

SUBJECT: AGRICULTURAL SCIENCE

TOPIC: DRAINAGE SYSTEM

CLASS: SS2

TERM: TERM: 1ST TERM

WEEK: FIVE (5)

Drainage is the process whereby excess water in the soil is removed artificially to promote good farming activities.

Importance or effects of drainage system

1. It helps in regulating regaining waterlogged soil for production.
2. It improves soil structure and structure and water holding capacity of the soil.
3. It improves soil aeration for root respiration.
4. It gives a suitable condition for the growth of microbes which helps in decomposition
5. It helps to increase soil temperature.
6. Drainage leaches excess salt from the soil which prevent poisoning and death of the plants.
7. It makes tillage operation easier.
8. It reduces the incidence of crop diseases.
9. It enhances the harvest of crops.
10. It increases crop production.

Types of drainage system

1. Surface drainage
2. Sub-surface drainage.

SURFACE DRAINAGE SYSTEM

This involves the orderly removal of excess water artificially from the surface of the land using constructed ditches, field drains and land grading.

Advantages of surface drainage system

1. It is relatively easy to construct.
2. It is cheaper than the sub-surface drainage system

Disadvantages of surface drainage system

1. It occupies good land (space) that could have been for planting.
2. It hinders the passage of machines like tractor.
3. It is prone to gully erosion.
4. It requires frequent maintenance.

5. It increases the cost of production.
6. Farm mechanization is impaired.
7. It is expensive and difficult to establish.

SUB-SURFACE DRAINAGE SYSTEM

This is the orderly removal of excess water from the land ties or moles or perforated pipes dug under the ground, it is also called underground drainage.

Advantages of surface drainage system

1. It does not pose any threat to machines.
2. High values of crops are grown.
3. It leaves the field free from surface obstruction.
4. More land is made available for cultivation.
5. Cost of maintenance is low
6. Drainage is faster and more efficient.

Disadvantages of subsurface drainage system

1. It is very expensive to operate.
2. It cannot easily be constructed.
3. It is difficult to maintain.
4. It needs a very deep exaction of the soil.

ASSIGNMENT

1. Define drainage system
2. List five importance of drainage system.