CHAPTER THIRTY

VEGETABLES PRODUCTION:

Vegetables:

- Vegetables are edible plants that are grown for their leaves, roots, seeds and fruits.

- Examples are pepper, cabbage, onion, lettuce and okro.

The importance of vegetables:

- We eat them as food so as to be healthy.
- They add taste to our food.
- Vegetable production provides some people with employment.
- When they are exported, a country earns foreign exchange.
- They provide enough fibre to help in easy digestion in our bodies.
- They supply cannery industries with agricultural raw materials, which they use to produce canned vegetables.

Classification of vegetables:

- Vegetables can be classified or grouped according to their source or origin, their growth cycle and their edible parts.

Classification according to their origin:

- With respect to their origin, vegetables are classified as exotic or local vegetables
- Exotic vegetables are those which come from foreign countries, and examples are carrot, lettuce, French beans, cauliflower and cabbage.
- Local or indigenous vegetables are those which come from our country and examples are pepper, garden eggs and cocoyam leaves.

Classification according to their growth cycle:

- Under this, vegetables are classified as annual, biennial or perennial vegetables.
- Annual vegetables are those that grow within a year.
- Examples of such vegetables are lettuce, garden eggs, tomatoes and okro.
- Biennial vegetables are those which take about two years to grow and examples are cabbage, carrot and beetroot.
- Since biennial vegetables last for just about two years, all these vegetables grow within two years.
- Perennial vegetables are those which last for many years or for a long time and examples are cocoyam and Indian spinach.

Classification according to their edible parts:

- Under this, vegetables are classified or grouped into roots, leaves, stems, flowers and bulbs.
- For root vegetables, the food is stored usually in the root, which usually serves as the edible part.
- It is therefore the root which is usually eaten, and an example it the carrot.
- With respect to food vegetables, the food is usually stored in the leaf, which usually serves as the edible part and examples are cabbage and lettuce.
- For those vegetables classified as fruits, the food is stored in the fruits which they bear.
- The edible part is usually the fruit and examples are tomatoes, garden eggs and pepper.
- In vegetables classified as bulbs, the food is stored in the bulb which is the edible part, and examples are the onion and shallot.

Factors which affect the production of vegetables:

- These factors are climate and soil factors.

Climate factors:

- Climatic factors which affect the production of vegetables are temperature, rainfall, humidity and wind.

Temperature:

- Depending on the type, vegetables grow well within a certain temperature range, and if this temperature range is absent, then that type of vegetable crop may die or may not grow well.

Rainfall:

- For vegetables to grow well, the right amount of rainfall must be available.

Humidity:

- The level of humidity determines the ability of diseases to attack vegetable crops.
- During high humidity, the crops are usually attacked by diseases but this is not so during low humidity.
- While high humidity usually occurs during the wet season, that of low humidity occurs during the dry season.

Wind:

- When the speed of the wind is low, the rate of photosynthesis increases within the plant.
- This means that the plant Is able to manufacture more food.
- But the rate of photosynthesis decreases when the wind speed is high.
- The plant therefore can produce less food and as such, its growth rate can be affected.

Soil factors:

- These include soil texture, soil structure, soil colour and soil p.H.

Soil texture:

- This determines the aeration of the soil, drainage and the ability of the soil to hold water.

- Since loamy soil has a good drainage, retains water well and contains a good amount of nutrients, then it is the best soil for vegetable production.

Soil Structure:

- This determines the entry of water and air into the soil, which affects the growth of crops.
- A soil has a good soil structure if its particles are neither too loose nor tightly packed.
- For such a soil, air can easily enter.

Soil colour:

- Vegetables grow well in soil whose colour is black or dark brown.
- This is due to the fact that, this type of soil contains a type of plant food called humus.

Soil pH:

- Most crops including most vegetables grow well in soil, whose pH value ranges from 6.5 to 7.
- At low pH values, the activities of soil micro-organisms are reduced.

Nursery practices in vegetable cultivation:

The nursery:

- It is a place where seedlings are raised from seeds and cared for until they are ready for transplanting.

Types of nursery:

- There are two types of nursery and these are
  (a)the nursery bed.
  (b)the nursery box.

The nursery bed (seed bed):

- This is prepared on a small patch of fertile soil (loamy soil), by losing the soil and adding organic manure so as to make the soil richer.
- It is usually 1m x 1m in size.

Nursery box (seed box):

- This is a small box made of wood or plastic in which seeds are sown.
- There are holes around or under it, so as to allow the extra water in the soil it contains to drain away.
- The seed box is filled with a special soil mixture to a depth of about 4cm.
- This special soil mixture consists of sand, loam and compost in the ratio of 1:2:1 respectively.

Vegetable propagation:

- The method used in the sowing or the propagation of vegetables seeds, depends on the type and the size of the seed.
- Some common methods used are:

(1) Sowing the seeds on nursery beds, before transplanting them later on.
- Small seeds are sown by this method and the drilling method is used.
- In the drilling method, a dibber is used in making small trenches which are 7cm apart, and not more than 2cm deep.- Seeds are then carefully placed into these trenches, covered with fine soil and watered.

(2) Sowing seeds in nursery boxes before they are transplanted.
- It is also small seeds which are sown by the means, and the drilling method is also used.

(3) Planting at stake or sowing the seeds directly on the farmland.
- Seeds which are large in size are propagated by this method.
- In this case also, apart from the drilling method the broadcasting method can be used in sowing the vegetable seeds.
- In the broadcasting method, the seeds are spread evenly on top of the soil, covered with a within layer of soil and then watered.

(4) Vegetative propagation.
- This involves the use of parts of the parent plant, to propagate or reproduce young ones.