

CHAPTER THIRTY TWO

FARMING SYSTEMS AND FISH FARMING:

Introduction:

- This refers to the various methods of farming.
- Farming systems can also be referred to as agriculture systems, and there are various types.

(1) Subsistence farming:

- This is the type of farming in which the farmer grows food to feed himself and his family.
- The farm is usually small and simple tools such as the hoe and the cutlass are used.
- Under subsistence farming, the farmer may also keep a few animals.
- The main aim of the farmer is not to make money, even though he may sell any excess produce.
- One disadvantage of this system of farming is that production is low.
- This is due to the fact that the size of the farm is small, and simple tools are used.
- Another disadvantage is that the animals kept under this system are not well cared for.

(2) Cash crop farming:

- This is the type of farming in which the farmer grows crops for sale.
- The main aim of the farmer is to make money and crops such as cocoa and yam may be grown.
- Apart from the farming, cash crop farmers do other jobs.
- Another name of cash crop farming is plantation farming.

(3) Commercial farming:

- This is the type of farming in which crops and animals are grown and reared on large scale for sale.
- Machines and farm inputs such as fertilizers are usually used.
- One main advantage of this system of farming is that, it provides factories with raw materials.
- Another advantage is that, it assists in solving the unemployment problem.
- One main difference between cash crop farming and commercial farming is that, under cash crop farming, the farmer does not devote all his time to the farm, but commercial farmers devote all their time to their farms.
- Another difference is that, cash crop farms are not as big as commercial farms.

(4) Shifting cultivation:

- This is the farming system in which a farmer after cultivating a piece of land till it becomes infertile leaves it for another land, with no intention of returning to the old one when it regains its fertility.
- In this case also, the farmer moves his family and his settlement to the new land.

Advantages:

- The old land becomes fertile again after the fallow period, i.e. the time when it was left bare.
- The farmer is able to avoid pests and diseases by moving from one land to another.
- Inputs such as fertilizer and insecticides are not very much necessary.
- Simple tools and inexpensive equipments are used.
- Since new lands are always cleared, the farmer always has a fertile land to farm on.

Disadvantages:

- Since new farmlands are always cleared, the forest is destroyed.
- It cannot be practiced in areas where land is scarce.
- Since land is always being cleared, this system of farming becomes expensive.

- Because the farmer uses only a small amount of input, the level of production is low.

(5) Land rotation:

- This is the method of farming in which a farmer cultivates a piece of land for sometime, and leaves it to cultivate on a new piece of land, with the intention of returning to the old land when it regains its fertility.
- In this case, the farmer does not move his family and settlement to the new land.

Advantages:

- Money is saved since the farmer does not build a new settlement any time he moves.
- It is cheap since simple tools are used.
- The old land becomes fertile again, when it is allowed to remain fallow for sometime.
- The farmer does not have problems with pests and diseases.

Disadvantages:

- Because new areas are cleared, the virgin forest is destroyed.
- It cannot be practiced in areas where land is scarce.
- It becomes expensive and difficult, since land is constantly cleared.
- Because simple tools are used, the commercial production of crop cannot occur.

(6) Crop rotation:

- This is the type of farming in which a farmer grows different types of crops on different plots in a definite order, on the same piece of lands.
- In each growing season, the farmer changes the crop grown on each plot.
- The rules to be followed when practicing crop rotation are:
 - (a) Crops with long roots should follow those with short roots.
 - (b) Crops which use the same type of plant food must not be allowed to follow each other, for example, maize must not be allowed to be followed by millet.
 - (c) A fallow period must be included in the crop rotation program, so as to allow the land to regain its fertility.

- (d) Legumes must also be included in the program.

Reasons why legumes are included in a crop rotation cycle:

- They house nitrogen-fixing bacteria.
- They check erosion when used as cover crops.
- Because they provide a lot of leaves which serves as organic matter, the structure of the soil is improved.
- They increase the nitrogen level in the soil, since they fix nitrogen in the soil.

Differences between land and crop rotation:

Land rotation	Crop rotation
(1) The farmer works on different pieces of land.	The farmer works on one particular land.
(2) The crops are grown in any order.	Different crops are grown in a definite order.
(3) In land rotation, legumes are not necessary.	In crop rotation, legumes are included in the cycle.

Advantages of crop rotation:

- Since different types of crops are grown each season, diseases and pests are controlled.
- The farmer harvests a variety of crops.
- The soil nutrients are effectively used.
- Land is conserved.
- When one type of crop fails, the other may not fail.

Disadvantages of crop rotation:

- It involves a lot of work since the farmer grows different types of crops.

A three-year crop rotation

A piece of land is divided into three plots	Plot 1	Plot 2	Plot 3
Year 1	Cassava	maize	Soyabean
Year 2	Maize	Soyabean	Cassava
Year 3	Soyabean	Cassava	Fallow

A four-year crop rotation

A piece of land is divided into four plots	Year 1	Year 2	Year 3	Year 4
Year 1	Yam	Maize	Cassava	Soyabean
Year 2	Maize	Cassava	Soyabean	Yam
Year 3	Cassava	Soyabean	Yam	Maize
Year 4	Soyabean	Yam	Maize	Fallow

(7) Mixed farming:

- This is the method of farming in which a farmer rears animals and grows crops on the same piece of land.
- The area where crops are grown must be fenced, so as to prevent the animals from destroying the crops.

Advantages:

- The droppings of the animals can be used to fertilize the soil.
- The farmer gets a regular income throughout the year.
- The farmer is more likely to get a higher income from the farm.
- Because the risk of losing the crops and the animals is very low, it is a form of insurance for the farmer.
- The farmer gets a balanced diet.

Disadvantages:

- More skills are required by the farmer in order to manage the crops and the animals.
- The farmer has no time to rest since it involves a lot of work.
- If care is not taken, the animals may destroy the crops.