**NAME:………………………………………………………………………………….CLASS:……………………………………….**

**SECOND TERM E-LEARNING NOTES**

**JS 1 (BASIC 7)**

**SUBJECT: AGRICULTURAL SCIENCE**

**SCHEME OF WORK**

**WEEK TOPIC**

1. Classification of crops based on the life cycle

2 Classification of crops based on uses (a) food crops (b) oil, spices, latex beverages, fibre ,etc. (c) As sources of nutrient: Carbohydrates, proteins, fat/oil, minerals and vitamins

3. Ecological distribution of crops/factors affecting distribution of crops in Nigeria (Map of Nigeria required).

4. Forms of farm animals e.g. work animal, diary animal, guard animal, poultry bird ,etc.

5. Forms of farm animals (cont’d)

6. Classification of farm animals based on-Habitat-Aquatic and terrestrial, Mammals and Non-Mammals.

6. Classification of farm animals based on Digestive system-Ruminants and Non-Ruminants.

7. Characteristics of farm animals e.g. Cattle, Goat, Sheep, Pig, Poultry, Rabbit.

8. Breeds of farm animals, e.g. Cattle, Goat, Sheep, Pig, Poultry, Rabbit.

9. Uses of farm animals – Food, Work, Income, etc.

10. Ecological distribution/ factors affecting distribution of animals in Nigeria.

11. Revision

12. Examination

**WEEK 1**

**TOPIC: CLASSIFICATION OF CROPS**

CONTENT: **CLASSIFICATION OF CROPS**

SUB-TOPIC 1: **Classification of Crops**

Crops can be classified based on their life cycle or lifespan: Thus crops are classified into Annual, Biennial and Perennial Crops.

ANNUAL CROPS: These are crops, which complete their life cycle (length of life) within one year or in one growing season. These crops grow into maturity, flower, produce seeds and eventually die within one year. Examples are maize, rice, sorghum, okra, tomato, yam, etc.

EVALUATION: Give 3 examples of annual crops

BIENNIAL CROPS: These are crops, which take two years or two seasons to complete their life cycle. The vegetative parts grow into maturity in the first year or season, while the fruits or tubers are produced in the second year or season. Examples are cassava, cocoyam, onion bulbs, carrots, cabbage, etc.

EVALUATION: Name five crops that are Biennial

PERENNIAL CROPS: These are crops, which take more than two years to complete their life cycle. Their lives cover several growing seasons. Perennial crops are also called permanent crops. As you keep on maintaining them, they keep on producing from year to year. Examples are Rubber, Cocoa, Oil Palm, Orange, Mango, Pawpaw, Cashew, Guava, Tea, etc.

EVALUATION: What is the other name of Perennial Crops? Give 6 examples.

WEEKEND ASSIGNMENT:

Identify 10 different crops grown in your school farm and write the class they belong.

Junior secondary Agriculture (workbook 1)byAnthony.Youdeowei et-al pages

**WEEK: 2**

TOPIC: Classification of crops (based on uses):

(a) Food and Feed crops (b) Industrial crops: Oil, Spices, Latex, Beverages, Fibre ,etc

**Content:**

(i) Classification of crops based on food and feed crops

(ii) Classification of crops based on industrial crops.

Sub-Topic 1:  **Food and Feed Crops.**

These are crops used as food for man and his livestock. Some of these crops are sources of essential nutrients, e.g carbohydrates, proteins, minerals, etc . FOOD and FEED crops are grouped as follow :

**CEREAL CROPS**: These crops belong to the grass family called Gramineae. They are grown for their seeds or grains and are rich in carbohydrates.

Examples are Rice, Millet, Rye, Maize, Sorghum (Guinea corn), wheat, Barley, Oats etc.

**GRAIN LEGUMES (PULSES)**: The legumes or peas belongs to the family called LEGUMINOSEAE. They supply proteins in the food . Legumes have some bacteria in their roots’ nodules that fix nitrogen into the soil .

Examples are Cowpea, Soya-beans, Groundnuts, Pigeon-peas, lima beans, Clover, etc.

**VEGETABLE CROPS**: These are crops grown for their leaves and fruits. They are usually eaten fresh and green or boiled. They supply proteins, vitamins , minerals and also serve as roughage.

Examples are Okra, Tomatoes, pumpkin ( Ugu) Water-leaf, Lettuce, Cabbage, Cucumber, Onion, Bitter-leaf, Amaranthus, etc .

**ROOT AND TUBER CROPS**: These are crops that store food in underground stems or roots. They are major source of carbohydrates.

Examples are Cocoyam, Cassava, Sweet potato, Yam and Irish-potato.

**Fruit crops:** They grown mainly because of their fruits which supply vitamins and sugar to the body.

Examples include mango, quava, orange, pineapple, pawpaw, banana, cashew etc

**Sugar crops:** These are crops that supply sugar to the body. Example is Sugar cane

**Beverage crops:** They are crops that are grown for beverage drinks( e.g. bourvita, tea, coffee) . Examples are cocoa, coffee and tea.

**Oil crops:** They are crops that are grown for vegetable oil used for cooking, making pomade, candle, margarine.

Examples are oil palm, groundnut, coconut, melon, cheese butter

**Spices:** These are crops that are used to flavor food. Examples are ginger, onion, pepper , thyme, curry, locust beans

**FORAGE CROPS**: These are grasses and legumes grown mainly for feeding farm animals. They are otherwise called feed crops.

Examples of forage crops are Elephant grass, Guinea grass, Centrosema, Gamba grass, Pueraria, Stylosanthes gracilis.

**EVALUATION:**

1. Highlight four food and feed crops with two examples for each.

2. Name five forage crops.

Sub-Topic 2: **Industrial crops**

Industrial crops are used in the manufacture of various useful items . These include

**FIBRE CROPS**: These are crops grown specifically for their fibres. Fibres are used for making clothes, Carpets, Sacks, Ropes, Twines and Papers. They may be produced from Fruits or Seeds , Stems or Leaves. Examples are Cotton, Jute, Kenaf, Hemp, Sisal, Raffia, etc.

**NUT CROPS**: They grown mainly for their oil. Examples are cashew, coconut , groundnut

**LATEX CROPS**: These are crops whose stems or fruits produce Sap(fluid) which may be used as gum or coagulated to form rubber.

Examples are Gum Arabia ,Para-Rubber(Hevea brasiliensis), Indian- Rubber(Ficus elastic).

**DRUG CROPS AND STIMILANTS:** These are medicinal plants which contain chemical substances that produce an action in the human body. Examples are Tobacco, Cocaine, Quinine, Eucalyptus, Neem tree, Indian hemp or Marijuana Dongoyaro etc. Examples of stimulants are Kola, Lime, The active material is usually present in their Roots, Seeds, Leaves, Barks, Woods, etc.

**ORNAMENTAL CROPS**: These are crops grown for the purpose of making our environment beautiful. They include Flowers, House Plants, Hedge Shrubs and Lawn grasses. Examples are Roses, Sunflower, Pride of Barbados, Acacia, Ixora, Hibiscus, Marigold, Lily, and some water plants.

**EVALUATION:**

1. What are industrial crops?

2. List four industrial crops with three examples for each

**PRE-READING ASSIGNMENT:** Read about the ecological distribution of crops and factors affecting distribution of crops in Nigeria.

**WEEKEND ASSIGNMENTS:**

Junior secondary Agriculture (workbook 1)byAnthony.Youdeowei et-al pages 19-21

**REFERENCE TEXTS**

1. Junior Secondary Agriculture For Nigerian Schools By Anthony Youdeowei et al

2. Intensive Agricultural science For JSS 1-3 By E . U Okaro

3. Essentials Of Agricultural Science For JSS And Colleges By Earnest Chukwudi

**WEEK 3**

**DATE:…………………………..**

**TOPIC: ECOLOGICAL DISTRBUTION OF CROPS IN NIGERIA**

Sub-Topic 1**: DISTRIBUTION OF CROPS**

Distribution of crops refers to region where each particular crop is mostly adapted in Nigeria. Successful adaptation of crop to the climatic and soil condition of an area is known as **Adaptability**. Different crops require different climatic and soil conditions for their normal growth and development.

**THREE ECOLOGICAL REGIONS IN NIGERIA**

**Coastal Region** of Nigeria is where the mangrove forest occurs, paddy rice and rubber can profitably be grown.

**Rain Forest region** of the South, the crops adapted to the environment are mostly oil-palm, cocoa, banana, kola-nuts, rubber, tuber crops and root crops of various types.

**Savanna Region** areas of the North, the crops grown are mainly cereals and legumes because they do not require high rainfall.

**EVALUATION**

1. What are the requirements of all crops?

2. State reasons why rubber and cocoa cannot be grown in Northern parts of Nigeri**a**

**Sub-Topic 2: Factors Affecting Distribution Of Crops In Nigeria:**

**A . Climate:** The climatic factors that determine where a particular crop is found are

i. Rainfall

ii. Temperature

iii. Relative Humidity

iv. Sunshine

**RAINFALL**: Crops depend mainly on rainfall for their water supply. Although this water can be got from underground and by irrigation. Water requirements of crops vary from crop to crop. E.g. Banana requires much water , it is grown in the South. While Millet or Sorghum requires low water and it is grown in the North.

**TEMPERATURE: Th**ere is a temperature range within which a crop can attain it maximum yield. They have minimum or maximum temperatur**e**, therefore those crops that can survive high temperature are majorly grown in the northern parts while those that thrive under low temperature are grown majorly in the southern parts.

**RELATIVE HUMIDITY:** Some crops require very cool temperature , e.g. Irish Potato which is grown in cool Northern areas like Jos.

**SUNSHINE**: Sunshine is very necessary for the growth of all crops. It is an essential element in the photosynthetic activity of the plants . Some crops like cereals require long hours of sunshine while others like cocoyam require shorter hours to produce well.

**B. SOIL FACTOR(SOIL CONDITIONS)** : Soils vary in physical as well as chemical properties. Some crops require sandy to loamy soils, e.g. Groundnuts while some require clay soil, e.g. Swamp Rice.

Soils also vary in pH levels and some crops do well in soils of low pH level others require hi**gh pH.**

**C. HUMAN ACTIVITIES ON LAND**: Man has also influenced crops distribution by supplying water through irrigation and damming, therefore making production of crops that require a lot of water possible in drier areas . Fertilizers have been applied to poor soils to improve their fertility , while organic manures has been applied to clay soils to improve water retention

**EVALUATION:**

1. Outline four climatic factors affecting the distribution of crops in Nigeria.

Which regions in Nigeria can these crops be grown? Rubber, Millet, Kola-nut, Oil-palm, Sorghum.

1. In what ways has man influenced crops distribution ?

Pre-Reading Assignment: Read about forms of farm animals .

Student Activity: Draw the map of Nigeria showing distribution of crops.

**WEEKEND ASSIGNMENT** : 5 OBJECTIVES AND 2 THEORIES.

**REFERENCE TEXTS:**

1. Junior Secondary Agriculture For Nigerian Schools By Anthony Youdeowei et al

2. Intensive Agricultural science For JSS 1-3 By E . U Okaro

3. Essentials Of Agricultural Science For JSS And Colleges By Earnest Chukwudi

**WEEK 4**

**TOPIC: FORMS OF FARM ANIMALS.**

**CONTENT:** (i) Meaning of Farm Animals

(ii) Forms of Farm Animals

(iii) characteristics of farm animals.

Sub –Topic 1: **Meaning of farm animals**

Farm animals are animals that are reared by man for different purposes. Farm animals include goats, sheep. Rabbits, poultry, cattle, pigs fish, snails etc.

**Forms of farm animals**

1.**Work Animals**: These are animals that are used for work on the farm. they are used for carrying loads, ploughing, harrowing and ridging.

Examples of work animals are cattle e. g bullocks [Sokoto Gudali , White Fulani] , horses, camels and donkeys. These animals are referred to as beasts of burden.

**Characteristics:**

 They are well built with good body conformation.

 They can survive or travel long distance without water.

 They are rugged and have very great strength.

2.**Dairy Animals**: These are animals reared purposely for milk production. Examples are cattle[White Fulani, Sokoto Gudali Red Bororo]; Goats[Nubian goats, Jumnapari and surti of Indian]. Milk provides protein vitamins and minerals.

**Characteristics:**

 They are lean and have angular form of body.

 They have well developed mammary gland system.

 They have high food conversion efficiency for production of milk.

3.**Guard Animals**: These are animals domesticated or tamed and used for protecting life and properties from danger .

Examples are dogs, parrot, cat etc.

**Characteristics**

 They are easily controlled.

 Most of them are of an average size.

 They can be trained snd tamed to suit our purpose e.g security.

 They are sensitive to human behavior.

**Weekend Assignment : Read the text ( Junior Sec. Agric.) and answer the questions on the work book page 8**

Explain the following with examples [I ]Guard animals [ii] Dairy animals**.**

**WEEK 5**

**TOPIC: FORMS OF ANIMALS ( CONTD)**

4**.Poultry:**These are domesticated birds raised for meat, eggs or feather. Examples of poultry birds are domestic fowl, guinea fowl, turkey, geese and ducks.

**Characteristics:**

 Poultry bird a have medium body size.

 They do not give birth to their young ones alive [they lay egs].

 They have simple stomach.

 They are prolific animals, they lay and hatch many eggs into chicks.

 Their body is covered with feathers and they have two legs.

 They are best managed by intensive system .

5**.Pets:**These are animals kept as companion, treated with great care and affection.

Examples are dogs, cats, parrots, canaries, pigeon,monkeys, etc.

**Characteristics:**

 They are easily domesticated.

 They live freely with human beings .

 They can feed on food that are taken by human beings.

 They can be trained to be harmless.

6.**Aquatic Animals**: These are animals that live inside water like rivers, lakes, dams ponds and streams. Examples are prawn, oysters, lobsters, crabs, periwinkles, turtles, squids, shrimps, fish, frogs, etc

**EVALUATION:**

Mention three examples of the following: I Aquatic animals ii Poultry

**WEEKEND ASSIGNMENT: Read the text Agricultural Science for JSS 1by L A Are et al.Pages29-32.**

**EVALUATION:**

List two characteristics of the following animals:

(i) Poultry (ii) Pet

**Objectives:**

1 .The animal that has feather and two legs is called \_\_\_\_\_\_\_\_

(a) Poultry

(b) Rabbit

(c) Cattle

(d) Goat

2. The animals that are easily domesticated and live freely with human beings are called--------

(a) Dairy animals

(a) Guard animals

(c) Poultry

(d) Work animals

3. The following animals give birth to their young ones alive EXCEPT

(a) Pigs

(b) Dogs

(c) Goats

(d) Turkey

4. Production of one offspring only in a year is characteristics of

(a) Cattle

(b) Goat

(c) Sheep

(d) Rabbit

5.Animals that have the ability to survive or travel long distance without water are called

(a) Dairy animals

(b) Work animals

(c) Pet animals

(d) Poultry birds.

**Theory:**

1.(a) State one major characteristics of poultry birds.

(b) List five poultry birds.

2. (a) Explain the meaning of pet animals.

(b) Mention two characteristics of pet animals

**WEEK 6**

TOPIC: **Classification of farm animals.**

**CONTENT:** 1. Classification based on the habitat

2. Classification based on mode of reproduction and feeding of

their young ones.

**Introduction:**  Farm animals can be classified into different classes using different criterial. These includes; their sizes, their habitat ,how they reproduce and feed their young ones and the type of stomach they have.

**Sub-topic one**: **Classification Based On Their Habitat**

Habitat means where someone or something is living. Some farm animals are living on land and we called them **terrestrial animals**. Example of such animals are: cattle, sheep, goats, pigs fowls camels etc. Some other farm animals live in water and are called **aquatic animals**. E.g. fish shellfish, hippopotamuses etc.

There are some terrestrial animals, however, that live on trees and are called **arborial animals** e.g. birds.

All living things need oxygen for survival. Terrestrial animals obtain oxygen directly from the atmosphere, but aquatic animals obtain oxygen dissolved in the water where they live.

**Evaluation:**

1. What are terrestrial animals?

2. Give four examples of the following:

Arborials

Aquatic animals.

Terrestrial animals.

3. Where does the aquatic animals get their oxygen requirement?

Sub-topic 2: **Classification based on mode of reproduction and how they**

**feed their young ones.**

Using this criteria, farm animals can be classified into two group which are:

-mammals

-non-mammals

**Mammals** are those animals that bear their young ones alive and have their bodies covered with hair. They equally feed their young ones with milk from their mammary glands(breast).Examples of mammals are: goat, sheep, cattle, pigs, guinea pigs, rabbits.

**Non- mammals** are animals which produce their young ones by laying and hatching eggs. Examples are birds, fishes, lizards , snails, snakes.

**Evaluation:**

1. Differentiate between mammals and non- mammals.

2. Mention five examples each of each

3. State three characteristics of mammals.

**Week end assignment:**

1. Make a ten list of the example of the following:

Mammal

Non-mammals

2. Junior secondary Agriculture (workbook 1)byAnthony.Youdeowei et-al pages 9 – 10

3. Draw and label the two types of stomach farm animals can have.

**Pre-reading assignment:**

1. Junior Secondary Agriculture For Nigeria Schools Book 1, page 50.

**REFERENCES TEXT:**

Junior Secondary Agriculture For Nigeria Schools by Anthony Youdeowei and others

**WEEK 7**

TOPIC: **Classifications of Farm Animals Based on Types of Stomach**

**CONTENT**: (1) Ruminant

(2) Non-ruminant

Farm animals, especially mammals can be classified into **two groups,** according to the type of stomachs that they have . The first group is **ruminants** while the other group is **non-ruminants**.

**RUMINANTS** are animals that chew the cud. When ruminant is resting, it has ability to bring back from the stomach what it has eaten, to its mouth again and chew it properly (Regurgitation) .This habit is known as **chewing the cud.** This they can do because, they have complex stomach .The complex stomach of a ruminant is made up of **four cavities** (chambers)which are: **rumen, reticulum, omasum** and **abomasum**

Examples of ruminants are : Cattle, Sheep, Goat ,

**Evaluation**:

1 Mention two characteristics of a ruminant

2. Explain the term chew the cud

**3.** Mention the four stomach compartment of a ruminant**.**

Sub-Topic 2: **NON-RUMINANTS( MONOGASRICS)**

Non- ruminants are animals that have simple stomach. They are other wise called monogastric animals. This group of animals have single stomach compartment . Examples of such animals are : rabbits, pigs, guinea pigs, horse

**Evaluation:**

1. What are monogastrics?

**2.** Mention three examples of monogastric animals

**Week end assignment:**

Junior secondary Agriculture (workbook 1)by Anthony. Youdeowei et-al pages 22- 23

Draw the simple stomach of a monogastric and the complex stomach of a ruminants.

**Pre- reading Assignment:**

Read on the characteristics of farm animals .

**Reference Texts:**

JSA for Nigerian school by Anthony Youdeowei ,S.OAdesiyan and others .

**WEEK:8**

**TOPIC : CHARACTERISTICS/BREEDS OF FARM ANIMALS**

**CONTENT:** (1) Farm animals.

(2) Characteristics of Cattle & Sheep.

(3) Breeds of farm animals

Sub-Topic 1: **Farm Animals**

Farm animals have certain basic features that make them belong to a particular group .These characteristics help to differentiate them from other forms of animals and also enable some of the animals to adapt to their natural habitat .Examples of farm animals include: **Cattle,Sheep,Goat,Pig,Poultry,Rabbit,Fish,Snails,Guinea-Pig,Grass-Cutter,Donkey & Horse.**

**CATTLE:** Cattle belong to hoofed mammals. Some are humped (Bos indicus) e.g.Sokoto Gudali, Red bororo &White Fulani while others are humpless (Bos Taurus) e.g. Muturu &N’dama. Cattle is raised mainly for meat and milk.

**Characteristics of Cattle:**

Cattle are ruminant animals. They are large –bodied animals. They have large udder with four glands .They have four pairs of hoofs on each limb .Beef cattle are lighter than the dairy type .Some cattle are used as work animals e.g.Sokoto Gudali,White Fulani ,N’dama e.t.c. Some are resistance to trypanosomiasis e.g. N’dama, Muturu, etc. Gestation period(pregnancy period ) is 283 days.

SHEEP :They originated from Iran or Iraq in Asia .Sheep is raised in all country of the world for meat (mutton) ,milk and wool .They are important in Tropical Africal countries like Northern Nigeria,Ethiopia,Kenya ,Somalia,Sudan and Tanzania.

**Characteristics of Sheep:**

Sheep are ruminants mostly raised extensively for meat, milk and wool .They are small bodied ruminants ,hollow-horned and even toed .Only male have horns except Ouda The male are heavily manned . Gestation period is 150 days. Examples of sheep are :Balami,TheFulani (Ouda ), Yankasa (Hausa ), West African Dwarf(WAD) Sheep. .

**EVALUATION:**

1. State five farm animals that are raised in Nigeria.

2. Mention four characteristics each of (i) Cattle and (ii) Sheep.

Sub-Topic 2: **Characteristics of Goat and Pig**.

**GOAT:** They are important ruminants that can adapt and maintain themselves in very harsh environment. They can withstand diseases, high temperature and can survive where other animals cannot .Goats are raised for meat, milk and skin. They are small bodied animals .Both sexes have horns .Goats are scavengers and very inquisitive .Gestation period is 150 days. Examples of goats are: Red bororo (Maradi),Fulani (Sahel ),Kano brown,Nubian and WAD goat.

**PIG:** They are most productive of all farm animals . A sow (matured adult female pig) can produce between 8 and 16 litters at a time .Pigs are raised for meat and lard. They are omnivorous animals .They are good converters of feed into meat. They mature early and can breed anytime of the year. Pig production requires small initial capital with high return .Gestation period is 114 days .Examples of pigs are :Landrace ,Large white(Yorkshire),Duroc Jersey ,Large black ,Poland china ,Chester white e.t.c.

**EVALUATION:**

1. State four features each of (i) goat) and (ii) pig.

2. State five breeds of pig we have.

Sub-Topic 3: **a. Characteristics of Rabbit.**

**b. Characteristics of Poultry.**

**c. Characteristics of Horse.**

**RABBIT:** They are .prolific animals that can produce up to four times in a year. Rabbit are found both in temperate and tropical countries .They are raised for their meat, skin (pelt) and hair (fur). They are easy to house ,handle and manage. They reach maturity weight in about 5-6 months .Rabbit meat is of good quality .They are prone to stress and the rate of cannibalism is high . Examples of rabbit are: **California white, California red , Chinchilla, New Zealand white, Flemish giant, Angora Dutch Rabbit, Australia White, West African Rabbit(Giant Rat) etc**.

**POULTRY:** Poultry are birds raised for meat ,eggs or feathers. They are found both in temperate and tropical countries. Types of poultry birds are: **Domestic fowl, duck, turkey ,goose ,guinea fowl, pigeon** . Fowl is the most popular of all and this makes the discussion on poultry to be centred on domestic fowl .Domestic fowls are grouped into two :**Local fowl and Exotic fowl**.

**The local fowls** are light in weight ,hardy ,resistant to diseases ,poor growth rate, low egg production and production of white eggs .

**Exotic fowls** are grouped into two :Light breeders and heavy breeders

**(i) Light Breeders** : small sized, body early maturity ,good egg production, production of white shelled eggs e.g. leghorn.

**(ii) Heavy breeders**: large sized body, slow maturity, poor egg production, production of brown or tainted shelled eggs e.g. Rhode Island Red, Sussex.

**HORSE:** It is a non-ruminant animal raised mainly for work on the farm , riding for pleasure and sport, transportation of goods and human beings and for traditional ceremonies such as “Durbar festivals” in the Northern states of Nigeria.

**EVALUATION:**

1. Mention four features of rabbit.

2. State five types of domesticated birds that were referred to as poultry.

3. Mention three uses of a horse

**Sub Topic 3: BREEDS OF FARM ANIMALS**

**CONTENT:** (1) Breeds of Cattle

(2) Breeds of Sheep and Goats

(3) Breeds of Pigs and Rabbits

Sub-Topic 1: **Breeds of Cattle**

A .**Meaning of Breeds**: Breeds refer to kind or variety of animals with hereditary qualities that are developed by people in a controlled way.

B. **Breeds of cattle**: There are many breeds of cattle these, include: White Fulani ,Red bororo, Jet koram, Shuwa Arab, Yola or Adamawa(These can be used for dairy purpose.), N’dama ,Kuri or Lake Chad, Muturu (WAD),Ghana short horn (These can be used for beef production.)

**Terms used for Cattle:**

**Bull:** A matured adult male cattle

**Cow:** A matured adult female cattle.

**Calf:** Young one of cattle of either sex.

**Heifer:** A matured young female cattle not yet producing calves.

**Bullock:** A castrated bull

**Calving:** The process of giving birth to young ones by cow.

**Beef:** Meat of matured cattle.

**Herd:** Group of cattle.

**Veal:** Meat of young cattle.

Gestation period: This is the period of pregnancy. (283days)

**EVALUATION:**

1. Define breeds.

2. List four breeds of cattle that can serve the following purposes

I dairy ii. beef

Sub-Topic 2: **Breeds of Sheep and Goats**

**BREEDS OF SHEEP:**

There are three well known breeds of sheep in West Africa. They are:

(i) The Ouda (The Fulani) - The commonest and the most widespread of all breeds of sheep. .Ouda originated in Egypt. The rams have large ,wide and spiral horns.

(ii) Yankasa (and Balami) –These are commonly found in North Central Nigeria .The rams have long curved horns .Both are white in colour.

(iii) WAD Sheep-This is the smallest breed of sheep found in humid areas of W .Africa.

**Terms used for Sheep:**

**RAM:** A matured adult male sheep.

**Ewe:** A matured adult female sheep.

**Lamb:** A young sheep of either sex.

**Wether:** A castrated ram.

**Mutton:** Meat of sheep.

**Lambing:** Parturition in ewe.

**Flock:** Group of adult sheep

Gestation period :150days

**BREEDS OF GOAT:** They are the earliest domesticated and the most widely distributed animals with high concentration in Africa and India .Goat have ability to withstand harsh weather conditions. The common breeds of goats are : Sokoto red (maradi),Kano brown, Sahel goat, Borno white and WAD goat.

**Terms used for goats**.

Billy :A matured adult male goat .

Nanny :A matured adult female goat.

Buck :A male goat of breeding age.

Doe : A female goat of breeding stage .

Kid :A young goat of either sex .

Kidding :Parturition in doe.

Chevon : The meat of goat .

Castrate : A castrated male goat .

Herd : Group of goat .

Gestation period : 150days.

EVALUATION.

(I) The most widespread of sheep is-------

(II) State four breeds of goat you known

Sub-Topic 3: **Breeds of Pigs and Rabbits**

**BREEDS OF PIGS :**

Pigs are the most prolific (productive) of all farm animals .They are omnivorous and heavy feeders. Pig production is not as popular as goat production because of social, economic and religious reasons.

Breeds of pigs includes:

WAD pigs,

Large white(Yorkshire),

Land race,

American

Duroc,

Hampshire , large black, Chester White, polar China, Tam Worth e.t.c

**TERMS USED IN DESCRIBING PIGS:**

**Boar:** A matured adult male pig.

**Sow:** A matured adult female pig.

**Hog (Barrow):** A castrated boar.

**Piglet:** A young pig of either sex.

**Barrowing:** Parturition in sow.

**Pork:** Meat of pig.

**Lard:** Fat from pig.

Gestation period: 114days

**BREEDS OF RABBIT:** A productive animals that can produce up to four or five times in a year. It is not a native to tropical Africa but can do well under local tropical conditions . Examples of breeds of rabbit are :Flemish giant ,California rabbit, New Zealand rabbit , Chinchilla ,Checkered giant ,Dutch spotted rabbit etc.

**TERMS USED IN DESCRIBING RABBIT:**

**Buck:** A matured adult male rabbit .

**Doe:**  A matured adult female rabbit

**Kitten:** A young rabbit of either sex .

**Colony:** A group of rabbit.

**Kindling:** Parturition in doe.

Gestation period : 29 – 30 days

**EVALUATION:**

1. Define breed.

2. State four breeds of (a) cattle (b) sheep (c) goat (d) pig (e) rabbit

3. Mention four products that can be gotten from cattle ,sheep goat, pig and rabbit.

**WEEKEND ASSIGNMENT:**

Junior secondary Agriculture (workbook 1)byAnthony.Youdeowei et-al pages 10- 11

**REFERENCES:**

1. J S Agriculture for Nigerian schools by Anthony et al

2. Essentials of Agricultural science for JSS by Anie

**WEEK 9**

TOPIC: USES OF FARM ANIMALS

**CONTENT:** (1) Definition of farm animals and the example

(2) Uses of farm animals.

Sub-Topic1: **Definition of Farm Animals and examples.**

Farm animals are basically animals that can be domesticated and used by man. Examples include: cattle, sheep, goats, pigs, poultry, rabbit, fish, snail,

Farm animals are reared for the following purposes. They are reared for food, work, clothing, security/protection, sport and recreation, fertilizer, medicine, raw materials and livestock feed. Let us explain each of the usage briefly.

**FOOD**: Many food products are derived from farm animals. We get products like meat, milk, eggs, wool/hair from farm animals. Also animals by-products like feathers, bones, blood, droppings/dung, fat/oil are derived from farm animals. Food products and by-products from farm animals are very useful to man and industries.

**WORK**: Bigger farm animals can be used to work in the farm. Bullocks can be used to draw working machinery like plough, harrows, ridger while cultivating the soil. Donkey, camels are used to carry farm loads, while horse is used for transportation.

**CLOTHING**: Animals products such as wool, skin and furs are used for clothing. Skins and fibres from cattle, sheep and used for clothing and leather materials. The can be used for foot wear, bags and drum. Feathers of poultry are used in the production of pillows and mattresses.

Period 2

**Security and Protection**: Some farm animals e.g dogs and parrots are used for protection. The dogs assist the guards while protecting the house. Their barking alert the occupants of a house about strange person entering the house. The parrots also make some sounds to give information to the keeper in a house. The noise these animals make disturb the intruders into a house.

**Sport and Recreation**: Farm animals like horse and chicken (fowl) are used for sporting activities. Horse is used for games like horse rating and polo game. In Mexico and Philipines, chicken are used for popular sport, like chicken fights.

**Fertilizer**: Animal droppings from poultry, goats, sheep, rabbit and cow dung are good source of organic manure (fertilizer) which are used to enrich the nutrient of the soil. That is what is referred to as farm yard manure.

**Medicine**: Medicines are manufactured from substances taken from the body of some farm animals. Thyroid glands, hormones (insulin) taken from the body of sheep and cattle can be used to cure diabetes. For example, insulin is used to cure diabetes. Vaccine is obtain from egg white (albumen) which is used by the doctor to treat people.

**Raw materials**: Some animals products and by-products are used by the agro-allied industries. Animals bones, hooves, are used for adhesives. Fats are use candles, soap and points.

**Livestock feed**: The blood and used farm animals that have be slaughtered can be used as feed ingredients e.g. bone meals and blood meal.

Evaluation:

(A) Name 8 farm animals.

(B) Name 2 products we get from each animals below (1)cattle (b) pigs (c) poultry (iv) fish

(C) Mention 4 uses of farm animals.

(D) Mention 2 animals that can be used for security.

**REFERENCE TEXT**

1 G. M. Nwabuisi et al (2008). Comprehensive Agricultural Science For J.S.S. 1. Literamed Publication NIG. LTD , Lagos

2 Anthony Youdeowei (2008) Junior Secondary Agriculture For Nigerian Schools 1. West African Book Publishers Limited. Lagos Nigeria.

**Weekend Assignment:**

**Objectives**:

(1)Farm animals are those animals that can be …………… by man.(a) fed (b)friendly (c)domesticated (d) eaten.

(2) Which of the following is not a farm animal (a) dog (b) turkey (c )ram(d) antelope.

(3) Which of these farm animals provides wool and fur(a)fowl and rabbit (b)Sheep and rabbit (c) goat and sheep (d) cows and pig.

(4) Milk can be obtained from ……….and………….. animal (a) sheep and dog (b) cow and fpwl (c) rabbit and goat (d) goat and cow.

(5)Which of these animals CANNOT be used for sport.(a)horse (b)chicken(c)cock(d)bull

**Theory:**

1. Name 6 farm animals and products each of the animals.

2. Name the animals that the following products are derived a. fat, b. skin, c. mutton d. beef

e. dung f. feathers g. pork h. eggs i. scales. j. milk k. droppings. L. horns.

**WEEK 10**

TOPIC: **Distribution of Farm Animals and Factors Affecting the Distribution**

**of Farm Animals in Nigeria.**

**Content:** (1) The Distribution of Farm Animals

(2) Factors Affecting the Distribution of Farm Animals.

Sub-Topic 1: **Distribution of farm animals in Nigeria.**

Many Farm animals commonly reared by farmers are found in different parts of the nation, due to some factors that favoured their growth and development.

Below shows the major farm animals and the state where they are majorly found.

|  |  |
| --- | --- |
| Cattle | Kano , sokoto ,Kaduna |
| Goats/sheep | Northern states and some other parts of the nation e.g oyo, ondo, Ekiti |
| Poultry | Most of the major cities in the nation |
| Fish | States with large water bodies |
| Pigs | Most southern states e.g Edo, Delta, Rivers and other places where the weather is conducive |
| Rabbits | Cities where poultry are successfully reared. |

Sub-Topic 2: **Factors Affecting the Distribution of Farm Animals in Nigeria**

The most important factors affecting the distribution of farm animals in Nigeria include

(1)Culture of the people

(2) Climate

(3) Availability of natural pasture

(4) Religion of the people

(5) Incidence of pests and diseases.

**Culture of the People**: Animal rearing is a common occupation of families in the northern part of Nigeria. Most of the cattle, sheep and goats are from the north. That means that the northern Nigeria farmers have a culture of animal rearing.

**Climate**: Climate is the average weather condition of a place over a long period of time. Climatic factors such as rainfall, temperature, light, wind and relative humidity determines the type and number of farm animals in a particular place. For instance in the north, where rainfall and relative humidity is low, cattle, goats and sheep are better reared than any other part. Much rainfall in the south increases the spread of pests and diseases and consequently affects animal production.

**Religion of the people**: Religion is also an important factor in the distribution of farm animals. For instance, goats and rams are more abundant in the northern and western parts of Nigeria where most of the Muslim live. They use these animals for festivals. Muslim religion forbids the eating of pigs. So, pigs are not common in the north where the Muslims are in large population.

**Availability of natural pasture**: Natural pasture are grasses used to feed cattle, goats and sheep. These grasses are more in the north and as such favored the rearing of those animals.

**Incidence of pests and diseases**: Tsetse fly which a carrier of the parasite, trypanosome which cause the disease known as trypanosomisisss is prevalent in the south. much rainfall and big trees in the south contribute to the increase of tsetse fly.

Evaluation (a) Why are cattle commonly found in the north?

(b) Name 4 weather elements that are responsible for the distribution of farm animals in Nigeria

(c) Why are aquatic animals reared mostly in the southern part of Nigeria?

(d) Mention one state where the following animals are mostly reared (i) goats (ii)fish (iii) bull (iv)fowl

**REFERENCE TEXT**:

1. G. M. Nwabuisi et al (2008). Comprehensive Agricultural Science for

JS 1: Literamed Publications Nig. Ltd, Lagos.

2. Anthony Youdeowei (2008), Junior Secondary Agriculture for Nigerian

Schools West African Book Publishers Ltd. Lagos, Nigeria.

**WEEKEND ASSIGNMENT:**

**Objectives:**

1. Which of these farm is not majorly reared in the northern states?

(a) fowl (b) pigs (c) goats (d) sheep

2. Which of these farm animals is affected mostly by tsetse fly bite? (a) goats (b) sheep (c) pigs (d) cattle

3. One of the following animals can be reared in many cities of the nation, Nigeria. (a) poultry (b) goats (c) cow (d) pigs

4. Trypanosomiasis is a disease that is among the cattle reared in the ---------- (a) East (b) West (c) South (d) North.

5. Availability of grasses favours the rearing of ----------

(a) pigs (b) cattle (c) fish (d) rabbits.

**Theory:**

1. Name 5 farm animals and write their major producing states.

2. Give 4 reasons why some farm animals are found majorly in the south and while others are found majorly in the North.