

## AGRICULTURAL **SCIENCE**

CLASS \_\_\_\_\_ SSS2

TOPIC \_\_\_\_\_ FOREST MANAGEMENT

WEEK \_\_\_\_\_ 4

### FOREST MANAGEMENT

FOREST can be defined as a large area of land covered with trees and bushes, either growing wild or planted for some purposes which serve as habitat to various animals.

SILVICULTURE is the growing and cultivation of trees.

FORESTRY is the management of forest and of trees.

FOREST ECOLOGY is the scientific study of interrelated organisms in the forest.

### COMMON FOREST TREES

Common forest trees found in forest are iroko, obeche, mahogany, Nigeria walnut, Ebony, Camwood, opepe, Afare, teak, and abura.

### FOREST RESERVE IN NIGERIA

- (1) Manu river forest reserve in Anambra state
- (2) Omo forest reserve in ogun state
- (3) Afi river reserve in cross river state
- (4) Okumu forest reserve in Edo state
- (5) Shasha river reserve in Ogun state
- (6) Zamfara forest reserve in zamfara state
- (7) Sanga river forest reserve in zamfara state.

### IMPORTANCE OF FOREST RESERVE AND ITS RESOURCES

The following are ways in which the forest and it resources are important to us. They are as follows:

- (1) Provision of food
- (2) Provision of fuel
- (3) Provision of medicinal herbs
- (4) Provision of Employment (lumbering)
- (5) Forest serves as a windbreaker.
- (6) Formation of rain
- (7) Prevention of soil erosion
- (8) Addition of nutrient to the soil.
- (9) Home for wild animals
- (10) Forest serves as a tourist Centre.

## MANAGEMENT OF THE FOREST

The following are the management practices that will ensure a constant supply of timber in the forest.

- (1) FOREST REGULATION: These are laws promulgated by the government in the form of edicts, decrees and bye-laws to prevent people from exploiting or indiscriminate tapping of forest resources.
- (2) The prohibition of bush burning
- (3) Ban of collection of leaves and firewood from the forest
- (4) Ban on the indiscriminate cutting of timber trees.
- (5) Encouraging people to trees
- (6) Ban on farming in the forest reserves.
- (7) Ban of cutting down of under aged trees
- (8) People are to obtain licenses so as to secure permission to ensure them to cut down trees for human needs.
- (2) SELECTIVE EXPLORATION: This is the process of cutting or harvesting only mature trees in the forest.

## ADVANTAGES OF SELECTIVE EXPLORATION

- (1) It ensures the concentration of selected species of timber in the forest.
- (2) It protects soil from erosion.
- (3) It ensures a continuous supply of timber.
- (4) It serves as a revenue base for the government.
- (5) It prevents indiscriminate felling of timber.

## (3) DEFORESTATION

This is the continuous or indiscriminate removal of trees without replacing them.

## CAUSING OF DEFORSTATION

- (1) Unfavorable climatic factors such as drought, wind, blast etc.
- (2) Man farming activities such as bush burning, shifting cultivation
- (3) Timber \industrialization
- (4) Timber exploitation
- (5) Bad government policies.

## EFFECT OF DEFOERSTATION

- (1) It encourages soil deforestation
- (2) It leads to a reduction in soil fertility.
- (3) It reduces the amount of rainfall in an area.

- (4) It reduces soil moisture content.
- (5) It may lead to desert encroachment.

#### (4) REGENERATION

Regeneration is the process of forest to re-grow after it has been exploited. It is a deliberate effort to grow trees.

#### TYPES OF REGENERATION

(A) Natural Regeneration

(b) Artificial Regeneration

#### NATURAL REGENERATION

In this type, there is regrowth of new plant from the stumps.

#### ARTIFICIAL REGENERATION

This involves the planting of new forest seedlings in a deforested area.

#### ADVANTAGES OF REGENERATION

- (1) It is expensive when compared with the artificial regeneration
- (2) It does not require formal stages in plantation establishment
- (3) It brings about the stabilization of natural ecosystem.
- (4) It does not require special management skills.
- (5) AFFORESTATION

This is the process of establishing forest plantation in any area.

#### ADVANTAGES OF AFFORESTATION

- (1) It leads to the addition of organic matters.
- (2) It provides a regular supply of raw materials e.g. timber for industries.
- (3) It prevents desert encroachment.
- (4) It increases forest fauna (wildlife) in the area.
- (5) It prevents leaching of plants nutrients.

#### (6) TAUNGYA SYSTEM

Taungya system is defined as the planting of arable crops at an early stage of forest establishment and the arable crops are harvested before the trees form canopies.

#### CONDITIONS NECESSARY FOR THE PRACTISE OF TAUNGYA SYSTEM

- (1) Scarcity of land.
- (2) Over population.
- (3) Unemployment.
- (4) Government policies.
- (5) A low standard of living.

#### ADVANTAGES OF TAUNGYA SYSTEM

- (1) Varieties of crops are harvested
- (2) There is the availability of crops produced throughout the year.
- (3) When leguminous crops are used, they fix nitrogen to the soil.
- (4) Solves the problem of land scarcity.
- (5) It increases the income of the farmers.

#### DISADVANTAGES OF TAUNGYA SYSTEM

- (1) The reluctance in releasing fertile soil.
- (2) Cultivation of selected crops.
- (3) Competition between crops and trees.
- (4) The inability of some crops to survive.