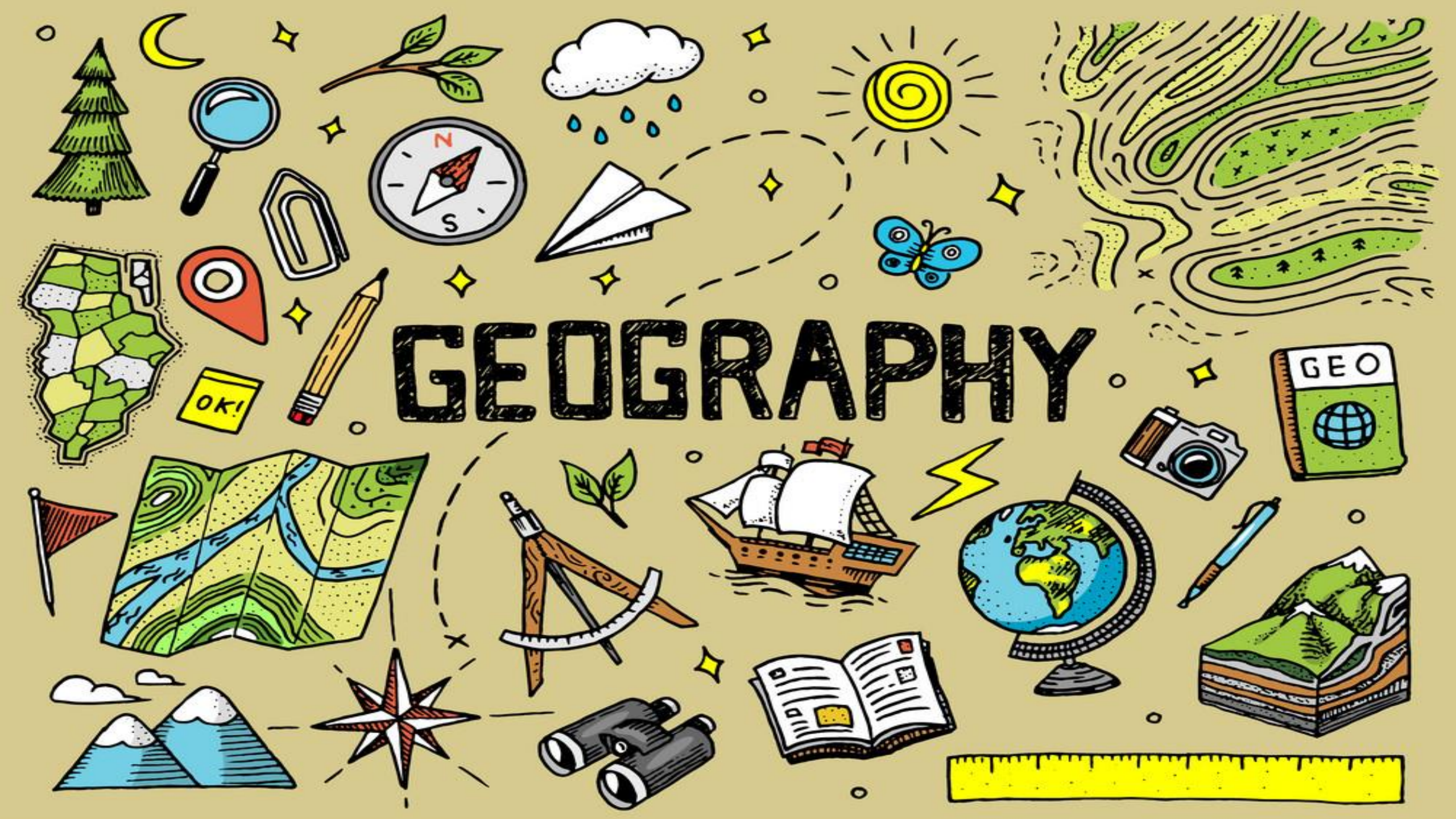
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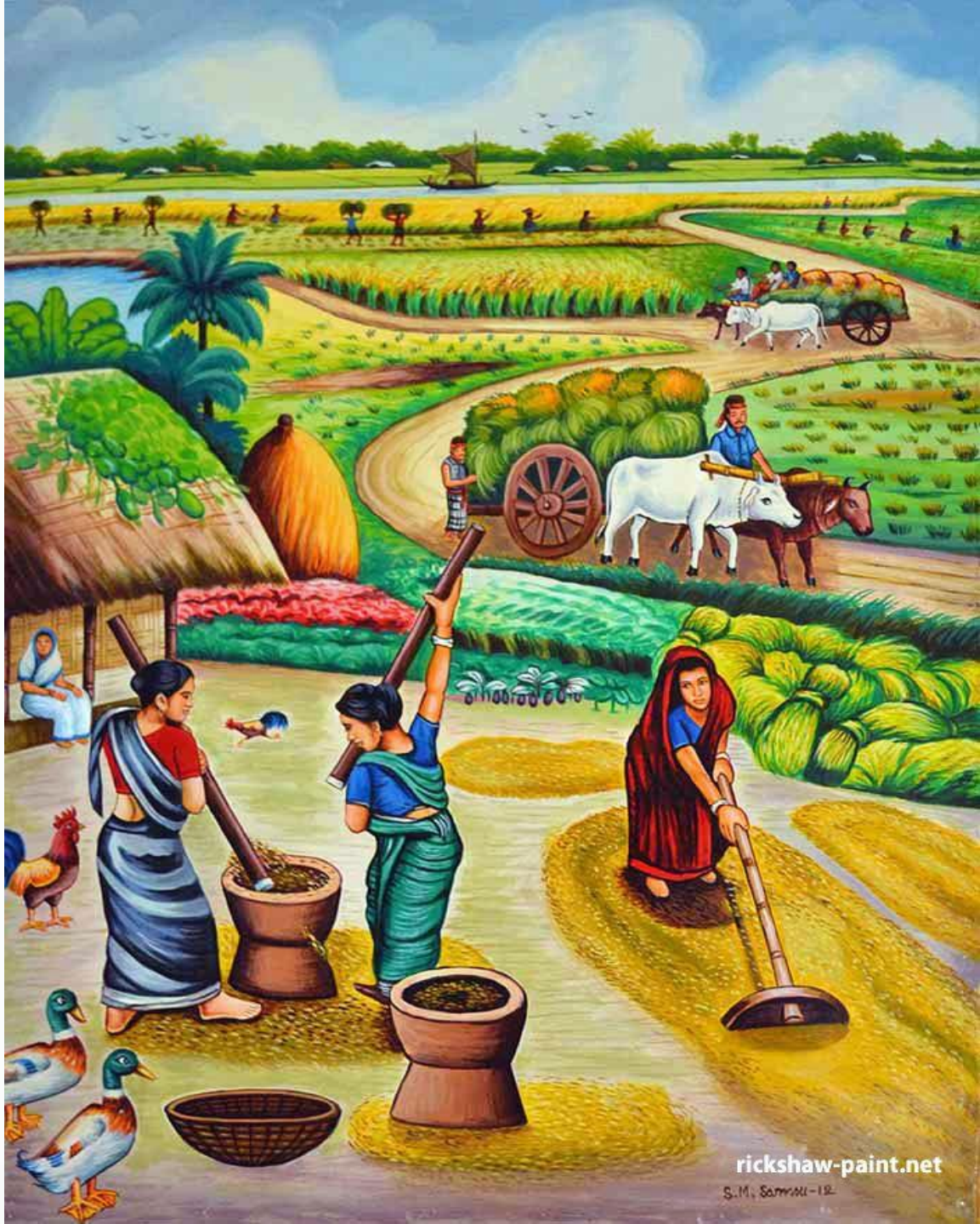
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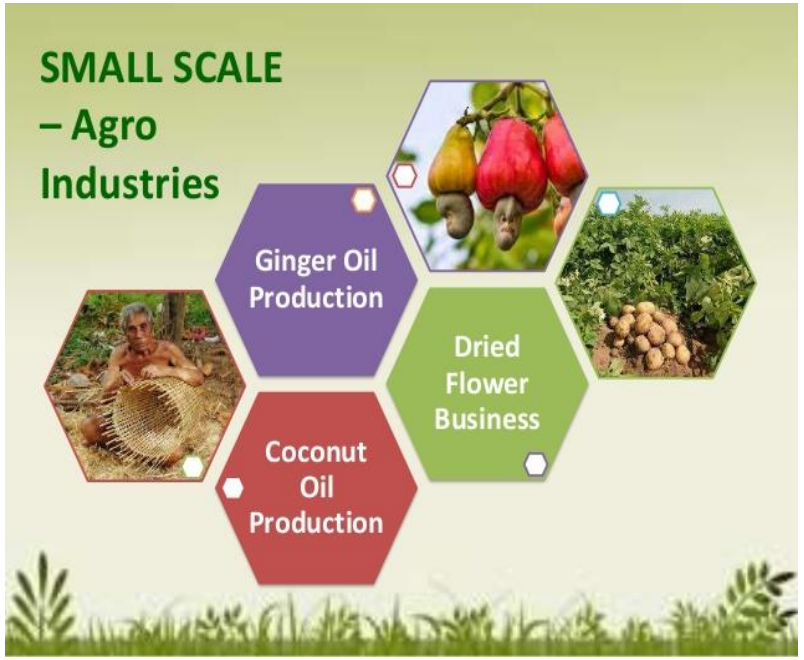
AGRICULTURE

CLASS-VIII

CHAPTER-5

AGRICULTURE

- **Agriculture** is the process of producing food, feed, fiber and many other desired products by the cultivation of certain plants and the raising of domesticated animals (livestock).
- It is a PRIMARY ACTIVITY
- It produces RAW MATERIAL FOR INDUSTRIES.



Factors influencing agriculture

- Climate
- Relief
- Soil
- Capital
- Technology (irrigation & machineries)
- Transport / infrastructure
- Market (demand)
- Government policies

Relief

- Temperature decreases by 6.5 degrees Celsius for every 1000m gained in height

- Dairy farms locate on fairly flat relief- as cows are not very agile or suited to steep slopes!

- Lowlands such as flood plains, are good for growing crops

- Steep slopes hinder machinery and have thinner soils- these locations are often only suitable for sheep farming

- South facing slopes receive more sunlight- important to know when growing crops

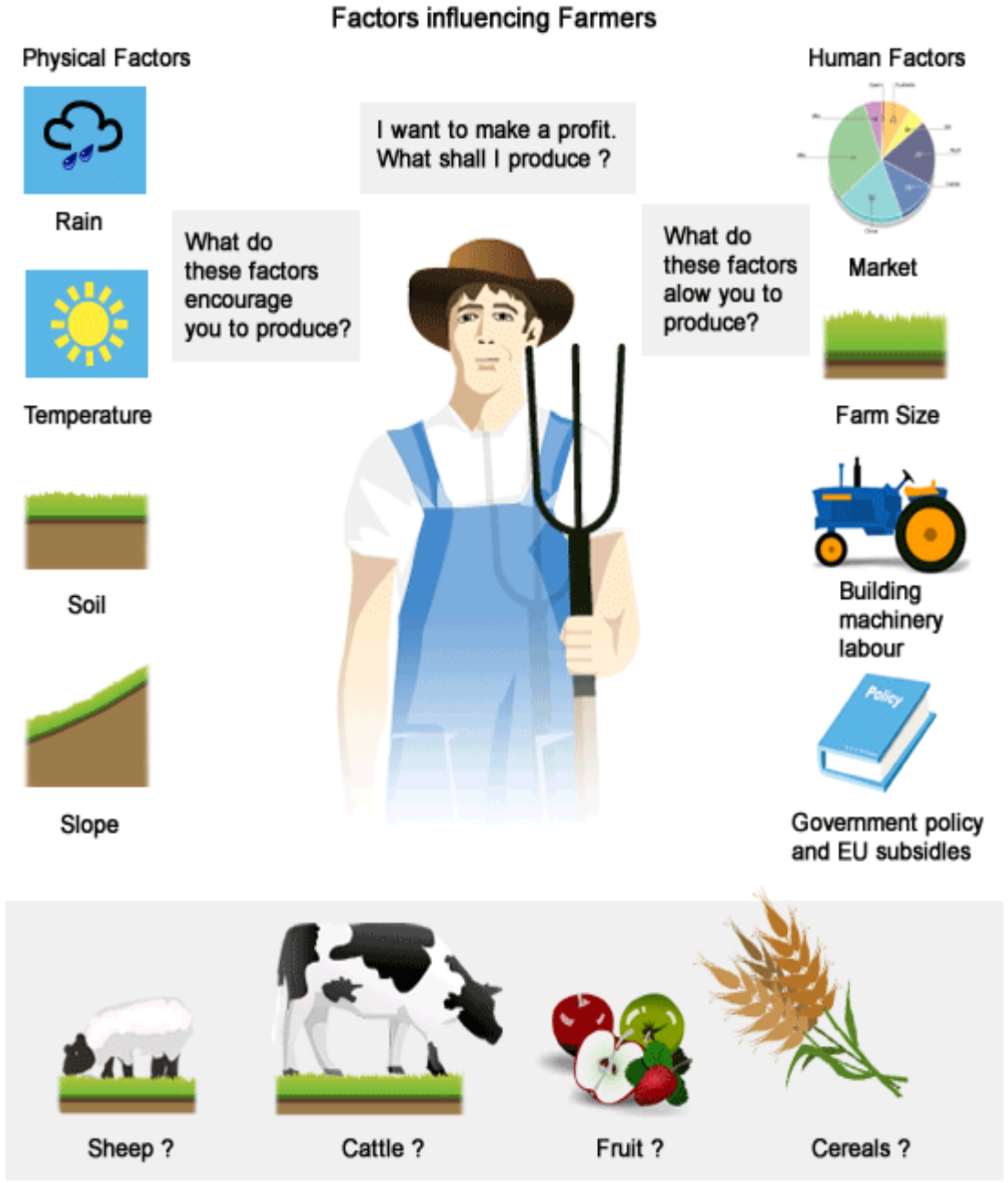
Soil

- Flood planes are good for crops because of the alluvial soils

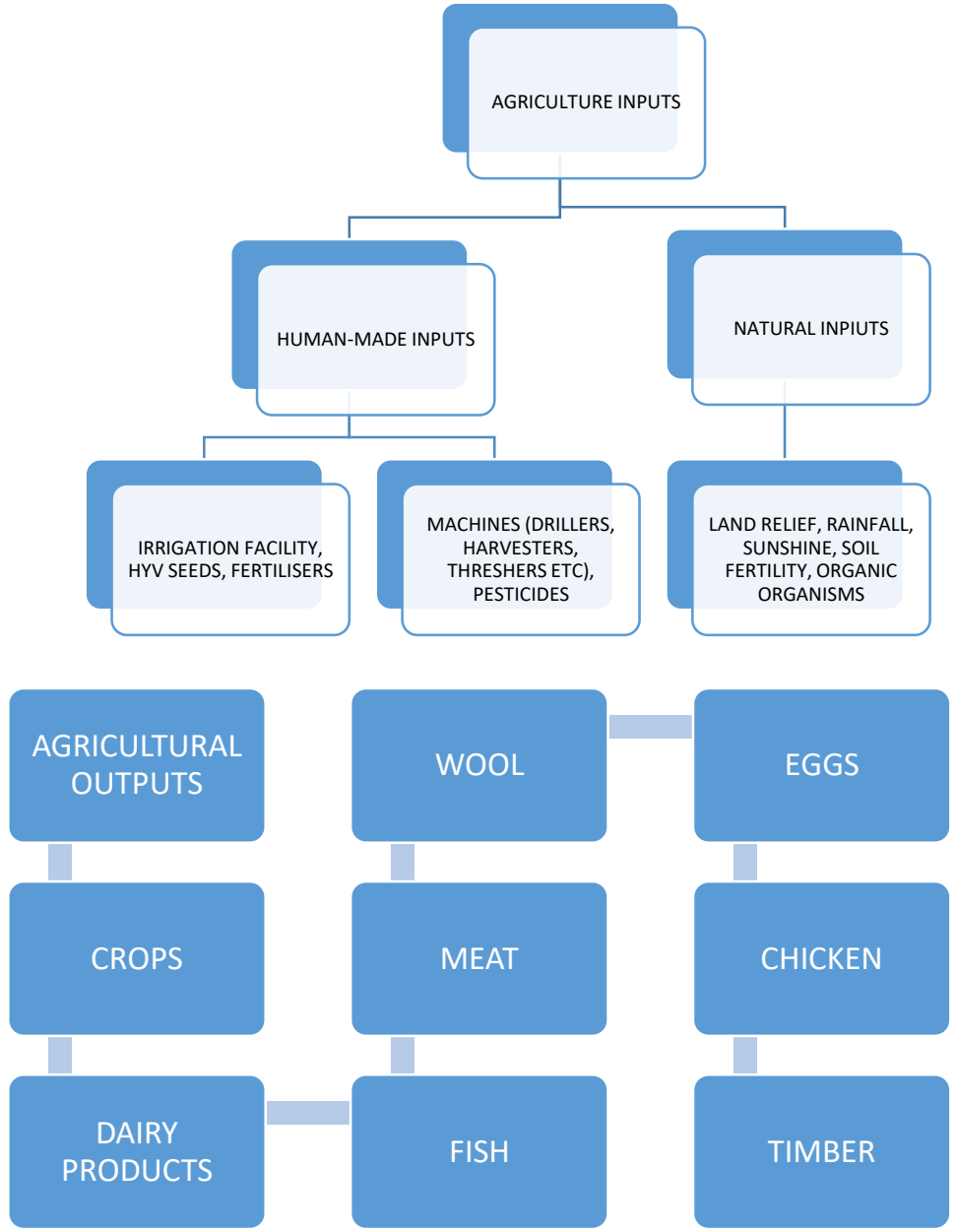
- Fertility is important for growing crops, good quality soil, means more inputs, however poor soil, means less inputs

- Good drainage reduces the dangers of water logging

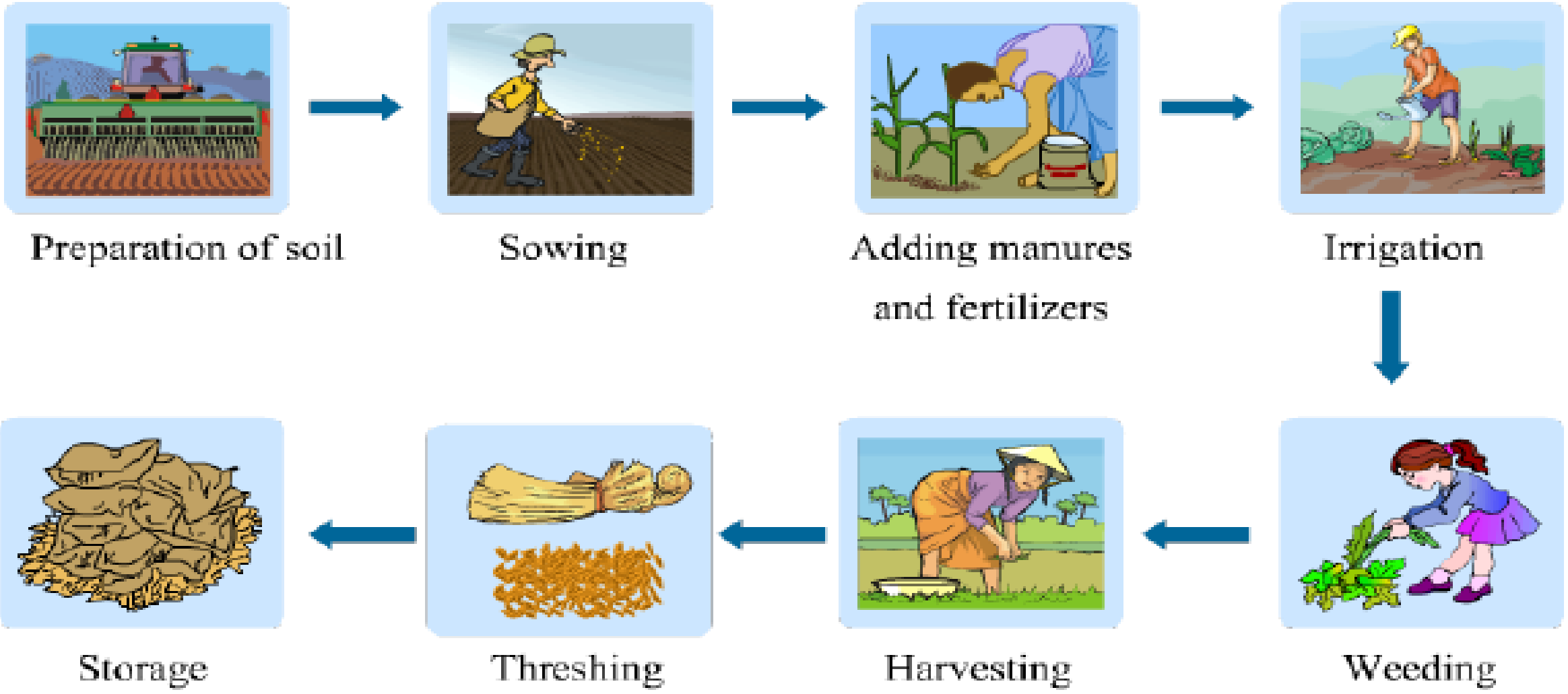
- Acidic soil- eg. In Dartmoor is no use for growing crops.



Agriculture is a productive system by itself.



THESE ARE SEVERAL ACTIVITIES WHICH A FARMER HAS TO DO, TO HARVEST A GOOD CROP:-



THE MAIN TYPES OF AGRICULTURE IN INDIA

SHIFTING AGRICULTURE / SLASH & BURN / JHUMMING

SUBSISTENCE AGRICULTURE

EXTENSIVE AGRICULTURE

INTENSIVE AGRICULTURE

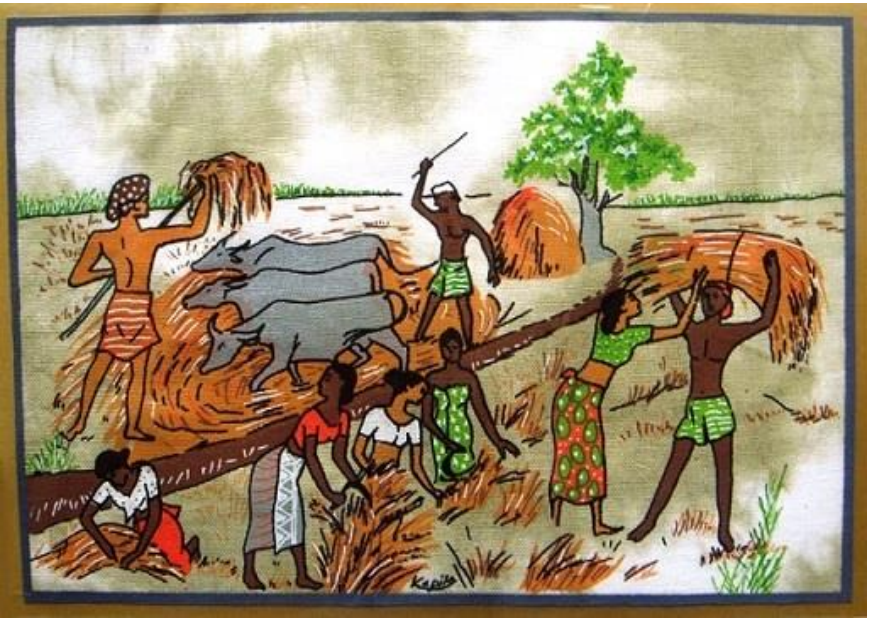
PLANTATION AGRICULTURE

MIXED FARMING

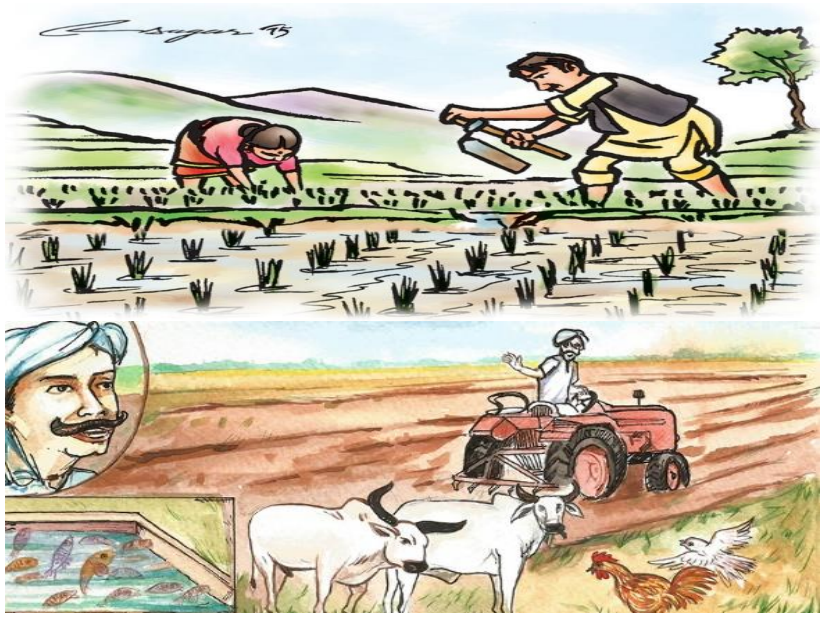
COMMERCIAL FARMING

TYPES OF FARMING

PRIMITIVE SUBSISTENCE FARMING



INTENSIVE SUBSISTENCE FARMING



COMMERCIAL FARMING

- **FARMING** IS GROWING CROPS OR KEEPING ANIMALS BY PEOPLE FOR FOOD AND RAW MATERIALS. FARMING IS A PART OF AGRICULTURE.

NOMADIC HERDING

- Herders move from one place to another with their animals for fodder and water.
- Sheep, camel, yak and goats are most commonly reared.
- Practised in the semi arid and arid regions of Sahara. Examples are the nomadic Bhotiyas and Gujjars of the Himalayas.

- Shifting cultivation : Shifting cultivation is practised in thickly forested areas of Amazon basin , tropical Africa , parts of southeast Asia and northeast India .Shifting cultivation is also known as jhumming , milpa , roca ,ladang

Primitive Subsistence Farming

This type of farming is still practised in few places in India. It is practised on small patches with the help of primitive tools like hoe, dao and digging sticks, and family or community labour. This type of farming depends upon monsoon, natural fertility of the soil and suitability of other environmental conditions.

It is also called "slash and burn" cultivation. Farmers clear a patch of land and produce crops to sustain their family. When soil fertility decreases, the farmers shift and start cultivating in the same way on a fresh patch of land. This allows nature to replenish the fertility of the soil. Productivity in this type of farming is low as fertilisers or modern inputs are not used.

Different Names of Slash and Burn Farming:

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 used for shifting cultivatión in different parts of the worlds

	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

Country	Jhumming Cultivation
Mexico	Milpa
Central America	Milpa
Venezuela	Conuco
Brazil	Roca
Central Africa	Masole
Indonesia	Ladang
Vietnam	Ray
India	Jhumming

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.

Though the right of inheritance leading to the division of land among successive generations has rendered land-holding size uneconomical, the farmers continue to take maximum output from the limited land in the absence of alternative source of livelihood. Thus, there is enormous pressure on agricultural land.

Did you know ?

12% of world's farm land is in India.

INTENSIVE SUBSISTENCE AGRICULTURE

- In densely populated East, South and Southeast Asia, most farmers practice intensive subsistence agriculture.
- Intensive subsistence farmers waste virtually no land.
- The typical farm is much smaller than elsewhere in the world.
- Because the agricultural density is so high, families must produce enough food for their survival from a very small area of land.

INTENSIVE SUBSISTENCE FARMING

- Aims at maximum possible production on limited farmland.
- Caters the need of the farmer's family and local market.
- Small land-holdings, preliminary mechanization.
- Capable of raising one crop in a year.
- Practiced in thickly populated regions.
- Regions- Punjab, Uttar Pradesh, Madhya Pradesh, parts of Rajasthan.
- Crops- Wheat, rice, millets.

Primitive Subsistence farming	Intensive 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.	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.

Commercial farming

In this type of farming, higher doses of modern inputs like HYV seeds, chemical fertilisers, insecticides and pesticides are used in order to obtain higher productivity. The degree of commercialisation varies from region to region.

For example: Rice is a commercial crop on Punjab and Haryana, but in Orissa, it is a subsistence crop.

Plantations

Plantation is a type of commercial farming. It is the type of farming in which a single crop is grown on a large area. The plantation has an interface of agriculture and industry. Plantations use capital intensive inputs, with the help of migrant labourers. All the produce is used as raw material in respective industries.

Tea plantations in Assam and North Bengal, Coffee plantations in Karnataka, Banana plantations in Southern part of India, Rubber plantations in Kerala, Bamboo plantations in North-East India etc. are some important plantation crops grown in India.

Since the production is mainly for market, a well-developed network of transport and communication connecting the plantation areas, processing industries and market is present.

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.

Mixed Farming

- In **mixed farming** the land is used for growing food and fodder crops and rearing livestock.

- It is practised in Europe, eastern USA, Argentina, southeast Australia, New Zealand and South Africa.
- Mixed farming is the combining of two independent agricultural enterprises on the same farm.
- A typical case of mixed farming is the combination of crop enterprise with dairy farming, that is, crop cultivation with livestock farming.
- Mixed farming may be treated as a special case of diversified farming.

Ranching refers to raising livestock for meat or wool on privately owned land along with the use of some public land.
It is common in Australia, western USA and Tibet. In India in some hilly regions people practice ranching as areas are rich in pastures.

Mixed Farming	Ranching
Under mixed farming agricultural land is used for multiple purposes.	It is the practice of raising and grazing livestock like sheep for wool.
In mixed farming the land is used for growing food and fodder crops and rearing livestock	Under ranching, farms are exclusively used for raising livestock like herds of cattle, sheep or horses.

DAIRY FARMING, THE REARING OF CATTLE ON A LARGE SCALE TO MEET THE DEMAND FOR MILK AND ANIMAL PRODUCTS.

IT NEEDS SCIENTIFIC METHODS OF FARMING AND HUGE CAPITAL INVESTMENT.

MAINLY PRACTISED IN AUSTRALIA, NEW ZEALAND, DENMARK, NETHERLANDS IN EUROPE AND NORTH AMERICA.

IN INDIA, WHITE REVOLUTION WAS STARTED IN GUJARAT WITH AMUL, CO-OPERATIVE SOCIETY.

Classification of Crops
(based on nutrition they provide)

- **Vegetables/ Fruits/Spcies** — Source of vitamins, minerals

- **Cereals** — Source of carbohydrates

- **Pulses** — Source of proteins

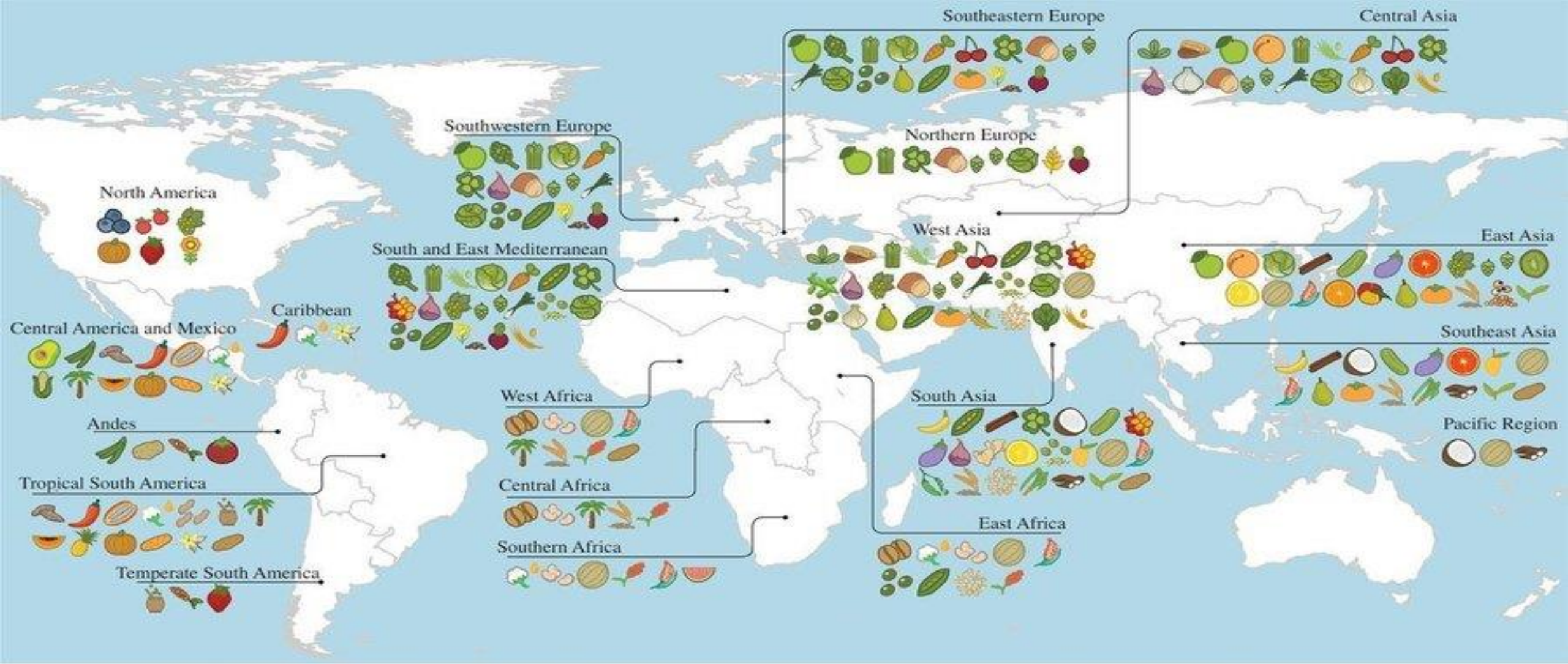
- **Oilseed crops** — Source of fats

MAJOR CROPS OF INDIA

- **FOOD CROPS** — Rice, Wheat, Millets, Maize, Pulses
- **FOOD CROPS OTHER THAN GRAINS** — Sugarcane, Oil Seeds, Coffee, Tea
- **HORTICULTURE CROPS** — Fruits and vegetables
- **NON FOOD CROPS** — Rubber
- **FIBER CROPS** — Cotton and Jute

S.NO.	CROP	TEMPER-ATURE	RAINFALL	SOILS	SPECIAL FEATURE	AREAS OF AVAILABILITY
1	RICE	Above25*c, high humidity	Annual above 100cm	Alluvial, Clayey soil that retains water.	Major food crop (staple diet), Kharif crop	China, India, Bangladesh, Japan, Sri Lanka, Egypt
2	WHEAT	Below 25*c	Annual 50 t0 75cm	Loamy	Staple crop, winter crop of India	USA, Canada, Argentina, Russia, Ukraine, Australia, India
3	MILLETS (Jowar, bajra, ragi)	Moderate temp.	Low rainfall	Sandy	Coarse grains Ragi 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.



- alfalfa
- almonds
- apples
- apricots
- artichokes
- asparagus
- avocados
- bananas and plantains
- barley
- beans
- blueberries
- cabbages
- carrots
- cassava
- cherries
- chickpeas
- chillies and peppers
- cinnamon
- clover
- cocoa beans
- coconuts
- coffee
- cottonseed oil
- cowpeas
- cranberries
- cucumbers
- dates
- eggplants
- faba beans
- figs
- garlic
- ginger
- grapefruit
- grapes
- groundnut
- hazelnuts
- hops
- kiwi
- leeks
- lemons and limes
- lentils
- lettuce
- maize
- mangoes
- mate
- melons
- millets
- oats
- olives
- onions
- oranges
- palm oil
- papayas
- peaches and nectarines
- pears
- peas
- pigeonpeas
- pineapples
- plums
- potatoes
- pumpkins
- quinoa
- rape and mustard seed
- rice
- rye
- sesame
- sorghum
- soyabean
- spinach
- strawberries
- sugar beet
- sugarcane
- sunflower
- sweet potatoes
- taro
- tea
- tomatoes
- vanilla
- watermelons
- wheat
- yams

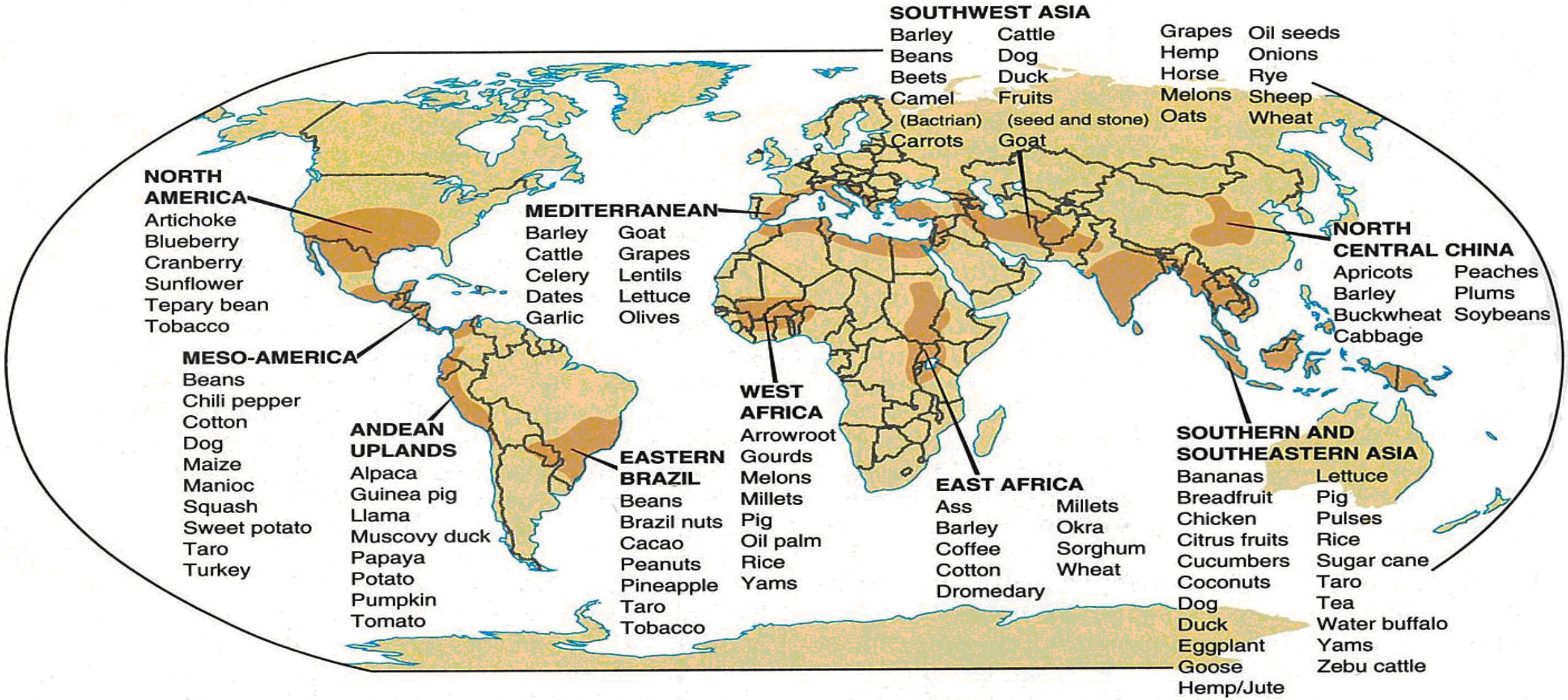
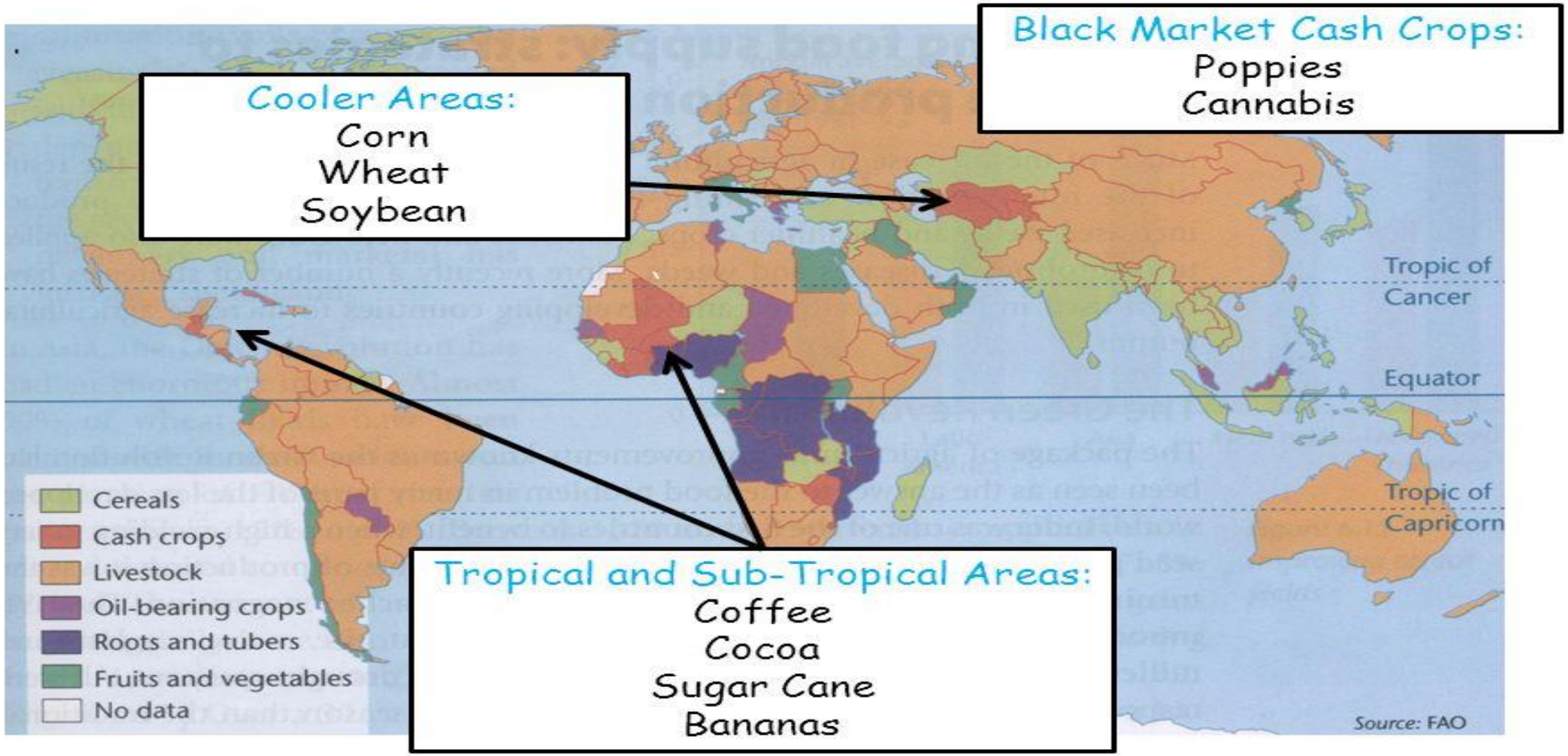


Figure 7–1. This map shows the origins of the world's food crops and domesticated animals. These plants and animals have been so widely redistributed, however, that today's leading producers of many of these are not the same as the areas in which they were first domesticated.

Distribution of cash crops



AGRICULTURAL DEVELOPMENT

- To **meet the growing demand of increasing**, efforts are made to increase farm production. This is known as **agricultural development .**

- It can be **achieve by increasing the cropped area**, the number of crops grown, improving irrigation facilities, use of fertilizers and high yielding variety of seeds.

- **Machine and technology** also plays an important role in agricultural development.

- The ultimate aim of agricultural development is to increase food security.

- **Development is** at different stages in different part of the world.

NEED FOR FOOD SECURITY

- Ever growing population.
- For the poor sections of the society.
- Natural disasters or calamity like earthquake, drought, flood, tsunami.
- Widespread crop failure due to drought.

AGRICULTURE IN INDIA

- Provides food to more than 1 billion people
- Produces 51 major crops
- Contributes to 1/6th of the Export Earnings

- Agriculture is the **backbone of Indian economy**. Agriculture is the most important occupation for most of the Indian families.
- In India, agriculture contributes about 16% of total GDP & 10% of total exports.
- That's reason India secured second position worldwide in terms of farm output. About 75% people are living in rural areas and are still dependent on Agriculture. About 43% of India's geographical area is used for agricultural activity.

FEATURES OF INDIAN AGRICULTURE:-

1. 75% India’s population depends upon agriculture.
2. Average size of land holdings is just 2.3hectares.
3. Fragmentation and sub-division of farms in family.
4. Intensive methods of cultivation.
5. Primitive methods of agriculture.
6. Rural indebtedness.

GLOBALIZATION AND CHANGES IN AGRARIAN SECTOR

- Changes in food basket
- Changes in agricultural marketing sector
- Changes in agricultural exports
- Changes in the share of agricultural employment
- Changes in the share of agriculture in GDP
- Changes in area of cultivation
- Contract farming and corporate farming

CASE STUDY

AGRICULTRAL PRACTICE IN INDIA	AGRICULTRAL PRACTICE IN USA
Size of farm is very small, about (1.5 hectares).	Size of farm is very large, (about 250 – 500 hectares).
Land is intensively cultivated, Double & Multiple cropping is very common. Wheat, rice, pulses, etc. are main crops grown.	Extensive type of farming is practiced, where yield per acre is low but the yield per worker is high.
All family members help in various agricultural activities. Production is for self usage and hardly there is any surplus.	Most of the work is done by machines. Manual labour is scarce and therefore, expensive.
Use of traditional methods of farming. Use of machine is limited.	Modern irrigation facilities are used.
Green Revolution – use of high yielding variety seeds, due to which agricultural production has increased manifolds.	Animals are reared on dairy farms. Mixed farming is common. Fodder crops are grown to feed the animals.
Farmers keep domestic animals like, buffaloes, hen, etc. for milk, egg, etc.	Highly scientific methods of agriculture are used. E.g. Soil is tested frequently for its fertility and best suitability for the crop to be grown.
Farmers do not have transport or storage facility. Thus, sell their products in the local market at low price.	

EXERCISE QUESTIONS:-

I. Distinguish between:

1. Plantation and shifting agriculture
2. Primary and tertiary activity
3. Mixed farming and ranching
4. Wheat crop and rice crop

II. Name the following.

1. A few factors on which agricultural development depends
2. Any three natural inputs that supports agriculture
3. Any four places where wheat crop is grown
4. Any five agro products
5. Any three types of farming

III. Give reasons.

1. Efforts have been made to increase farm production.
2. Subsistence farming is carried out by a farmer to satisfy just the needs of his family alone.

IV. Answer the following questions.

1. What are the three types of economic activities?
2. Define agriculture.

3. Mention the activities which are involved in harvesting a crop.
4. Define secondary activities. Give a few examples.
5. Describe in detail any four types of farming. Give examples.
6. Explain commercial farming.
7. What is meant by transhumance?
8. What practices should we adopt for agricultural development?
9. Briefly explain the climatic conditions suitable for the cultivation of tea.
10. Write a brief note on agriculture in India.
11. Compare farming in India with that in the USA.

Multiple Choice Questions

1. Agriculture is a
   a. primary activity b. secondary activity
   c. tertiary activity d. none of the above
2. Which of these crops would you expect to find in a place with a hot and wet climate?
   a. wheat b. tea c. rice d. millets
3. Groundnut would grow best in
   a. clayey soil b. sandy soil
   c. alluvial soil d. laterite soil
3. Which of these are human-made inputs of agriculture?
   a. relief of the land b. irrigation facilities
   c. earthworms d. crops
4. A farmer who clears a small patch of forest, burns the area, and then plants his crops there, is practicing
   a. shifting agriculture
   b. nomadic agriculture
   c. subsistence farming
   d. mixed farming
5. A farmer who practices subsistence farming would
   a. be able to grow enough food to meet the needs of his family and have some left over to sell in the market
   b. cultivate crops and rears animals for selling in the markets
   c. grow a single crop on vast areas of land
   d. raise livestock on a large scale
6. The areas where commercial grain farming is practiced includes:
   a. North America b. Europe
   c. Eurasia d. All of the above
7. In a mixed farm, a farmer:
   a. grows food crops and rears livestock
   b. grows food crops and fodder crops
   c. grows fodder crops and rears livestock
   d. grows fodder crops, food crops and rears livestock
8. In India, the white revolution is said to have started from Gujarat. What was the white revolution?
   a. The fight against the British
   b. The cultivation of a particular type of high-yielding white rice
   c. Abundant production of milk through the setting up of cooperative societies for dairy farmers
   d. None of the above
9. What is also known as the golden fibre?
   a. cotton b. wheat c. silk d. jute
10. The kharif crop is
   a. sown by April-May and harvested by October
   b. sown between October and February and harvested by June
   c. sown in January and harvested in December
   d. grown twice in an year
11. Which of these is not a typical feature of Indian agriculture?
   a. fragmentation and subdivision of land holdings
   b. rural indebtedness
   c. dependence on timely arrival of the monsoon
   d. extensive methods of cultivation

Thank You
&
Happy Learning!