AGRICULTURAL SCIENCE SECOND TERM E NOTES FOR BASIS FOUR

WEEK TOPIC

1. METHOD OF FARM PRODUCE PRESERVATIONS
2. METHOD OF FARM PRODUCE PRESERVATIONS CONT.
3. MATERIALS FOR GROWING CROPS
4. MATERIALS FOR GROWING CROPS CONT.
5. SAFETY MEASURE IN APPLYING CHEMICALS
6. HOW TO RAISE ORNAMENTAL CROPS
7. HOW TO RAISE ORNAMENTAL CROPS
8. COMPOST MAKING
9. IMPORTANCE OF EACH FACTOR OF PRODUCTION
10. REVISION

Class:- Basic 4

Subject:- Agricultural Science

Week:- 1 and 2

Topic: Method Of Farm Produce Preservation

Behavioral objective:- At the end of the lesson the pupils should be able to:-

1.State the methods of preserving foods on the farm

2. Mention the importance of farm produce preservation

Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for priimary school book 4

Building Background /connection to prior knowledge : Students are familiar with the various examples of farm produce such as maize, tomatoes etc and their tendency to get spoilt quickly.

Content

METHOD OF FARM PRODUCE PRESERVATION

The proper keeping of food until they are needed is called **food preservation.** Some crop Plants will need to store until the next planting season. To make sure that they are good for planting (viable), they must be properly preserved.

IMPORTANCE OF FARM PRODUCE PRESERVATION

1. To retain the freshness of the food
2. To reduce the loss of quality of the food
3. To prolong the food shelf life
4. To prevent possible contamination and infection.

METHODS OF FARM PRODUCE PRESERVATION

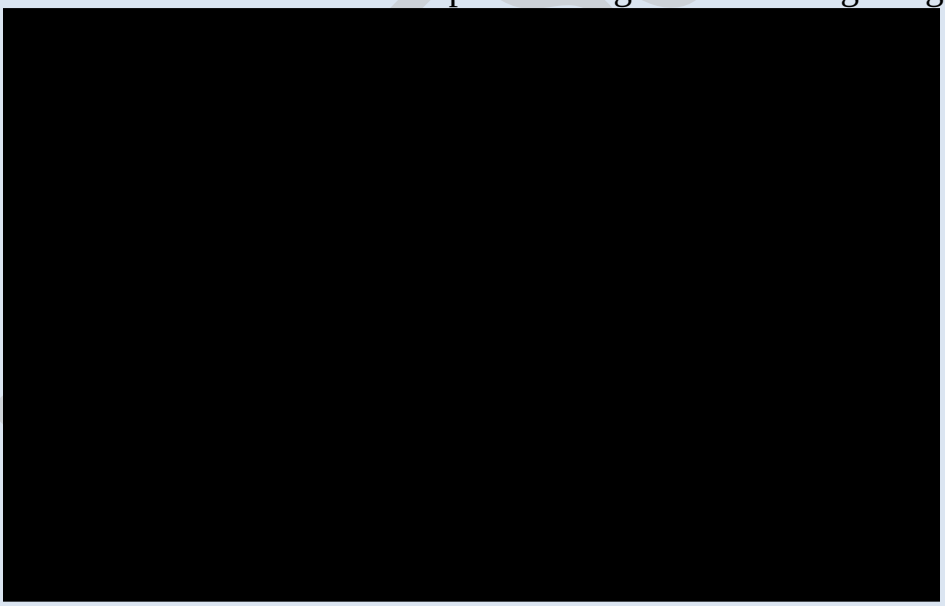
The different methods of farm produce preservation are:
(a) Sun drying
(b) Smoking
(c) Salting
(d) Frying
(e) Refrigeration
(f) Canning
(g) Bagging
(h) Bottling

(a) Sun drying

(b) Peeled cassava, peeled yam, maize, beans can be preserved by spreading them under the sun. Drying reduce the water content of the food stuff.

(c) Smoking

Fish and meat can be smoked with coal fire. Smoking dries the meat and fish. These meat and fish can be kept for a long time without getting spoilt.

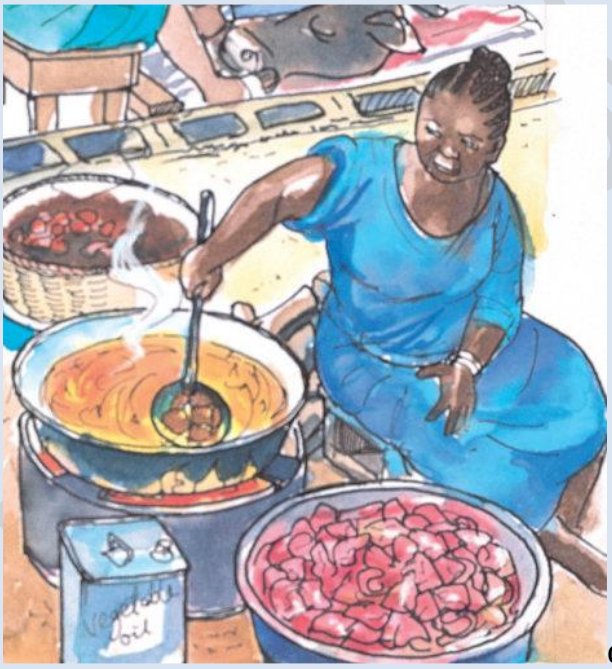


(d) Salting

Adding salt to some food stuffs like meat and fish can preserve them for a short period of time. The salt keeps out germs away from the from the food stuff.

(e) Frying

Meat, fish, chicken, plantain, yam and potato can be preserved by frying. Frying removes water from the food items so that it can be kept for a long [peri



od of time.

(f) Refrigeration

This is a modern way of preserving food. Food items like eggs, fruits and vegetables can be preserved in the fridge. For longer preservation, meat, fish should be stored in the freezer.

(g) Canning

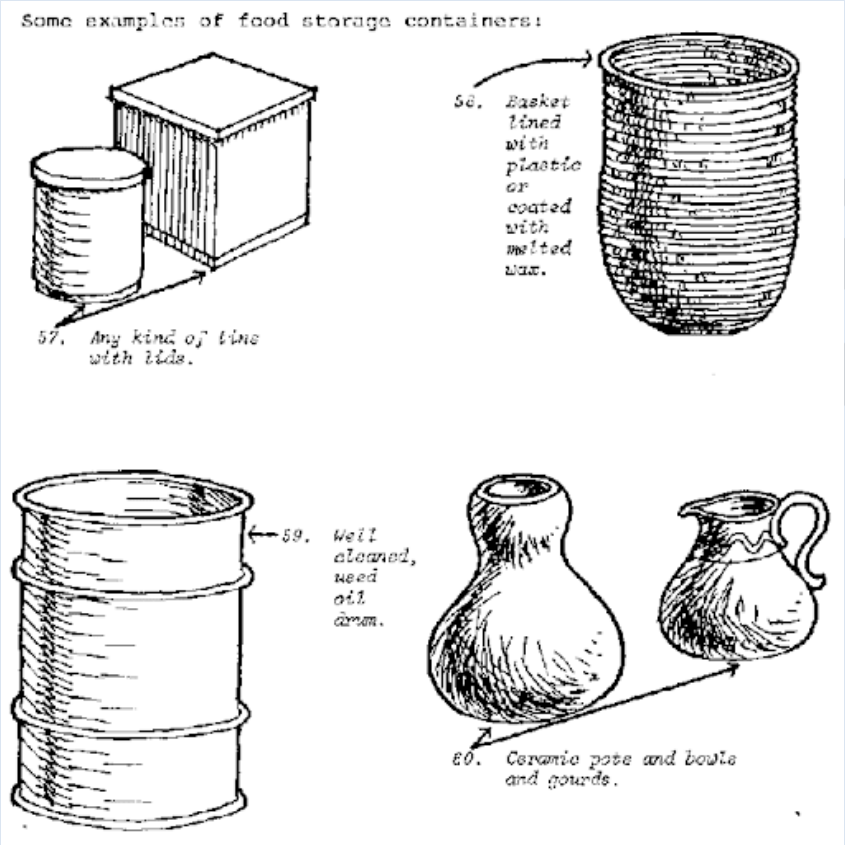
In factories food are processed and canned so that they can be stored for a long time. Such foods include fruits, pepper, tomato, sardine, corned beef and soup. the can is sealed after adding some chemicals called preservatives.

(h) Bagging

Foodstuffs can be preserved in a bag so that they can be stored for a long time e.g. rice.

(i) Bottling

Fruit juice can be put in sealed bottles for preservation purposes.



Evaluation:-

1. What is food preservation
2. State four importance of food preservation
3. Methods of preserving food include:

(a) _____

(b) _____

(c) _____

(d) _____

(e) _____

(f) _____

Class:- Basic 4

Subject:- Agricultural Science

Week:- 3 and 4

Topic: Materials Needed To Grow Crops

Behavioral objective:- At the end of the lesson the pupils should be able to:-

1. List four materials needed for growing crops
2. Describe good seeds that can germinate easily
3. Describe good stem cuttings that can sprout easily
4. Explain the importance of fertilizer or manure.
5. List and Explain the importance of pests killing chemicals

Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for priimary school book 4

Building Background /connection to prior knowledge : Students are familiar with the materials needed to grow crops

Content

MATERIALS NEEDED TO GROW CROPS

The following materials are needed to grow crops:

1. Good seeds
2. Good stem cuttings
3. Fertilizer or manure
4. Pest killing chemicals (including weed killers)

1. **Good seeds**

Seeds to be grown must be viable (living healthy seeds). They must not be seeds that are affected by diseases. Examples are good seeds of beans, melon and maize grains.

2. Good stem cutting

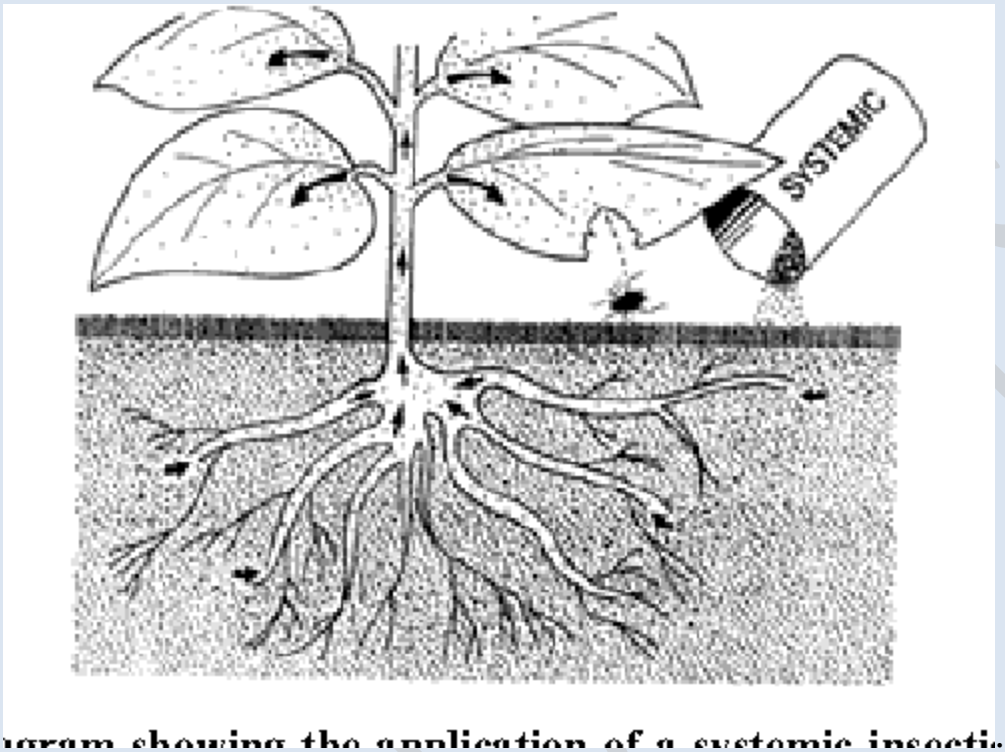
Good stem cuttings are used in growing cassava and some tree crops. The cuttings must not be affected by diseases and must be clean and healthy looking.

3. Fertilizer or manure

Fertilizers or manure supply mineral nutrients that serve as food to crop plants. They are usually added to the soil to make our crops grow well and healthy.

4. Pest killing chemicals

Chemicals called **insecticides** can be spayed on the plants to kill insects. Baits are used for rodents (rats, rabbit) and scare crow for birds. Chemicals called **rodenticides** can be used to kill rodents



ıgram showing the application of a systemic insecti

Evaluation :-

1. Four materials needed for growing crops
2. Describe good seeds that can germinate easily
3. Describe good stem cuttings that can sprout easily
4. Explain the importance of fertilizer or manure.
5. List Explain the importance of pests killing chemicals

Class:- Basic 4

Subject:- Agricultural Science

Week:- 5

Topic: Safety measures in applying chemicals

Behavioral objective:- At the end of the lesson the pupils should be able to:-

1. List two safety measures in applying chemicals

2. State two dangers of excessive use of chemicals

Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for priimary school book 4

Building Background /connection to prior knowledge: Students are familiar with some dangerous chemicals such as acid.

Content

SAFETY MEASURES IN APPLYING CHEMICALS

1. Spray the chemicals with the aid of a knapsack sprayer with your mouth and face covered. This is to disallow chemicals to get into your mouth.
2. Do not allow chemicals to come in contact with your skin.
3. Always wash your hands with soap and water after use. It is even better to take a full bath after use.

DANGERS INVOLVED IN EXCESSIVE USE OF CHEMICALS

1. Chemicals can be toxic to the crop and kill our crops.
2. It can destroy the useful living things in the soil.

3. It can be washed into streams and rivers and kill fish and other water living organisms.
4. Chemicals can cause water and air pollution
5. Some chemicals if they touch our skin, can burn the skin.

Evaluation :-

1. List two safety measures in applying chemicals
2. State two dangers of excessive use of chemicals

Class:- Basic 4

Subject:- Agricultural Science

Week:- 6 and 7

Topic: How to raise ornamental plants

Behavioral objective:- At the end of the lesson the pupils should be able to:-

1. Define ornamental plants
2. List the importance of planting flowers in school?
3. List the steps in raising namental crops
4. List four ornamental plants grown in school.
5. Name three tools for planting ornamental plants

Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for priimary school book 4, picture chart.

Building Background /connection to prior knowledge : Students are familiar with the various examples of flower in their environment.

Content

LEARNING OBJECTIVES: At the end of the lesson, pupils should be able to:

CONTENT

HOW TO RAISE ORNAMENTAL PLANTS

Ornamental plants are plants that beautify our environment. They are mostly flowers e.g. hibiscus, rose flower, flamboyant flower and sun flower.

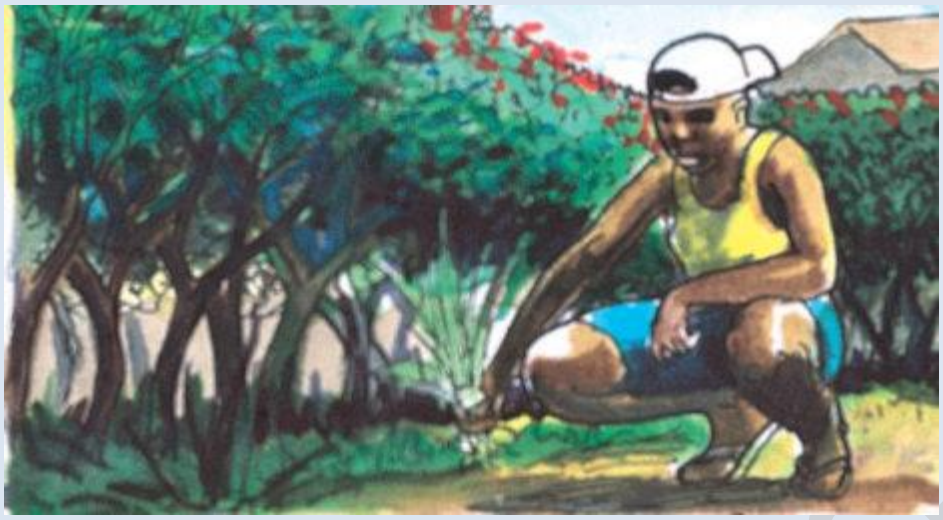
The Steps in growing ornamental crops are:

1. Land clearing
   Before planting, the land must be cleared of weeds and debris. Hoes and machetes can be used in clearing the land.

2. Seed bed or pot preparation
   Seed bed should be well planned. Pot should also be fine and filled with good soil. Topsoil should be loosening for removal or roots, stones and woods.

3. Planting
   Most ornamental plants are planted through their seedlings. So, seedlings are transplanted tpo the pots ot flower bed.

4. Weeding
   This is the removal of unwanted plants. It is done regularly with the aid of hoes in the flower bed. In the pot, hand weeding should be done i.e. pulling out the weeds with hands.



5. Manuring

   This means applying manure to the flower beds or the soil in the pots. Manure helps the plants to grow well.

6. Watering

The flower bed should be regularly watered particularly, in the dry season. The pots should be watered daily.

7. Mulching

This is the covering of the surface of the soil or the seed bed with cut dry leaves, stems and even plastic to reduce the loss of water from the soil.

8. Pruning
   Trimming should be done constantly to make the flower look attractive.

Evaluation

1. What are ornamental plants?
2. What are the importance of planting flowers in your school?
3. List the steps you would take to raise ornamental crops
4. List four ornamental plants grown in your school.
5. Name three tools for planting ornamental plants.

Class:- Basic 4

Subject:- Agricultural Science

Week:- 8 and 9

Topic: Preparation of compost manure

Behavioral objective:- At the end of the lesson the pupils should be able to:-

1. Define compost
2. List the material required for compost making
3. Explain the steps involved in compost making
4. Give reasons why we do the following during the compost preparation:
   --- Watering –
   ---Turning the heap –
   --- Shading from light –

Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for priimary school book 4

Building Background /connection to prior knowledge : Students are familiar with the materials used in making compost manure

CONTENT

PREPARATION OF COMPOST MANURE

What is compost manure?

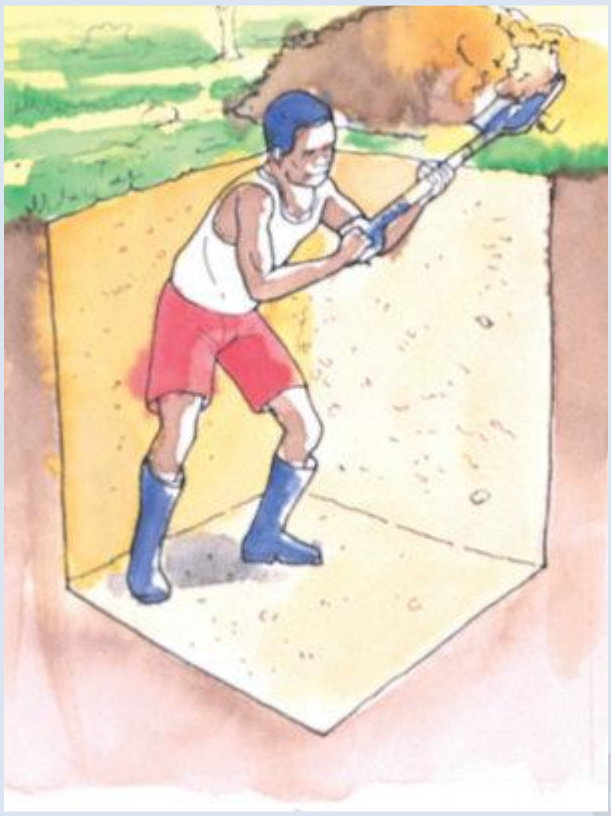
Compost is mixture of decayed plants refuse, decayed animal dung and chicken waste. When added to the soil, it makes the soil fertile. Compost improves plant food and makes the crop to grow well.

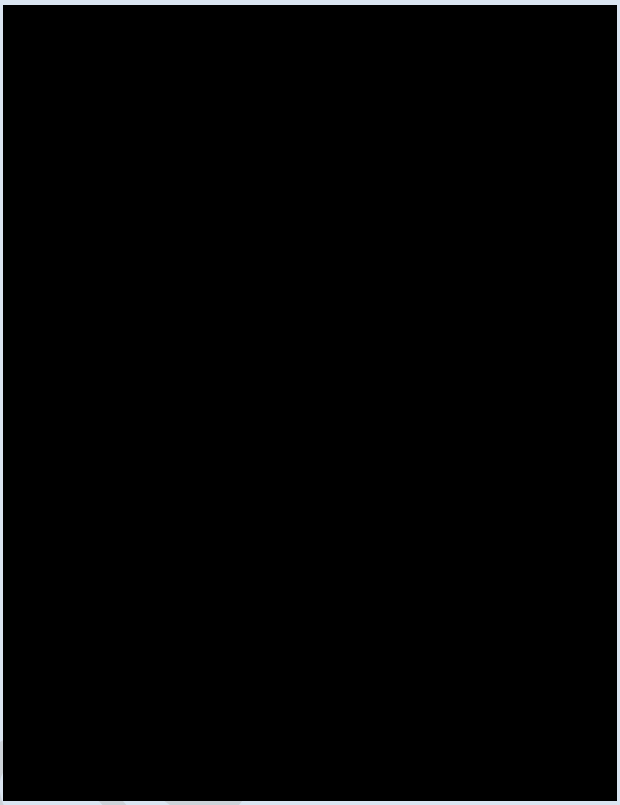
Materials for making compost

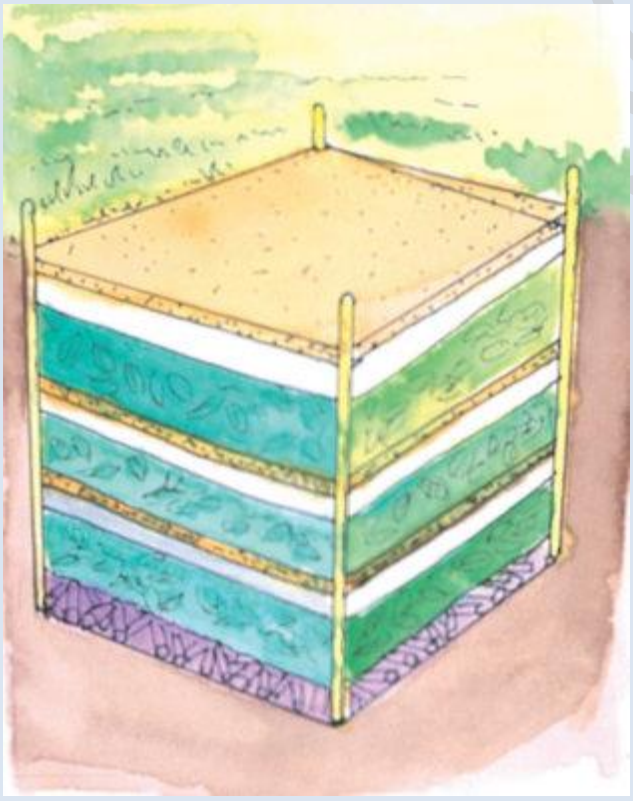
a. Plant refuse
b. Animal dung(farm yard manure)
c. Household refuse(kitchen)
d. Wood ash
e. Soil
f. Water

Steps in making compost

a. Dig four pits labeled A, B, C and D. the size should be 1 m × 1m x 0.5.
b. Pit A is called loading pit. Arrange the materials for making compost in layer separated by soil in pit A. make sure you moisten the heap with water to allow for easy decomposition.
c. After two weeks, move the contents of pit A to B (first turn).
d. After about one week, mo e the content of B to C (second turn).
e. After another one week, move the content of C to D.
f. Cover up the compost to prevent evaporation, leaching and erosion before applying it to the farm. Content of D is transferred to as compost after 4 – 6 weeks. Turning the heap allow the air into the heap and make for even decay.







Evaluation

1. What Is Compost?

2. List the material required for compost making
3. Explain the steps involved in compost making
4. Give reasons why we do the following during the compost preparation:
    i. Watering –
    ii. Turning the heap –
    iii. Shading from light –