- seeds produced in India are:

- *Groundnut*: is a Kharif crop and accounts for half of the major oilseeds produced in India. Gujarat is the largest producer of groundnuts.
- *Mustard*: is a rabi crop.
- *Sesamum (til)*: is a Kharif crop in the north and rabi crop in south India.
- *Castor seeds*: It is grown as both Rabi and Kharif crop.
- *Linseed*: is a rabi crop.
- *Coconut*
- *Soyabean*
- *Cotton seeds*
- *Sunflower*

Tea

1. It is also an important beverage crop introduced by the British in India.
2. The tea plant grows well in tropical and sub-tropical climates with deep and fertile well-drained soil, rich in humus and organic matter.
3. Tea bushes require warm and moist frost-free climate all through the year.
4. Tea is a labor-intensive industry.
5. Major tea producing states are Assam, hills of Darjeeling and Jalpaiguri districts, West Bengal, Tamil Nadu and Kerala.

Coffee

Yemen coffee is produced in India and this variety of coffee is in great demand all over the world. Its cultivation was introduced on the Baba Budan Hills and is confined to the Nilgiri in Karnataka, Kerala and Tamil Nadu.

Horticulture Crops

India is a producer of tropical as well as temperate fruits. Major crops produced are pea, cauliflower, onion, cabbage, tomato, brinjal and potato. Some of the famous horticulture crops grown in India are:

- **Mangoes** of Maharashtra, Andhra Pradesh, Telangana, Uttar Pradesh and West Bengal
- **Oranges** of Nagpur and Cherrapunjee (Meghalaya), bananas of Kerala, Mizoram, Maharashtra and Tamil Nadu.
- **Lichi and Guava** of Uttar Pradesh and Bihar
- **Pineapples** of Meghalaya
- **Grapes** of Andhra Pradesh, Telangana and Maharashtra
- **Apples, pears, apricots and walnuts** of Jammu and Kashmir and Himachal Pradesh

Non-Food Crops

Rubber	Fiber	Cotton	Jute
It is an equatorial crop.	Cotton, Jute, Hemp and Natural Silk are the four major fiber crops.	It is a Kharif crop.	It is known as the golden fiber.
It requires a moist and humid climate with rainfall of more than 200cm and temperature above 25°C.	Cotton, Jute and Hemp are grown in the soil.	It requires high temperature, light rainfall, 210 frost-free days and bright sunshine for its growth.	It grows well on well-drained fertile soils in the flood plains. High temperature is required for its growth.

It is an important industrial raw material	Natural Silk is obtained from cocoons of the silkworms fed on green leaves	Cotton grows well in black cotton soil of the Deccan plateau.	It is used in making gunny bags, mats, ropes, yarn, carpets and other artefacts.
Mainly grown in Kerala, Tamil Nadu, Karnataka and Andaman and Nicobar islands and Garo hills of Meghalaya.	Rearing of silkworms for the production of silk fiber is known as Sericulture .	Major cotton-producing states are Maharashtra, Gujarat, Madhya Pradesh, Karnataka, Andhra Pradesh, Telangana, Tamil Nadu, Punjab, Haryana and Uttar Pradesh.	Major jute producing states are West Bengal, Bihar, Assam, Odisha and Meghalaya.

Technological and Institutional Reforms

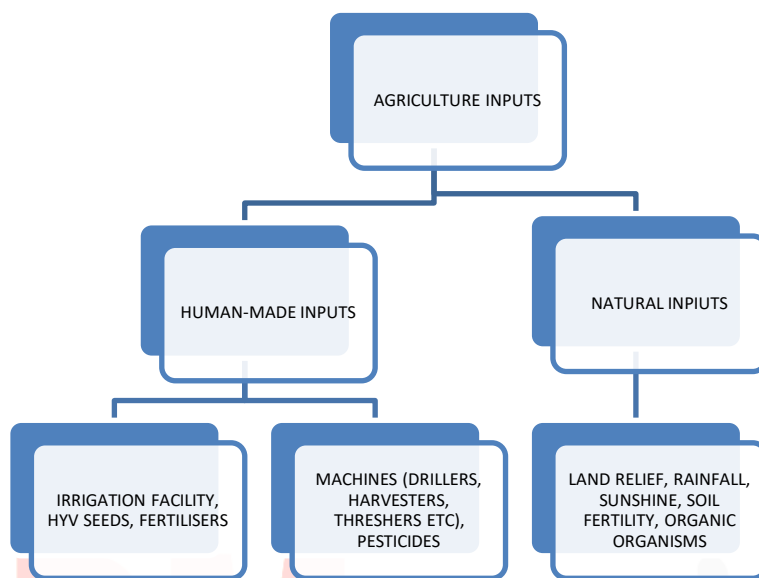
Agriculture provides a livelihood for more than 60% of its population, so this sector needs some serious technical and institutional reforms. The Green Revolution and the White Revolution were some of the reforms initiated by people to improve agriculture.

Some Initiatives taken by the Government are:

- Schemes introduced by Government such as Kissan Credit Card (KCC), Personal Accident Insurance Scheme (PAIS).
- Special weather bulletins and agricultural programmes for farmers on the radio and television were introduced.
- The government also announces 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% of the total workforce was employed by the farm sector.
- The share of agriculture in the GDP is declining.
- Indian Council of Agricultural Research (ICAR), agricultural universities, veterinary services and animal breeding centers, horticulture development, research and development in the field of meteorology and weather forecast, etc. are a few of the initiatives introduced by the government to improve Indian agriculture.



Slash and Burn Farming in India

Name	Regions
Jhumming	Assam, Meghalaya, Mizoram and Nagaland
Pamlou	Manipur
Dipa	Bastar (Chhattisgarh) and Andaman & Nicobar Islands
Bewar or Dahiya	Madhya Pradesh
Podu or Penda	Andhra Pradesh
Pama Dabi or Koman or Bringa	Orissa
Kumara	Western Ghats
Valre or Waltre	South eastern Rajasthan
Khi	Himalayan belt
Kuruwa	Jharkhand

	Terms	Country or Region
Asia	Ladang	Indonesia, Malaysia
	Jumar	Java
	Ray	Vietnam
	Tam-ray, Rai	Thailand
	Hay	Laos
	Hanumo	Philippines
	Chena	Sri Lanka, Japan
	Karen	Korea
	Taungya	Burma
	Bewar, dhya, dippa, erka, jhum, kumri, penda, pothu, podu	India

Primitive Subsistence farming

1. It is practised on small patches of land.
2. Primitive tools like hoe, dao and digging sticks, and family or community labour are used.
3. In this type of farming, farmers depend on the monsoons and natural fertility of the soil.
4. Land productivity in this type of agriculture is low.

Intensive Subsistence farming

1. It is practised on bigger land holdings.
2. Modern inputs like HYV seeds, chemical fertilisers, insecticides, etc., to obtain higher productivity are used.
3. In intensive subsistence, irrigation facilities like tubewells and canal irrigation is used.
4. Land productivity is high as it is meant for commercial purposes.

SUBSISTENCE FARMING	COMMERCIAL FARMING
The farming practice in which crops are raised for personal consumption, it is known as subsistence farming.	The farming practice, in which the farmer grows crops for the purpose of trade, it is called commercial farming.
Labor intensive	Capital intensive
It is practiced in small area.	It is practiced in large area.
It is enhanced through the use of manures.	It is enhanced through higher doses of modern inputs.
Food grains, fruits and vegetables	Cash crops and cereals
It depends on monsoon.	It uses modern irrigation methods.
Traditional methods are used.	Machines are used.

S.NO	CROP	TEMPERATURE	RAINFALL	SOILS	SPECIAL FEATURE	AREAS OF AVAILABILITY
1	RICE	Above 25°C, high humidity	Annual above 100cm	Alluvial, Clayey soil that retains water.	Major food crop (staple diet), <u>Kharif</u> crop	China, India, Bangladesh, Japan, Sri Lanka, Egypt
2	WHEAT	Below 25°C	Annual 50 to 75cm	Loamy	Staple crop, winter crop of India	USA, Canada, Argentina, Russia, Ukraine, Australia, India
3	MILLETS (Jowar, baira, ragi)	Moderate temp.	Low rainfall	Sandy	Coarse grains <u>Ragi</u> is rich in iron, calcium, micro nutrients and roughage.	India, Nigeria, China, Niger
4	MAIZE	21°C to 27°C	75cm	Well drained fertile soil	Food and fodder crop	USA, Brazil, China, Russia, Canada, Mexico

S.NO.	CROP	TEMPER- ATURE	RAINFALL	SOILS	SPECIAL FEATURE	AREAS OF AVAILABILITY
5	COTTON	High temp, bright sunshine	Light rainfall	Black soil	Takes 6-8months to mature. Raw material for cotton textile industry.	China, USA, India, Pakistan, Brazil, Egypt
6	JUTE	High temp. during growing season	Heavy rainfall, humid	Alluvial soil	Golden fibre	India, Bangladesh
7	COFFEE	Warm and wet climate	-	Loamy soil	Beverage crop Indian coffee is famous for its quality in the world.	Brazil, Columbia, India
8	TEA	Cool, frost free climate	Abundant Rainfall	Loamy Soil	Beverage crop Plantation crop Terrace Cultivation Labour Intensive crop (skilled labour requires)	Kenya, China, Sri Lanka and in India it was introduced by the British.

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