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Agriculture is the growing of crops and rearing livestock.

FACTORS INFLUENCING AGRICULTURE

1. **Climate**
 - (a) Temperature – warm temperatures facilities quick growth of crops
 - (b) Rainfall – most crops require moderate to high rainfall
 - (c) Winds – some crops are destroyed by strong winds e.g. coffee
2. **Topography** – Gentle slopes are ideal for farming since cultivation and mechanisation is easy.
3. **Soil** – most crops require well drained fertile soils.
4. **Biotic factors. These include;**
 - (a) Weeds and parasitic plants.
 - (b) Insect pest, fungi and diseases.
1. **Social factors. These include**
 - (a) Culture and traditions of a community
 - (b) Gender
 - (c) Religion
 - (d) Ownership and inheritance of land
2. **Economic factors. These include**
 - (a) Operation cost
 - (b) Marketing expenses
 - (c) Price fluctuations
 - (d) Government policy
 - (e) The level of technology and the willingness to use the technology

TYPES OF ARABLE AGRICULTURE PRACTICES

1. SUBSISTENCE FARMING

This is a type of farming where the farmer produces food crops for his own and that of the family consumption. The most common form of subsistence farming is shifting cultivation.

MAIN FEATURES OF SHIFTING CULTIVATION

1. The farming is carried out in thick forests, which is set on fire and slashed.
2. Cultivated areas are scattered and separated by thick forests.
3. Cultivation is done using implements such as sticks and hoes.
4. It requires a lot of manual labour.
5. Very few crops are grown mainly starchy foods.

2. PLANTATION AGRICULTURE

This is the growing of a single crop on a large piece of land usually over 40 hectares.

MAIN FEATURES / CHARACTERISTICS

1. Only one type of crop is grown.
2. The crops are raised on large estates of more than 40 hectares (100 acres).
3. The farms are usually foreign owned.
4. The work in the farm is usually specialised and uses machinery and fertiliser.
5. Plantation agriculture requires large capital for the development of infrastructure.
6. Has its own processing factory within the farm.

ADVANTAGES OF PLANTATION AGRICULTURE

1. Plantation Agriculture is a source of employment.
2. It leads the development of infrastructure.
3. It is a source of foreign exchange through export of processed crop.
4. Plantation agriculture raises the standard of living of the surrounding population.
5. Quality of crop and product is high.

DISADVANTAGES

1. The crops can be attracted by diseases, pests or storms and all profits are lost
2. Monoculture farming will result in soil exhaustion.
3. Farm labour may be exploited.
4. Fluctuation in world prices may prove disastrous.

3. COMMERCIAL FARMING

This is a type of farming whose products are geared towards the market. It is a highly specialised form of farming and in most cases done on a large scale. Examples: poultry, beef, dairy, plantation cash crop farming etc.

REQUIREMENTS

1. Large capital outlay.
2. Large tracts of cultivation land.
3. Large supply of human labour.
4. Specialised skills and management.

5. It is practised in areas of high market.
6. Strong infracstructural facilities such as roads.

CROP FARMING

Crops can be divided into;

- ◆ Beverages
- ◆ Cereals
- ◆ Fibres
- ◆ Industrial crops

BEVERAGES

CROP	REQUIREMENTS	PROBLEMS	AREAS GROWN
1. COFFEE <u>Types</u> 1. Arabica 2. Robusta 3. Liberia	<ul style="list-style-type: none"> ◆ Temp: -15°C – 26°C ◆ Rainfall:- 1000 – 2000mm ◆ Soils:- well drained volcanic soils ◆ Labour:- Large labour force during picking. ◆ Infrastructure:- Good Road network for delivery to the factory. 	<ul style="list-style-type: none"> ◆ Pest and diseases ◆ Shortage of labour ◆ Unreliable rainfall ◆ Fluctuating world prices ◆ Competition from other beverages 	<ul style="list-style-type: none"> ◆ Nyeri, Muranga, Kiambu ◆ Taita Taveta ◆ Trans-Nzoia ◆ Vihiga ◆ Kisii Nyamira
2. TEA <u>Varieties</u> 1. Aswan 2. Chinese	<ul style="list-style-type: none"> ◆ Temp:- 20° – 25°C ◆ Rainfall:- 1500 – 2000mm ◆ Soils. Deep aerated, well drained volcanic soils. ◆ Altitude:- 1000 – 1700m. ◆ Labour:- Large labour force during picking. 	<ul style="list-style-type: none"> ◆ Pest and diseases attack e.g. Black tea thrip. ◆ Hailstones ◆ Fluctuation of world market prices. ◆ Competition from other beverages 	<ul style="list-style-type: none"> ◆ Kisii ◆ Nandi ◆ Kakamega ◆ Embu ◆ Nyeri ◆ Murang'a ◆ Kiambu etc.
3. SUGARCAGE	<ul style="list-style-type: none"> ◆ Temp:- 20°C – 30°C ◆ Rainfall 1000 – 1500mm. ◆ Soils: Black cotton soil ◆ Topography: Undulating and gently relief. 	<ul style="list-style-type: none"> ◆ Pest and disease attacks ◆ Fire outbreak ◆ Fluctuating prices due to dumping. 	<ul style="list-style-type: none"> ◆ Awendo ◆ Muhoroni ◆ Miwani ◆ Nzoia

	<ul style="list-style-type: none"> ◆ Labour: Large labour force during planting and harvesting 	<ul style="list-style-type: none"> ◆ Competition from other sources of sugar. 	<ul style="list-style-type: none"> ◆ Mumias
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CEREALS

These are crops, which produce starchy edible grains. Examples Wheat, Rice, Maize, Oats, Millets and Sorghum.

CEREAL CROPS

CROP	REQUIREMENTS	PROBLEMS	AREAS GROWN
1. MAIZE <u>USES</u> <ol style="list-style-type: none"> 1. Human food 2. Animal food 3. Industrial product 4. Manure 5. Domestic fuel 	<ul style="list-style-type: none"> ◆ Temp:- 18 – 27 ◆ Rainfall 750 – 1200mm ◆ Soils Deep rich fertile soils ◆ Labour: Large labour during harvesting 	<ul style="list-style-type: none"> ◆ Pests and diseases attack. ◆ Unreliable rainfall ◆ Competition from other cereals. 	<ul style="list-style-type: none"> ◆ Trans – Nzoia ◆ Nyanza Province ◆ Parts of Rift Valley ◆ Western province
2. WHEAT	<ul style="list-style-type: none"> ◆ Temp:- 15 – 20 ◆ Moisture 30 – 1015mm ◆ Soils light day or heavy loam ◆ Topography flats 		

CLOVES IN ZANZIBAR AND PEMBA

Cloves are indigenous crops of West Indies. They were brought to Europe by Vasco da Gama from India in the 16th Century. Sultan Seyyid Said between 1804 – 1856 introduced the cloves in Zanzibar and Pemba.

Zanzibar and Pemba produces 80% of the world's supply of cloves.

CONDITIONS NECESSARY FOR THE GROWING OF CLOVES.

1. Hot climate throughout the year. Temperature $27^0 - 30^0\text{C}$.
2. Heavy and reliable rainfall of about 1,500mm – 2000mm.
3. Deep fertile soils.
4. High humidity throughout the year about 70 – 80%.
5. Plenty of cheap especially during harvesting.

The cloves are mainly drawn in the Western part of the two islands because they have deep fertile soils while the Eastern has poor this soils which does not favour the growth of cloves.

PROBLEMS FACING CLOVE GROWING

1. Disease attacks the plants. E.g. a cute die-back
2. Price fluctuations
3. Stiff competition to other clove growing areas such as Mauritius and Comoros.

MAIN USES OF CLOVES

1. Flavouring of food
2. Cloves are chewed as stimulant
3. Used in the making of cigarettes
4. Making of oil used in making chocolate, sweets and cakes.

LIVESTOCK FARMING

This is the rearing of cattle, Sheep, goats, houses and poultry. There are two types of livestock farming namely traditional and commercial livestock farming.

TRADITIONAL LIVESTOCK FARMING

This farming is often referred to as nomadic herding.

FEATURES OF NOMADIC HERDING

1. The cattle are kept as a sign of wealth
2. There is uncontrolled breeding of the animals
3. Lack of organised land tenure as land is owned communally resulting in overgrazing and soil erosion
4. Disease attack is common
5. Animals are poor and weak due to disease to disease attack.
6. Poor marketing system
7. Seasonal movement of people and their animals is caused Transhumance. Examples of communities involved in Transhumance are the Fulani in West Africa and Masaai of East Africa.

PROBLEMS FACING NOMADIC PASTORALISM

1. Unreliable rainfall leading to drought. This results in poor pasture and death of animals.
2. Diseases and pest attack e.g. rinderpest and foot and mouth disease, which kill animals.
3. Overstocking and overgrazing. This result in serious soil erosion.
4. Poor quality breeds. Threes animals cannot give milk and meat of high quality.

5. Fires, Accidental fires burn grass and force the herdsmen to move from the affected areas.

COMMERCIAL LIVESTOCK FARMING

This is the keeping of animals and their products for sale. Examples; Beef farming, Beef keeping, Dairy farming, Sheep farming, Pig farming, Poultry farming.

BEEF FARMING

This is the rearing of livestock for meat.

BEEF FARMING IN KENYA

Beef cattle are mainly found in Rift Valley, Nyanza and Eastern Provinces.

STEPS TAKEN BY THE GOVERNMENT TO IMPROVE BEEF FARMING IN KENYA

1. Creating ranching schemes in arid and semi-arid areas.
2. Employment of livestock officers.
3. Educating the farmers on modern technologies of farming.
4. Introduction of new breeds of animals such as the pedigree British cattle.
5. Providing water by building dams and reservoirs.
6. Decontrolling the price of meat products.

PROBLEMS FACING BEEF FARMING

1. Unreliable rainfall leading to drought.
2. Poor pasture leading to low quality animals.
3. High temperatures in most of Kenya. This makes it difficult to raise cattle of high quality.
4. Disease and pest attack e.g. nagana and rinderpest.

BEEF FARMING IN ARGENTINA

Factors favouring beef farming

1. Gentle sloping land provides good natural grazing landscape with good pasture.
2. So that fertile soils which have given rise to good natural pasture.
3. Well-distributed high rainfall ensures regular supply of water and pasture through the year
4. Availability of market provided by European countries.
5. Presence of alfa grass which has high nutrients content.
6. Well organised and mechanised ranches resulting in increased production.
7. Well-developed railway system ensures quick transport of the animals to the factory.

SHEEP FARMING

- ♦ Sheep is kept for its wool meal, hair skin and milk

SHEEP FARMING IN KENYA

Most of the sheep kept in Kenya is indigenous. The exotic sheep are found in cooler wetter highlands particular Molo, Meru and parts of Nyandarua.

REASONS FOR ENCOURAGING SHEEP FARMING

1. To supplement beef for local needs and export.
2. Farmers are assured of a source of income.
3. To ensure steady supply of wool.

SHEEP FARMING IN AUSTRALIA

Australia has a Sheep population of about 135 million. Australia has a large Sheep farms, which can hold up-to 50,000 sheep. Australia is the world's leading wool producer. Australia exports her wool to Japan, Britain and other European countries. Australia is the second producer and export of sheep products after the former USSR.

FACTORS FAVOURING SHEEP FARMING IN AUSTRALIA.

1. Availability of high quality pasture due to humid climate
2. Availability of water
3. Availability of ready market in Melbourne and that the mutton remains fresh up-to the market.

PIG FARMING IN KENYA.

Pig farming is carried in small scale. The main types of pig include large white pig, saddle back pig, and crossbreed pig and landrace pig. Products of pig are – fresh pork, bacon, ham sausages and canned pork.

PROBLEMS FACING PIG FARMING.

1. Inadequate market as many people do not eat pork due to religious reasons.
2. Poorly organised marketing system in Kenya
3. Mismanagement of bacon factory in Limuru
4. Expensive pig feeds. This discourages the farmers.

SOLUTIONS.

1. Sound management of bacon factory
2. Provision of extension and technical services
3. The government has set up pig husbandry and multiplication centres in the country where farmers can buy crossed breed.
4. Encouraging schools and institutions to be involved in pig farming.

HORTICULTURE AND MARKET GARDENING.

Horticulture is the intensive cultivation of vegetable fruits and flowers while market gardening is the intensive cultivation of vegetables and fruits main features of market gardening and horticulture.

1. Plots are intensively farmed
2. The farms are general small
3. The products are from the forms are market oriented or for sale.
4. The farming is practiced in areas with fertile soil and this fertility is maintained by the use of fertiliser
5. Involves growing of fruit and vegetables.

DIFFERENCES BETWEEN HORTICULTURE AND MARKET GARDENING.

HORTICULTURE

1. Vegetables, fruits and flowers grown

MARKET GARDENING

1. Vegetables and fruits only

- | | |
|---|--------------------------|
| 2. Less labour intensive | 2. More labour intensive |
| 3. Products are foreign market oriented | 3. Local market oriented |

HORTICULTURE IN KENYA.

FACTORS FAVOURING HORTICULTURE.

1. Hot and wet climate favours quick growth of crops
2. Presence of fertile volcanic soils favours growth of variety of crops
3. High demand for horticultural crops both locally and internationally creates the market for the products
4. Availability of capital by large companies, which have heavily invested in the horticultural industry e.g Delmonte Company in Thika, Sulmac limited and Oserian Development Company in Naivasha.
5. Availability of technical and financial assistance from friendly countries e.g German Agricultural team,
6. Good transport and refrigeration facilities.

Horticultural crops grown in Kenya are:

1. Vegetables e.g Starchy tubers e.g yams, rootcrops e.g carrots green vegetables e.g beans, peas, cabbages etc.
2. Fruits e.g grapes, oranges, apples, pears, plums
3. Flowers e.g roses, orchards, carnations and gladioli.

PROBLEMS FACING HORTICULTURAL FARMING.

1. Muddy roads during rainy seasons limit accessibility between the farms and collecting centre.
2. Inadequate refrigeration facilities which leads to reduction of quality of most of the horticultural products
3. Lack of proper marketing and organisation making some of the farm products to rot
4. High freight charges leads to marginal profit
5. High farm input prices leads to high production cost hence high prices of horticultural products
6. Stiff competition from other international horticultural produces such as Netherlands and Israel
7. Pest and Diseases attack which destroy the crops.

SIGNIFICANCE OF HORTICULTURE TO THE ECONOMY

1. Horticultural is a source of foreign exchange
2. It is a major source of employment
3. Horticulture has facilitated the development and expansion of infrastructure such as roads
4. It is a major source of raw materials to industries such as fruit canning and manufacture of vegetable oil.
5. It has provided a source of income to farmers hence raising their standard of living.

HORTICULTURE IN NETHERLANDS

Netherlands is one of the leading horticultural producers in the world.

FACTORS FAVOURING HORTICULTURAL FARMING.

1. Presence of well drained quickly warmed coastal sandy soils ideal for the growth of horticultural crops.
2. The sunny summer allows the flowers to blossom while the warm Gulf Stream ensures that the area is frost free throughout the year.
- 3.

