SECOND TERM E - NOTES
CLASS: BASIC FIVE
SUBJECT: AGRIC SCIENCE

WEEK	TOPIC
1.	HOW TO RAISE CROPS
2.	PROCEDURE FOR RAISING FARM CROPS
3.	RAISING SCHOOL FARM
4.	GENERAL REQUIREMENTS FOR LIVESTOCK PRODUCTION
5.	ANIMAL PRODUCTION
6.	CARE OF ANIMALS
7.	SPECIC NEEDS OF YOUNG ANIMALS FOR HEALTHY GROWTH
8.	SPECIC NEEDS OF YOUNG ANIMALS CONT.
9.	EFFECTS OF LACK OF CARE ON FARM ANIMALS
10.	REVISION

Class:- Basic 5
Subject:- Agricultural Science
Week:- 2
Topic: How to raise crops
Behavioral objective:- At the end of the lesson the pupils should be able to:-
1. Differentiate between field crop and cereals
2. State the procedures for raising field crop and cereals
Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for primary school book 5
Building Background /connection to prior knowledge : Students are familiar with the various examples of field crop
Content
HOW TO RAISE CROPS
EXAMPLES OF FIELD CROPS

1. Cereals - rice, maize, millet, corn
2. Legumes - beans, cowpea, soya beans

3. Tubers - examples are yam/cassava

PROCEDURE FIR RAISING FIELD CROPS

How to raise legume crops

In the country, the most common legume crops grown are cowpeas, soya beans, bambara nuts and groundnuts. Legumes are generally rich in protein. Groundnut is also rich in fat and oil. Legume crops grow well on sandy loam soil and under an average rainfall of 500 –1 000 ml.

Land clearing

Vegetation is cleared off the land to be planted. The cut vegetation is packed and burnt. The land has to be cleared of bush either by tractor or by human labor. After clearing, it is better to leave the dead leaves, stems and roots to decay on the soil. Do not burn the remains of the plants so as not to destroy the soil.

Planting

Legumes are planted on ridges or flats. Only good seeds are selected for sowing.

This is carried out at the beginning of the rainy season.

Weeding

The first weeding is done with hoes about three weeks after germination. A second or third weeding may be done by hand picking.

Tilling and stumping

The soil is plough and stumps are removed. Stumps are uprooted and

Packed away Land for growing legume crops requires light tillage. Animal traction maybe used for making ridges. Tractors or hoes May also be used.

Ridges and mounds making

This is done by heaping to soil into a row. Ridging is good for better crop yield. Ridging soften the soil. It brings nutrients closer to the plant roots.

Fertilizer application

In the cultivation of legumes, fertilizer is usually not applied. However, where necessary, fertilizer is applied after the first weeding is done, that is, about three weeks after germination. Fertilizer may be applied in ring form or in holes.

Harvesting

It is the pods which legumes produce that are harvested. Harvesting is done when the pods are mature and dry. Harvested pods are sundried and shelled to release the seeds.

Processing and preservation

Shelled or threshed legume seeds are separated from the pods by winnowing. The seeds are dried again in the sun to reduce the moisture content. They are then packed in metal or plastic containers or in jute bags. They are also treated with Chemical to prevent weevil attack.

HOW TO RAISE CEREAL

How to raise cereal crops

The cereal crops commonly grown in Nigeria are maize, rice, sorghum, millet and guinea corn. These crops feed and grow mainly on the top soil because of their fibrous shallow root system.

Let us now go through the processes of raising cereal crops.

Evaluation:-

1. List four cereal crops
2. List four legume crops
3. List three tuber crops
4. Explain the following procedures for raising field crops
   (a) Land clearing -
   (b) Tilling and stumping -
   (c) Ridges and mounds making -

Class:- Basic 5

Subject:- Agricultural Science

Week:- 3

Topic: Procedure for raising farm crops

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

1. States the procedures for raising farm crop

Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for primary school book 5

Building Background /connection to prior knowledge : Students are familiar with the various examples of field crop

Content

PROCEDURE FOR RAISING FARM CROPS

Procedure for raising farm crops

(i). land clearing
(ii). Tilling/Stumping
(iii). Ridge/mound
(iv). Making
(v). Planting in rows with spaces between plants
(vi). Regular weeding
(vii). Fertilizing
(viii). Harvesting
(ix). Processing/preservation
(x). Storage
(xi). Marketing

1. PLANTING

Planting can be on ridges or mounds or beds. A spacing of 20-50cm is kept for ridges. Also a spacing of 40-100cm is kept between one crop and the other. The actual spacing depends of crops and the season of planting. Spacing makes weeding easy, makes manuring easy and prevents overcrowding of plants thereby allowing the plants to access sunlight.

Planting can be through:

1. Sowing seeds: grain crops are usually grown by sowing their seeds in ridges or beds or on a flat land. Examples are soya bean, maize, and groundnut.
2. Stem cutting: field crops like cassava are produced by planting some parts of their stems.
3. Tuber seeds: some field crops like yam and cocoyam are raised by planting small parts of the tuber called tuber seeds.

Land clearing

Cereal crops grow well on land with low forest growth. Land for planting is cleared of shrubs, weed sand grass. Cut materials are packed and burnt. The land is now ready for stumping and tillage.

Stumping

This is the removal of tree stumps to make farming operations easy. Stumps are removed with hoes, cutlasses, pick axes or graders.

Tilling

This is the breaking or loosening of the soil to provide a favorable condition for planting of crops. This will make it easy for air and water to enter the soil. Tilling can be done using a cutlass, hoe, spade, fork or rake.

Ridge/mound making

This is the moving of the soil in to straight ridges, or heaping of the soil in to mounds. For a small area of land, e.g. the school farm, the land is marked out with pegs and ropes before the ridges are made. Ridges and mounds are usually made with a hoe. Few rains of the year. Correct planting spacing issued on the beds for sowing the seeds about 5cm deep. Seeds are planted at the sides of the mounds or ridges. Rice is usually planted on flats. Two or three grains are dropped into one hole and covered with soil. The grains germinate in about five days.

Weeding

Weeding is carried out about three weeks after planting. During weeding, ridges or mounds that may have been washed off, a real so remolded. Weeding may be repeated after four weeks.

Fertilizer application

Fertilizer is applied to the crop after weeding. The application may be in a ring form, in holes or by broadcasting, depending on the type of cereal planted. The application may be repeated after four weeks.

Harvesting

Some cereals produce flowers about two months after planting. They produce mature grains about one month after. Cereals like maize can be harvested green for food.

Planting

Cereals are grown through grains or seeds only good grains.

Processing and preservation

Cereals like rice, sorghum and guinea corn are threshed after harvesting. The pure grains are removed by winnowing. Maize cobs are shelled to remove the grains.

Evaluation:-

1. Explain how crops can be planted
2. Explain the processes involved in planting
3. What are seed tubers used for?

Class:- Basic 5
Subject:- Agricultural Science
Week:- 4
Topic: Raising school farm
Behavioral objective:- At the end of the lesson the pupils should be able to:-
1. explain the meaning of school farm
2. States the procedures for preparing a school farm
Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for primary school book 5
Building Background /connection to prior knowledge: Students have been to their school farm
Content

RAISING SCHOOL FARM

A school farm is a small farm for growing crops like cassava, maize, millet etc. It is usually located at the backyard of the school.

WAYS OF PREPARING A SCHOOL FARM

1. Land clearing

The land has to be cleared of bush by hand by using cutlass, hoes, shovels, etc. After clearing the land, it is better to leave the dead leaves, stems and roots to decay into the soil (the serves as manure)

2. Manuring

Manure is applied to the farm land and mixed together with the soil to make it fertile.

3. Weeding

After planting and the crops are growing, we should constantly remove weeds from the farm. This can be done by the use of hoe or by spraying with weed killer.

4. Fencing

The school farm is fenced to prevent pests/animals like rats, goats, bats etc from entering inside the farm and destroying crops

Raise school farm (practical)
(i). Prepare materials for planting
(ii). Prepare the land for planting using farm tools
(iii). Participate in the planting of crops
(iv). Care for the farm

Evaluation:-
1. Explain the meaning of a school farm
2. List four crops grown on a school farm
3. Explain the following
   (a) Land clearing -
   (b) Manuring -
   (c) Fencing -
   (d) Weeding -

Class:- Basic 5
Subject:- Agricultural Science
Week:- 5
Topic: General requirements for livestock production
Behavioral objective:- At the end of the lesson the pupils should be able to:-
1. Explain the meaning of livestock production
2. State types of animal houses
Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for primary school book 5
Building Background /connection to prior knowledge : Students understand that animals are also known as livestock.
Content
GENERAL REQUIREMENTS FOR LIVESTOCK PRODUCTION

Livestock production (animal husbandry) is another farming activity apart from crop plant farming. It can also be called animal farming.

Things that are needed for successful livestock production are:

1. Housing
2. Food
3. Care of farm animals

HOUSING

Housing is a major requirement for livestock production. Even animals that are allowed to move about should still have a farm house. Animal houses are necessary to protect them from rain, sun, wind, parasites, thieves, predators etc

TYPES OF ANIMAL HOUSES

1. Cage: this is used for rearing chicken. It could be made of bamboo, wood or wire mesh.
2. Brooder: brooder is used for rearing chicks
3. Hutch: this is a small wooden cage for rearing rabbits and guinea pigs

Evaluation:-

1. Explain the meaning of livestock production
2. What are the things necessary for livestock production
3. Why are animal houses necessary?
4. List three types of animal houses

Class:- Basic 5

Subject:- Agricultural Science

Week:- 6

Topic: Animal production - How to raise livestock

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

1. Explain how to care for sick animal
2. State the steps in raising livestock

Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for primary school book 5

Building Background /connection to prior knowledge : Students have learnt about the general requirement for livestock production.

Content

ANIMAL PRODUCTION - HOW TO RAISE LIVESTOCK

Growing animals should receive adequate medical treatment to protect them from diseases and pests.

A veterinary doctor should visit the farm regularly to observe the animals for any symptom. Those that are sick should be given adequate medication by:

(a) Mixing drugs with feeds,
(b) Injecting animals,
(c) Mixing drugs with drinking water,
(d) Spraying animals with pesticides

A CLEAN FARM ENVIRONMENT

A clean farm environment is necessary for the prevention of diseases. This is achieved by:

1. Having good animal houses,
2. Keeping the animal houses clean,
3. Disinfecting the animal houses regularly
4. Cleaning the drinking and feeding troughs daily.

Steps in raising farm animals

There are many steps involved in raising farm animals, right from when they are young, till when they are old or mature and are ready for marketing. These steps can be generally grouped into housing, feeding, health care and handling for marketing.

Procedure for raising cattle

Cattle are large farm animals with or without (big) horns which are reared for milk and meat. They are mostly found in the northern part of the country. They are raised using the following procedure:

Health management

Cattle pens should be cleaned regularly. Feed troughs should be emptied and cleaned before fresh feed is added. Water troughs should be washed daily and clean fresh water supplied. Old beddings should be removed and replaced with fresh ones. Veterinary doctors should be invited regularly for routine health

check and care of animals. Ticks and other ectoparasites should be removed occasionally from the animals by dipping them in appropriate chemical. Sick animals should be isolated and dead ones removed from the pen for burial.

Marketing

Mature cattle should be sold alive in the field. They may be transported in vehicles or made to trek to distant markets in other parts of the country for sale. Mature cattle are also slaughtered in abattoirs and sold for beef. Stocking Weaned calves should be purchased for rearing. Farmers usually purchase more female calves than male calves in order to increase the opportunity of getting many young animals in future for the herd.

Housing

Cattle require little housing facilities. They are kept mostly in the open field to graze and rest under the shade of trees. Rearers move them from one place to another in search of pasture. This is known as the nomadic system of cattle rearing.

Milking and nursing cows require some form of housing or shelter. The house should be well ventilated and have sufficient space for the milker and the young ones.

Feeding

Cattle feed more on grasses and legumes in the pastures. Rearers usually move them around the fields to graze and drink from streams, lakes or troughs. In some places, cattle are kept in ranches and grazed in rotation. Concentrates may be served In addition to the green pastures. Concentrates are served in feeding troughs at special locations. Silage and hay/straw is served during the dry season. Plenty of clean drinking water and salt lick are also provided for the animals to trek to distant markets in other parts of the country for sale. Mature cattle are also slaughtered in abattoirs and sold for beef.

Water Kids and lambs should be supplied with clean drinking water in troughs in their mothers' pens.

Housing

Kids and lambs should be made to stay with their mothers in confinement in their mothers' pens where they should be fed with grass, peelings and concentrates. Pens should be kept clean, dry and warm always.

Medical Water
Kids and lambs should be supplied with clean drinking water in troughs in their mothers' pens.
Medication
Veterinary doctors should be called to check the kids and lambs for good health.
Clean environment
This can be provided in the following ways:
1. Keep the pens clean always and replace used beddings.
2. Clean the feeding and drinking troughs regularly.
3. Keep pasture grass low and fresh
Veterinary doctors should be called to check the kids and lambs for good health.
Evaluation:-
1. Mention three ways a vet doctor gives farm animals medication
2. List two ways of cleaning the animal houses
Class:- Basic 5
Subject:- Agricultural Science
Week:- 7
Topic: Care of animals
Behavioral objective:- At the end of the lesson the pupils should be able to:-
1. Explain how to care for farm animals
Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for primary school book 5
Building Background /connection to prior knowledge : Students have learnt about the importance of caring for farm animals
Content
CARE OF ANIMALS
Farm animals should be given the best possible care in order to ensure productivity. Here are some ways of caring for farm animals:
1. Farm animals should always be given balanced ration of feeds.
2. They should be pre
3. Animals against diseases by the use of vaccines.

4. Veterinary offices should always be invited to visit farms to advise farmers on how to take good care of their animals.

Care of farm animals

Farm animals require good care and health for growth, and this can be provided through the following practices: cleaning animal environment, animal inspection and food hygiene.

Cleaning animal environment

The environment where animals live should be kept clean always. Bushy areas should be cleared, pens should be swept,

Evaluation:-

Give four ways of caring for farm animals

(a) _____

(b) _____

(c) _____

(d) _____

Class:- Basic 5

Subject:- Agricultural Science

Week:- 8 and 9

Topic: Specific requirement of young animals for healthy growth.

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

1. List the main requirement for the growh of young animals
2. Explain how to care for young animals

Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for primary school book 5

Building Background /connection to prior knowledge : Students have learnt the importance of animal care in the previous lesson

Content

SPECIFIC REQUIREMENT OF YOUNG ANIMALS FOR HEALTHY GROWTH

The three main requirements for the growth of young animals are:

1. Housing
2. Feeding
3. Health care

1. Housing: housing is a major requirement for livestock production. Houses protect them from wind, rain and sun. Housing needs of sheep and goats Sheep and goats require cheap houses or shelter which is c unalled pens. The houses usually have low walls to provide cover for the animals at night. The roofs may be covered with iron sheets or grass. However, grass houses or pens are better because they are cooler in hot weather. Sheep and goats require sufficient space for free movement, and they perform better under such condition. Housing needs of pigs
2. Animal food: Animal foods are called feeds. Feeds contain nutrients (water, proteins, vitamins etc). Feeds can be mixed in different proportion for a balanced ration. By now, you know that farm animals can be put into two groups according to their mode of feeding: ruminants and non ruminants. Ruminants are animals that feed mostly on grass. Some of the animals are cattle, sheep and goats. Non-ruminants feed mostly on the types of food that man eats. Such animals include pigs and poultry.
3. Health care: livestock should be given adequate health services to make them work effectively. The person that takes care of sick animals is known as veterinary doctor.

Clean environment

Keep the environment clean by doing the following:

1. Clean the pens regularly and replace beddings as necessary.
2. Clean the feeding and drinking troughs.
3. Keep pasture grass low and fresh.

Evaluation:-

1. Who is a veterinary doctor?
2. Explain the following requirements for animal growth:
   (a) Housing -
   (b) feeding -
   (c) Health care -

Class:- Basic 5

Subject:- Agricultural Science

Week:- 10

Topic: Effects of lack of care on farm animals

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

1. Discuss the effect of lack of care on animals

Instructional material/Reference material:- Learn Africa Basic Agricultural Science UBE edition for primary school book 5

Building Background /connection to prior knowledge : Students have understood how to care for farm animals

Content

EFFECTS OF LACK OF CARE ON FARM ANIMALS

Farm animals should be given proper care. When proper care is not given to farm animals they will not function properly in terms of yield and output.

Below are some of the effects of lack of care on farm animals

1. Body part disorder
2. Leads to sheep scab in sheep
3. Broiler leg disorder in broilers
4. Metabolic diseases
5. Unstable health condition
6. Lack of growth
7. Lack of feeling
8. Reduction in production performance
9. To death

CARE FOR YOUNG ANIMALS IN THE SCHOOL

1. Always feeding them at the right time
2. Cleaning their house and surrounding to prevent infection.
3. Providing good bedding for the young animals
4. Providing adequately clean water
5. Treat diseases quickly
6. Treat injury with caution
7. Allow adequate ventilation
8. Ensure the animals remain clean and dry
9. Make use of the right illumination
10. Ensure their waste are remove regularly and safely
11. Pest control should be used to prevent diseases
12. Noise from other animals should be controlled
13. Feed dispensers should be clean always.

Evaluation:-

1. Mention 5 effect of lack of care on the animals
2. Mention 10 ways you can care for the animals in the school