

# SOCIAL SCIENCE

(GEOGRAPHY)

**AGRICULTURE** 









# **Chapter 4: Agriculture**

## **Concepts Covered:**

- 1. Types of Farming
  - Primitive Subsistence Farming
    - Slash and Burn
  - Intensive Subsistence Farming
  - Commercial Farming
    - Plantation
- 2. Cropping Pattern
  - Main types of cropping season
- 3. Major Crops
  - > Types of Farming
  - Primitive Subsistence Farming
  - > Slash and Burn
  - Intensive Subsistence Farming
  - Commercial Farming
  - Plantation
    - Jowar
    - Bajra
    - Ragi
  - Pulses
- 4. Food Crops other than Grain
  - > Jowar
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  - Pulses
- 5. Non-Food Crops
  - **Rubber**
  - Fibre crops
  - **Cotton**
  - > Jute
- 6. Technological and Institutional Reforms
  - > Land development programme
- 7. Bhoodan Gram dan Movement
- 8. Contribution of Agriculture to the National Economy, Employment and Output

Future's Key

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- > Condition of agriculture sector in India
- 9. Impact of Globalisation on Agriculture
- 10. Mind Map

(Colourful & Interactive/ Complete All Concept Covered)







**Practice Questions (All Topics Available)** 



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### **TYPES OF FARMING**



# **TYPES OF FARMING**

In India we are dependent on agriculture for the following things:

- Occupation
- Food grains
- Raw material for industries





Agriculture is an age-old economic activity in our country.

Cultivation methods have changed significantly depending upon the characteristics of physical environment, technological know-how and socio-cultural practices.

- Primitive Subsistence Farming
- Intensive subsistence Farming
- Commercial Farming







### TYPES OF FARMING





# **Primitive Subsistence Farming**

- Primitive subsistence farming is Practised on small patches of land with the help of primitive tools.
- This type of farming depends upon monsoon, natural fertility of the soil and suitability of other environmental conditions to the crops grown.

### **Slash and Burn**

It is a 'Slash and Burn' type of agriculture.





- Shifting allows Nature to replenish the fertility of the soil through natural processes.
- It is known by different names in different parts of the country.

### Slash and burn in India

It is called Jhumming in north-eastern states like Assam, Meghalaya, Mizoram, and Nagaland; Pamlou in Manipur, Dipa in Bastar district of Chhattisgarh, and in Andaman and Nicobar Islands.



### TYPES OF FARMING







### Slash and Burn in World

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.



## **Intensive Subsistence Farming**

For high population we require more food on limited piece of land.

Intensive Subsistence Farming is labour intensive farming, where high doses of biochemical inputs and irrigation are used for obtaining higher production.

### Right of inheritance

- Reduce land size holding
- The farmer is forced to take maximum output from the limited land.
- Creating enormous pressure on agriculture land.



### TYPES OF FARMING



# **Commercial Farming**

Farming performed from the perspective of earning money by higher production through the use of higher doses of modern inputs, e.g., high yielding variety (HYV) seeds, chemical fertilisers, insecticides and pesticides is known as Commercial farming.

The degree of commercialisation of agriculture varies from one region to another.





### **Example**

Rice is a commercial crop in Haryana and Punjab, but in Odisha, it is a subsistence crop.





### **Plantation**

Plantation is also a type of commercial farming. A single crop is grown on a large area.

The plantation has an interface of agriculture and industry.

- Cover large tracts of land.
- Capital intensive inputs.
- Migrant labourers.
- Raw material for industries in produced.
- Well-developed network of transport and communication is essential.



### TYPES OF FARMING



In India, tea, coffee, rubber, sugarcane, banana, etc., are important plantation crops.







Future's Key

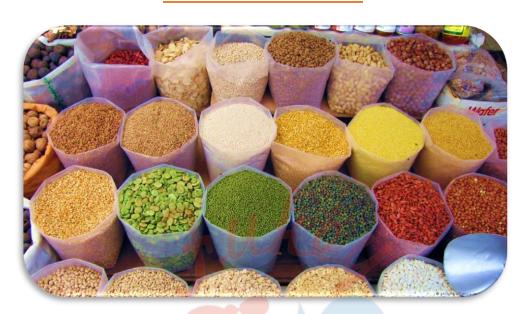
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### **CROPPING PATTERN**



# **CROPPING PATTERN**



Physical diversity and plurality of cultures in India Reflected in agricultural practices.

# Main types of cropping season

	Kharif	Rabi	Zaid
Sowing period	Onset of monsoon [June -	In winte <mark>r [O</mark> ctober -	March - April
	July]	No <mark>vem</mark> ber]	
Harvesting period		Summer [march April]	May June
Crops	Paddy maize jowar bajra	Wheat, barley peas	Watermelon, Muskmelon,
	tur moong urad cotton	gram and mustards.	cucumber, vegetable, and
	jute groundnut and	_	fodder crops
End	soybean	duos	ation
Irrigation	CVE	UUG	Private source of irrigation
			Ex. Tubewell, lakes & well





### **CROPPING PATTERN**







**Kharif Crops** 

**Zaid Crops** 





**Rabi Crops** 

• In states like Assam, West Bengal, and Odisha, three crops of paddy are grown in a year. These are Aus, Aman, and Boro.





Sugarcane takes almost a year to grow.

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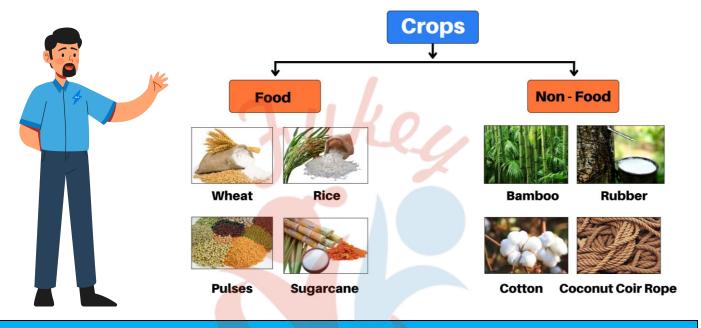




# **MAJOR CROPS**

### Food Crops(grains)

Major crops grown in India are rice, wheat, millets, pulses, tea, coffee, sugarcane, oil seeds, cotton, and jute, etc.



### Rice

It is a staple food crop.

- Our country 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.
- It is grown in the plains of north and north-eastern India, coastal areas, and the deltaic regions.

### Wheat

The second most important cereal crop of our country.

- It is the main food crop, in north and north-western part of the country.
- This rabi crop requires a cool growing season with 50 to 75 cm of annual rainfall and a bright sunshine at the time of ripening.
- Wheat growing regions are the Ganga-Satluj plains in the north- west and black soil region of the Deccan.



### **MAJOR CROPS**



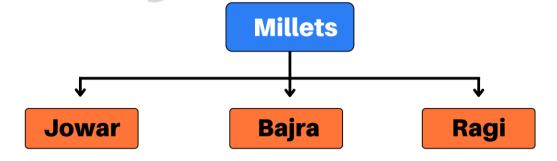
# Millets

- Jowar, bajra and ragi are the important millets grown in India.
- These have very high nutritional value.

Crops	Cropping season	Temperature	Rainfall	Area	State	Key point
Rice	Kharif crop	Required 25°C	Above 100 cm	Northern plains north-eastern states, deltaic region	Orissa, West Bengal, Bihar, and Tamil Nadu	Most important cereal crop
Wheat	Rabi crop	Cool growing season bright sunshine during harvest	50 to 75 cm	Ganga-sutlej plain, black soil region of Deccan	Punjab, Haryana, U.P. and M.P.	Second Most important cereal crop
Maize	Kharif crop	21°C to 27°C	60 to 110 (India 40)	Old alluvial tracks	U.P., Bihar and M.P.	Used as both food and fodder



Thought, these are known as coarse grains, they have very high nutritional value.



### <u>Jowar</u>

- Third most important food crop (area and production).
- It is a rain-fed crop. (hardly needs an irrigation)



### **MAJOR CROPS**



Major producing states: Maharashtra. Karnataka, Andhra Pradesh, and Madhya Pradesh.





### <u>Bajra</u>

- Bajra grows well on sandy soils and shallow black soils.
- Major Bajra producing States are Rajasthan, Uttar Pradesh, Maharashtra, Gujarat, and Haryana.



### <u>Ragi</u>

- Crop of dry region 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.
- It is very rich in iron, calcium and other micronutrient and roughage.



### **MAJOR CROPS**







# **Pulses**

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

Major pulses Grown in India.





### **MAJOR CROPS**



Pulses need less moisture and survive even in dry conditions.

- Temperature 25°C to 30°C
- Rainfall Average 45 cm rainfall.

Pulses are Leguminous crops [except arhar]. It Helps in restoring soil fertility by fixing nitrogen from the air. These are mostly grown in rotation with other crops. Major pulse producing states in India are Madhya Pradesh, Rajasthan, Maharashtra, Uttar Pradesh, and Karnataka.





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### FOOD CROPS OTHER THAN GRAIN



# **FOOD CROPS OTHER THAN GRAIN**

## **Sugarcane**

Required Temperature - 21°C to 27°C Required Rainfall - 75 cm to 100 cm.

- Sugarcane is a Tropical as well as sub-tropical crop.
- It requires manual labour.
- India is the second largest producer after Brazil.
- Raw material/source of jaggery, Khand sari, sugar, and molasses.
- U.P., Maharashtra, Karnataka.









## **Oil Seeds**

• Main oilseeds produced in India are groundnut, mustard, coconut, sesamum (till), soyabean, castor seeds, cotton seeds, linseed, and sunflower.

### Uses -

- Most of these are edible and used as cooking mediums.
- They are used as raw material in the production of soap, cosmetics, and ointments.







### FOOD CROPS OTHER THAN GRAIN



### Groundnut

- It is a kharif crop and accounts for about half of the major oil seeds produced in the country.
- Gujarat was the largest producer of groundnut followed by Rajasthan and Andhra Pradesh in 2019-20.





- 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 is a Tropical as well as subtropical crops.
- It is also a Plantation crop and beverages crops.
- Tea grows well on deep and fertile well drained soil.



### **FOOD CROPS OTHER THAN GRAIN**



- Requires warm and moist, frost-free climate.
- Frequent and evenly distributed rainfall.
- It is a Labour-intensive industry.
- Assam, Darjeeling, Jalpaiguri district of W.B.





# Coffee

- Indian coffee is known for its quality. [Arabic variety brought from Yemen]
- Indian produces 4% of the world's coffee production.
- Initially it was grown in Baba Budan Hills.
- Now also its production is confined to Nigiri in Karnataka, Kerala and T.N.





# **Horticulture crops**



### FOOD CROPS OTHER THAN GRAIN



### Fruits and vegetables

• In 2016, India was the second largest producer of fruits and vegetables in the world after China.

- India is a producer of tropical as well as temperate fruits.
- 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.
- Litchi 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.

India is an important producer of pea, cauliflower, onion, cabbage, tomato, brinjal and potato.











### **NON-FOOD CROPS**



# **NON-FOOD CROPS**

### Rubber



- Rubber is an equatorial crop but can be grown in tropical and subtropical areas.
- It requires moist and humid climate.
- Rainfall more than 200 cm.
- Temperature more than 25°C.
- Important industrial raw material.
- Major areas Kerala, T.N., Meghalaya, Andaman, and Nicobar.

# Fibre crops

- These crops are used as fibre [Cloths].
- Cotton, jute, hemp, and natural silk are the four major fibre crops grown in India.

### Silk

This type of fibre is obtained from cocoons of the silkworms fed on green leaves especially mulberry. It is the process of cultivating silkworms and extracting silk from them known as Sericulture.









### **NON-FOOD CROPS**



### Cotton

India is the original home of cotton plant.

- Cotton is one of the main raw materials for cotton textile industry.
- Cotton grows well in drier parts of the black cotton soil of the Deccan plateau.

### **Climate conditions**

- It requires high temperature, light rainfall, or irrigation, 210 frost-free days and bright sunshine for its growth.
- It is a kharif crop and requires 6 to 8 months to mature.
- Major producing state: Maharashtra, Gujarat, Madhya Pradesh, etc.







### Jute

It is also known as Golden fibre.

- Grows well on well-drained fertile soils in the flood plains where soils are renewed every year.
- High temperature is required during the time of growth.
- Major producers: West Bengal, Bihar, Assam, Odisha, and Meghalaya.



• It is used in making gunny bags, mats, ropes, yarn, carpets, and other artefacts.





### **NON-FOOD CROPS**





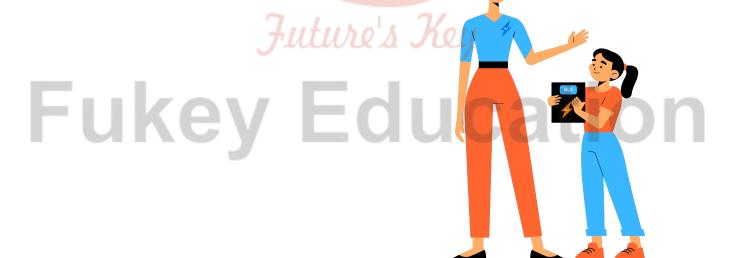




Jute v/s Nylon Due to the high cost of jute, it is losing market.

Also, Nylon is stronger than Jute.







### TECHNOLOGICAL AND INSTITUTIONAL REFORMS



# **TECHNOLOGICAL AND INSTITUTIONAL REFORMS**

Regular usage of land without compatible techno-institutional changes have hindered the pace of agricultural development. Some serious technical and institutional reforms are required.

# Land development programme

- Collectivisation, consolidation of holdings, cooperation, and abolition of zamindari, etc.
- Land reform' was the main focus of our First Five Year Plan.

To improve Indian agriculture in 1960s and 1970s government Embarked upon Green revolution and White revolution. This too led to the concentration of development in few selected areas.





In 1980s and 1990s A comprehensive land development programme was initiated which included both institutional and technical reforms.

- 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.
- Kisan Credit Card (KCC).
- Personal Accident Insurance Scheme (PAIS).
- Special weather bulletins and agricultural programme for farmers on radio and television.
- Minimum support price.



### TECHNOLOGICAL AND INSTITUTIONAL REFORMS









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### **BHOODAN - GRAMDAN MOVEMENT**



## **BHOODAN - GRAMDAN MOVEMENT**

Vinoba Bhave was the Spiritual heir of Mahatma Gandhi, after Gandhi's martyrdom, he undertook padayatra to spread Gandhiji's message covered almost the entire country.

### He believed in the idea of Gram Swaraj



### Incident of Pochampalli, Andhra Pradesh

Some poor landless villagers demanded some land for their economic well – being.

Shri Ram Chandra Reddy stood up and offered 80 acres of land to be distributed among 80 land – less villagers.

### **Bhoodan movement**

Some zamindars, offered to distribute some villages among the landless.

### Gram dan movement







# CONTRIBUTION OF AGRICULTURE TO THE NATIONAL ECONOMY, EMPLOYMENT AND OUTPUT

Share of agriculture in GDP is a matter of concern. In employment its share is also declining. [In 2011 about 54.6 percent of total workforce]

Any decline and stagnation in agriculture will lead to a decline in other spheres of the economy having wider implications for society.

India: Growth rate of GDP and Major Sectors (in %)						
Sector	2013-14	2014-15	2015-16			
Agriculture	4.2	-0.2	1.1			
Industry	5.0	5.9	7.3			
Services	7.8	10.3	9.2			
GDP	6.6	7.2	7.6			

Agriculture is an important sector. Therefore, steps are taken to improve the situation Government of India made concerted efforts to modernise agriculture.





- Establishment of Indian Council of Agricultural Research (ICAR)
- Setting up of Agricultural universities
- Veterinary services and animal breeding centres
- Focus on Horticulture development.
- Research and development in the field of meteorology and weather forecast.
- Improving the rural infrastructure



# Condition of agriculture sector in India

The growth rate in agriculture has been decelerating and sufficient employment opportunities are also not generated in the country.



CONTRIBUTION OF AGRICULTURE TO THE NATIONAL ECONOMY, EMPLOYMENT AND OUTPUT



Indian Farmers				
Big Challenge from international competition	Reduction in the public investment in			
	agriculture sector			
Reduction in import duties has led to increase.	Reduction on subsidy of fertilizers			
In the competition				



# **Fukey Education**



### IMPACT OF GLOBALISATION ON AGRICULTURE



# IMPACT OF GLOBALISATION ON AGRICULTURE

Globalisation is not a new phenomenon. Under globalisation, particularly after 1990, the farmers in India have been exposed to new challenges.

Despite being an important producer of various crops, Indian product was not able to compete with the products of developed countries. Highly subsidised agriculture in those countries has increased the competition.

### Important measures:

- Proper thrust should be given to the improvement of the condition of marginal and small farmers.
- The green revolution promised much. But today it's under controversies.

**Green revolution:** The keyword today is "gene revolution", which includes genetic engineering of seeds.

**Organic farming:** It does not affect environment in a negative manner and provides healthy-nutritious crops, vegetables, and fruits.

 Indian farmers should diversify their cropping pattern from cereals to highvalue crops.

This will increase incomes and reduce environmental degradation.











### MIND MAP



### Rabi crops

Sown in winter from October to December and harvested in summer from April to June, i.e., wheat, barley, peas, gram and mustard.

### **Kharif crops**

Grown with the onset of monsoon in different parts of the country and these are harvested in September-October, i.e., paddy, maize, jowar, bajra, tur (arhar), moong, urad, cotton, jute, groundnut and soyabean.

### Zaid crops

Grown between the rabi and the kharif seasons, i.e., watermelon, muskmelon, cucumher

### Intensive Subsistence Farming

Labour intensive farming, where high doses of biochemical inputs and irrigation are used for obtaining higher production.

### **Primitive Subsistence Farming**

Practised on small patches of land with the help of primitive tools like hoe, dao and digging sticks, and family/community labour. It is a'slash and burn' agriculture.

### **Commercial Farming**

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. Plantation is also a type of commercial farming

Collectivisation, consolidation of holdings, cooperation and abolition of zamindari, etc. were given priority after Independence. Provision for crop insurance against drought, flood, cyclone, fire and disease, establishment of Grameen banks, cooperative societies and banks for providing loan facilities.

### **Horticulture Crops**

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, ichi 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 are in great demand the world over.

Tea plant grows well in tropical and sub-tropical climates, deep and fertile well-drained soil, rich in humus and organic matter, bushes require warm

Main oil-seeds produced in India are groundnut, mustard, coconut, sesamum (til), soyabean, castor seeds, cotton seeds, linseed and sunflower.

Grows well in hot and humid climate with a temperature of 21°C to 27°C and an annual rainfall between 75 cm and 100 cm, needs manual labour from sowing to harvesting.

Arabica variety is in great demand all over the world. Cultivation is confined to the Nilgiri in Karnataka, Kerala and Tamil Nadu

### Rubber

Equatorial crop, but also grown in tropical and subtropical areas. Requires moist and humid climate with rainfall of more than 200 cm. and temperature

Rabi crop requires a cool growing season and a bright sunshine at the time of ripening. It requires 50 to 75 cm of annual rainfall evenly distributed over the growing season. Wheat-producing states are Punjab, Haryana, Uttar Pradesh, Bihar, Rajasthan and parts of Madhya Pradesh.

### Jute

Grows well on well- drained fertile soils in the flood plains where soils are renewed every year. West Bengal, Bihar, Assam, Odisha and Meghalaya are the major producers.

Kharif crop which requires high temperature, (above 25°C) and high humidity with annual rainfall above 100 cm. Grown in the plains of north and northeastern India, coastal areas and the deltaic regions.

### Maize

Kharif crop which requires temperature between 21°C to 27°C and grows well in old alluvial soil. Use of modern inputs such as HYV seeds, fertilisers and irrigation have contributed to the increasing production.

Cotton grows well in drier parts of the black cotton soil of the Deccan plateau, requires high

and moist frost-free climate all through the year.

# **Pulses** Major pulses that are grown in India are tur (arhar), urad, temperature, light rainfall or irrigation, 210 frost-free moong, masur, peas and gram. days and bright sun-shine.

**Major Crops** 

## **Cropping Pattern**

**Agriculture** 

### **Types Of Farming**

Technological and

# **Institutional Reforms**

# Millets

Jowar, bajra and ragi are the important millets. Rain-fed crops mostly grown in the moist areas which hardly need irrigation.