

GEOGRAPHY

Chapter 4: Agriculture



Geography

Agriculture

There are three different kinds of activities:

Primary Activities: All those activities in which natural resources are extracted from the Earth. Examples: Farming, fishing, mining

Secondary Activities: It involves all processes in processing and manufacturing of primary goods. Examples: Weaving of cloth, manufacturing of steel

Tertiary Activities: Tertiary activities provide services to support the primary and secondary activities. Examples: Transport, banking, advertising

Types of Farming

Farming depends on various conditions such as geography of land, availability of labour, kinds of tools used and the level of technology. Based on these factors, there are two main kinds of farming— subsistence farming and commercial farming.

Subsistence Farming

In this kind of farming, cultivation is practised by farmers to fulfil the needs of their own families. Mostly family members cultivate on a small piece of land. Subsistence farming can be further classified into intensive subsistence farming and primitive subsistence farming.

Intensive Subsistence Farming

- In this kind of farming, cultivation is carried out on a small patch of land with simple tools and extensive labour.
- More than one crop can be grown on the land because of the availability of sunlight and fertile soil.
- Besides rice, which is the main crop, wheat, maize, oilseeds and pulses are also grown.

Primitive Subsistence Farming

Primitive subsistence farming can be further classified into shifting cultivation and nomadic herding.



In subsistence farming, methods of farming are traditional and primitive.

Shifting Cultivation (Slash and Burn Agriculture)

- In this kind of cultivation, a patch of forested land is cleared by felling and burning trees. The ashes of trees are mixed in the soil.
- After two to three years, when the soil loses its fertility, the land is left fallow and a new patch of land is cleared for cultivation.
- Maize, potato, yam and cassava are mainly grown in shifting cultivation. It is practised in the forested regions of the Amazon basin, tropical Africa, some parts of Southeast Asia and northeast India.



In shifting agriculture, a patch of forested land is cleared by the farmers for the purpose of cultivation.

Nomadic Herding

- Nomadic herdsman move from place to place with their animals in search of fodder and water.
- Herdsman travel on defined and familiar routes. They travel to different places in search of favourable climatic conditions in order to feed and rear their cattle.
- Sheep, camels, yaks and goats are mostly reared as they provide meat, wool, hides and other products to herders.

Commercial Farming

Contrary to subsistence farming, crops are grown on large estates in commercial farming. Because the land is large and availability of labour is limited, most work is done with the help of machines.

Commercial farming can be further classified into commercial grain farming, mixed farming and plantation agriculture.

Commercial Grain Farming

- In this kind of farming, crops are grown for commercial purposes, i.e. for selling in the local and international markets.
- Wheat and maize are the main crops which are grown in commercial grain farming.
- It is practised largely in North America, Europe and Asia.
- Because of severe winters, mostly one crop is grown in fields.

Mixed Farming

- In mixed farming, apart from growing crops and fodder crops, animals are also reared.
- This type of cultivation is mainly carried out in Europe, eastern USA, Argentina, New Zealand, South Africa and southeast Australia.

Plantations

- In plantation farming, single crops of tea, sugarcane, coffee, rubber, cotton and bananas are grown on large fields.
- Large labour force and capital are required in plantations.
- Developed transport is required to transport these crops to factories for processing.

Major Crops

Wheat, rice, jute, coffee, cotton and maize are some important crops which are grown all over the world.

Rice

- It is a major food crop and forms the staple diet of the people living in tropical and sub-tropical countries.
- Rice grows well in clayey soil as it can retain moisture and requires high temperature, high level of humidity and abundant rainfall.
- China is the leading producer of rice in the world. India, Japan, Sri Lanka and Egypt are other major producers of this crop.



Rice requires high temperature and adequate rainfall.

Wheat

- Wheat requires rainfall during the growing season and sunshine at the time of harvests.
- It requires moderate temperature. It is grown mainly in USA, Canada, Argentina, Russia, Ukraine, Australia and India.

Millets

- Millets are grown on less fertile and sandy soils. They require moderate temperature and abundant rainfall.
- These are coarse crops such as bajra, ragi and jowar.
- These crops are grown in China, India, Nigeria and Niger.

Maize

- Maize is a major fodder crop which requires moderate temperature, rainfall and abundant sunshine.
- It grows in well-drained fertile soils.
- It is mainly grown in Brazil, North America, China, Russia, India and Mexico.

Cotton

- It requires light rainfall, high temperature, 210 frost-free days and bright sunlight.
- It grows well on alluvial and black soil.
- Major producers of cotton are China, USA, India, Pakistan, Brazil and Egypt.

Jute

- It is also known as the 'Golden Fibre'. It requires high temperature and heavy rainfall with moderate climate. Thus, this crop grows well in tropical regions.
- Alluvial is best suited to the growth of jute.
- India and Bangladesh are the leading producers of jute in the world.

Coffee

- Coffee grows best in well-drained loamy soil and wet climate. Thus, hillslopes are considered most suitable for the growth of coffee.
- Brazil is the leading producer of coffee in the world. India and Columbia rank second and third respectively in coffee production.



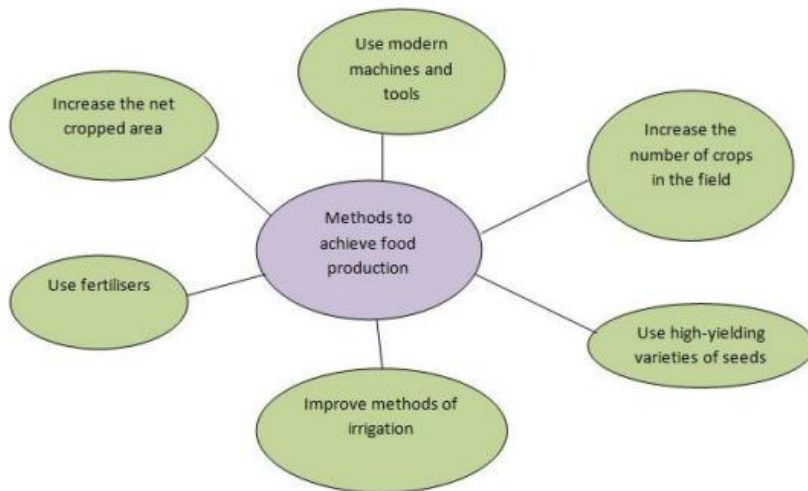
Tea plantation requires abundant labour for picking leaves.

Tea

- Tea requires cool climatic conditions and evenly distributed rainfall all over the year for the growth of its tender leaves.
- It grows well on drained loamy soil and on gentle slopes. It is a labour intensive industry as it requires human power at the time of the picking of leaves.

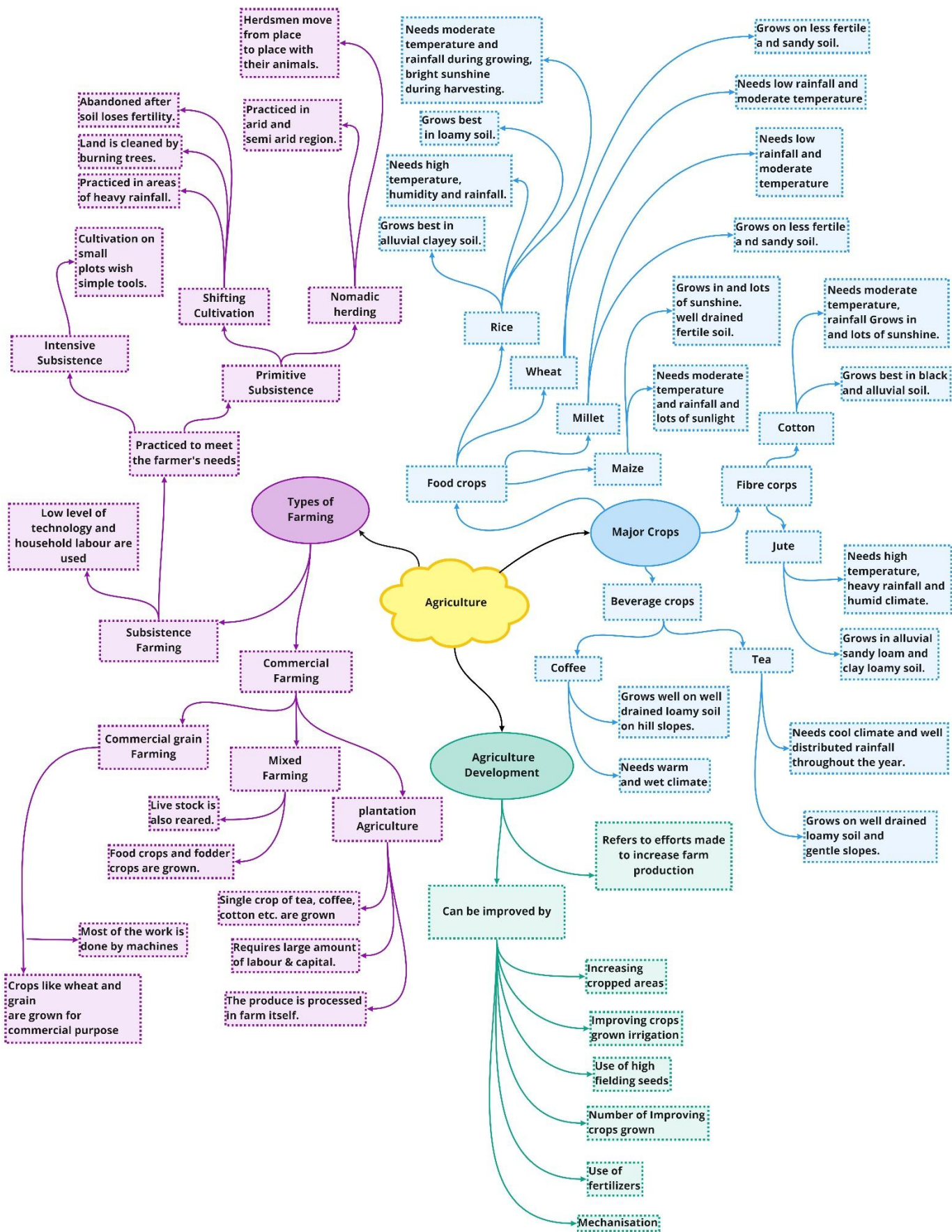
Agricultural Development

rising. Agricultural development refers to efforts made to increase farm production keeping in pace with the growing population. A country's aim of increased food production is to ensure food security for its people.



Comparison between Farms in India and USA

An Indian Farm	A US Farm
An average Indian farmer has a small farm. Many small farmers in India have a farm size ranging from 1.5 hectares to 5 hectares.	The average size of a US farm is much larger than that of an Indian farm. The size of a farm in USA is usually about 250 hectares.
Indian farmers reside in villages near their farms.	A farmer resides in a house which is located on the farm.
Farmers in India take advice from village elders, friends and government agricultural officers regarding various farming practices.	A farmer in USA takes adequate scientific measures to improve productivity.
An Indian farmer uses bullocks and tractors for ploughing land.	He uses modern machinery such as tractors, seed drills, combined harvesters and threshers to perform various agricultural operations.
He depends on information of monsoons in order to understand cultivating practices.	A farmer may use a satellite which is linked to his computer to give him a good picture of his field.
He is a peasant, with his family also perhaps engaging in farming during the harvest period.	A US farmer acts like a businessman.



Important Questions

Multiple Choice Questions-

Question 1. Commercial rearing of silk worms is known as

- (a) Pisciculture
- (b) Viticulture
- (c) Horticulture
- (d) Sericulture

Question 2. What per cent of persons are engaged in agricultural activity in the world?

- (a) 75%
- (b) 85%
- (c) 65%
- (d) 50%

Question 3. Shifting cultivation is also known as Milpa in which part of the world.

- (a) North East India
- (b) Mexico
- (c) Brazil
- (d) Malaysia

Question 4. In which type of farming is the land used for growing food and fodder crops and rearing livestock?

- (a) Subsistence farming
- (b) Intensive farming
- (c) Mixed farming
- (d) Commercial farming

Question 5. is a type of commercial farming where single crop of tea, coffee, sugarcane etc. are grown.

- (a) Plantation
- (b) Cultivation
- (c) Agriculture
- (d) None of the above

Question 6. Which one of the following is known as paddy crop?

- (a) Millets

- (b) Wheat
- (c) Rice
- (d) Flax

Question 7. What is another name of shifting agriculture in Mexico?

- (a) Ladang
- (b) Milpa
- (c) Jhumming
- (d) Roca

Question 8. Which agriculture is referred as Slash and Burn agriculture?

- (a) Intensive farming
- (b) Shifting agriculture
- (c) Primitive farming
- (d) Plantation agriculture

Question 9. Who is the Leading producer of coffee?

- (a) Brazil
- (b) India
- (c) Russia
- (d) America

Question 10. What do you mean by Horticulture?

- (a) Growing fruits, flowers, and vegetables.
- (b) Growing of wheat
- (c) Primitive farming.
- (d) All of these

Question 11. Where does the word 'agriculture' originated from?

- (a) Latin term Agri means soil
- (b) Latin term culture means cultivation
- (c) Both a and b
- (d) None of these

Question 12. What are tertiary activities?

- (a) Provide support to only primary activities
- (b) Provide support to primary and secondary activities

- (c) Provide support to only secondary activities
- (d) None of these

Question 13. What is the science of commercial rearing of silk worms called?

- (a) Horticulture
- (b) Viticulture
- (c) Sericulture
- (d) None of these

Question 14. What is horticulture?

- (a) Growing of vegetables
- (b) Growing of flowers
- (c) Growing of fruits
- (d) All of the above

Question 15. Why is different crops grown in different regions of our country?

- (a) Different climate condition
- (b) Different terrain
- (c) Different soil type
- (d) All of the above

Very Short:

1. What is the basic function of the three basic types of economic activities?
2. What are tertiary activities?
3. In what sorts of areas are agricultural activities concentrated?
4. What is arable land?
5. How is subsistence farming classified?
6. In what sort of areas is nomadic herding practised?
7. Why is mixed farming called so?
8. What is the main feature of plantation agriculture?
9. What weather conditions are required in the growing and harvesting seasons of wheat?
10. Which two countries lead in the production of jute?
11. Define the term Agriculture.

Short Questions:

1. Write a short note on the types of economic activities. Give examples.

2. Name the inputs and outputs of agriculture in general. Also mention the various operations involved.
3. Explain shifting cultivation.
4. Enlist the climate conditions required for the proper cultivation of rice. Mention the main regions of its production.
5. What do you understand by agricultural development?
6. How does the Joe Horan grow com with full scientific ways?
7. What is Agricultural Development and what is the ultimate aim of agricultural development?

Long Questions:

1. Describe subsistence farming and its types in detail.
2. Describe commercial farming and its types in detail.
3. What is subsistence farming? Briefly explain its classifications.

Answer Key:

MCQ:

1. (d) sericulture
2. (d) 50%
3. (b) Mexico
4. (c) Mixed farming
5. (a) Plantation
6. (c) Rice
7. (b) Milpa
8. (b) Shifting agriculture
9. (a) Brazil
- 10.(a) Growing fruits, flowers and vegetables.
- 11.(c) Both a and b
- 12.(b) Provide support to primary and secondary activities
- 13.(c) Sericulture
- 14.(d) All of the above
- 15.(c) All of the above

Very Short Answer:

1. The three types of economic activities are involved in the transformation from a plant to a finished product.
2. Tertiary activities are those which provide support to primary and secondary activities.
3. Agricultural activities are concentrated in those areas of the world which have suitable conditions of growing crops.
4. The land on which crops are grown is called arable land.
5. Subsistence farming is classified into intensive and primitive subsistence agriculture.
6. Nomadic herding is practised in semi- arid and arid regions of Sahara, Central Asia and some parts of India
7. In mixed farming the land is used for growing crops as well as rearing livestock.
8. In plantation agriculture only a single crop is grown.
9. In the growing season wheat requires moderate temperature and rainfall and in the harvesting season it needs bright sunshine.
10. India and Bangladesh are the leading producers of jute.
11. Agriculture is the science and art of cultivation on the soil, raising crops and rearing livestock. It is also called farming

Short Answer:

Ans: 1. The three types of economic activities are primary, secondary and tertiary.

Primary Activities. Activities which involve direct extraction and production of natural resources are called primary activities. Examples: agriculture, fishing, mining.

Secondary Activities. Activities which are concerned with the processing of natural resources are called secondary activities. Examples: manufacturing of finished products.

Tertiary Activities. Activities which fall neither in the primary category nor the secondary category are called tertiary activities. They form a support to primary and secondary activities. Examples: selling goods, advertising and banking.

Ans: 2. The inputs in agriculture are seeds, fertilisers, machinery, labour, etc. The operations involved in agriculture are ploughing, sowing, irrigation, weeding and harvesting. As outputs of the farming activity, a farmer gets crops, wool, dairy products and poultry products.

Ans: 3. Shifting cultivation is a class of primitive subsistence agriculture. In this, a plot of land is cleared by the farmer. This is done by felling the trees and burning them. The ashes are then mixed with soil and crops are grown. After some time, the land is abandoned and the farmer moves to a different place. This type of farming is common in the thickly forested areas of the Amazon basin, tropical Africa, parts of south-east Asia and north-east India. It is also called “slash and burn” agriculture, because of the process of felling and burning the trees is involved.

Ans: 4. Rice is a major food crop in tropical and sub-tropical parts of the world. Its cultivation needs high temperature, high humidity and rainfall. Its growth is best in alluvial clayey soils, since they have water retention capacity. China and India are the leading producers in the world. In favourable climatic conditions, even two to three crops are grown in a year.

Ans: 5. Agricultural development refers to efforts made to increase production in farms so as to meet the ever-growing demand of the population. The activities that come under this development are increasing the cropped area, growing more crops, improving irrigation, using fertilisers, sowing HYV (high-yielding variety) of seeds and by promoting mechanisation. Mechanization ensures that little labour is done by the farmers; instead, machines are used to provide efficiency

Ans: 6. Joe Horan, a farmer, grows corn on his field after making sure that soil and water resources meet the needs of this crop. Adequate measures are taken to control pests that can damage the crop.

From time to time, he sends the soil samples to soil testing laboratory to check whether the nutrients are sufficient or not. The results help Horan to plan a scientific fertilizer programme. His computer is linked to the satellite which gives him a precise picture of his field. This helps him to use chemical fertilisers and pesticides wherever they are required.

Ans: 7. Agricultural development refers to efforts made to increase farm production in order to meet the growing demand of increasing population. This can be achieved in many ways such as increasing the cropped area, the number of crops grown, improving irrigation facilities, use of fertilisers and high yielding variety of seeds. Mechanisation of agriculture is also another aspect of agricultural development. The ultimate aim of agricultural development is to increase food security.

Long Answer:

Ans: 1. The two main types of farming are: Subsistence farming and commercial farming.

Subsistence farming is practised solely to meet the needs of the farmer's family. Therefore, the practices involved are usually old-fashioned. Use of modern technology is minimum and most work is done by household labour.

In intensive, subsistence agriculture, simple tools and huge labour are used by a farmer to cultivate a small plot of land. More than one crop is grown annually in favourable conditions. Rice is the major crop. This form of agriculture is seen in the thickly populated areas of the monsoon regions of south, south-east and east Asia. Shifting cultivation is a class of primitive subsistence agriculture. In this, a plot of land is cleared by felling the trees and burning them. The ashes are then mixed with soil and crops are grown. After some time, the land is abandoned, and the farmers move to a different place. This type of farming is common in the thickly forested areas of the Amazon basin, tropical Africa, parts of south-east Asia and north-east India. It is also called "slash and burn" agriculture.

Nomadic herding refers to the practice in which herdsmen move from place to place with

their animals for fodder and water. Animals usually reared are the yak, sheep, camel and goats.

Ans: 2. Commercial farming is the practice in which crops are grown exclusively for commercial purpose, i.e., for sale in the market. A large area is cultivated and huge capital is involved unlike subsistence farming. Machines are used to a large extent.

Commercial grain farming is a class of commercial farming. Crops like wheat and maize are grown for commercial purpose. The temperate grasslands of North America, Europe and Asia are some common areas where it is seen.

Mixed farming is another type of commercial farming. The land is used for growing food and fodder crops and rearing livestock. Some areas where it is followed are Europe, eastern USA, Argentina, south-east Australia, New Zealand and South Africa. Plantations are a type of commercial farming where only a single crop (like tea, coffee, sugarcane, cashew, rubber, banana or cotton) is grown. Large amount of labour and capital are required. The produce is processed in the farm itself or nearby factories.

Ans: 3. Subsistence farming is practised to meet the needs of the farmer's family. Traditionally, low levels of technology and household labour are used to produce on small output. Subsistence farming can be further classified as intensive subsistence and primitive subsistence farming.

Intensive subsistence farming: In this type of farming the farmer cultivates a small plot of land using simple tools and more labour. Climate with large number of days with sunshine and fertile soils permit growing of more than one crop annually on the same plot. Rice is the main crop. Other crops include wheat, maize, pulses and oilseeds.

Intensive subsistence agriculture is prevalent in the thickly populated areas of the monsoon regions of south, southeast and east Asia.

Primitive subsistence farming: It includes shifting cultivation and nomadic herding.

Shifting cultivation: It is practised in the thickly forested areas of Amazon basin, tropical Africa, parts of Southeast Asia and Northeast India. These are the areas of heavy rainfall and quick regeneration of vegetation. A plot of land is cleared by felling the trees and burning them.

The ashes are then mixed with the soil and crops like maize, yam, potatoes, and cassava are grown. After the soil loses its fertility, the land is abandoned, and the cultivator moves to a new plot. Shifting cultivation is also known as 'slash and burn' agriculture.

Nomadic herding: It is practised in the semi-arid and arid regions of Sahara, Central Asia and some parts of India, like Rajasthan and Jammu and Kashmir. In this type of farming, herdsmen move from place to place with their animals for fodder and water, along defined routes.

This type of movement arises in response to climatic constraints and terrain. Sheep, camel, yak and goats are most commonly reared. They provide milk, meat, wool hides and other products to the herders and their families.