TERM: 1ST TERM

SESSION: 2019/2020 SESSION

WEEK:

DATE:

CLASS: JS 2

SUBJECT: AGRICULTURAL SCIENCE

LESSON TITLE: **AGRICULTURAL SYSTEMS**

SUB TITLE: FARMING SYSTEMS

 PERIOD: 1st & 2nd

DURATION: 80 min

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

i. define agricultural systems, with emphasis on farming systems,

ii. List and describe the various types of farming systems.

iii. state the advantages and disadvantages of each farming system identified.

TEXTBOOKS/ REFERENCE MATERIALS:

INSTRUCTIONAL MATERIALS: PowerPoint presentation slide for the lesson.

BUILDING BACKGROUND: Students are familiar with various farming activities carried out by farmers.

CONTENT

AGRICULTURAL SYSTEMS

Agricultural systems refer to the various methods of crops and livestock production. They are divided into two groups namely: Farming systems and Cropping systems.

FARMING SYSTEMS

Farming systems are the methods by which the farmer makes use of the available land to raise crops and rear farm animals. Various types of farming systems include the following:

a. **Shifting Cultivation**: This is a farming system whereby the farmer abandons a piece of land that have been cultivated for several years, and move to a virgin land, without the intention of returning to the abandoned land.

Advantages of shifting cultivation

- It is easy to adopt.
- Farmer enjoys fertile land as he opens up unused land for his cultivations.

Disadvantages of shifting cultivation

- It requires a great deal of labour and time in clearing every new land acquired.

b. Mixed Farming: This is the system in which crop cultivation is combined with animal rearing on the same piece of land, at the same time.

Advantages

- There is insurance against failure , i.e. if crop does not do well, animals will bring good yield, and vice versa.
- It enhances steady income throughout the year.
- Soil fertility is increased as animals drop their faeces on the farmland.
- Crop residues are fed to the livestock.

Disadvantages

- It is labour intensive.
- It requires the expertise of farmer.
- Livestock may damage crops in the course of grazing.

c. **Pastoral farming**: It is a system in which the farmer rears only ruminant animals such as cattle, sheep and goats. It is mostly practiced in the northern Nigeria; being a savannah zone.

Types of Pastoral farming

i.   **Nomadic Farming**: A system of livestock rearing whereby the farmer moves with his animals from place to place in search of forages and water.

ii.   **Ranching:** A system whereby the animals are kept in confinement and all their needs (food, water and drugs) are provided therein. It is an intensive system of livestock management.

Advantages

- It ensures efficient management.
- It saves labour.
- It is suitable for dairy production.
- It is also suitable for selective mating.

Disadvantages

- It is capital intensive.
- It does not allow adequate room for exercise.
- Over stocking may encourage the spread of diseases.

STRATEGIES AND ACTIVITIES

Step 1: Teacher revises the previous lesson with the students by asking the following questions:

a. What is a farmstead?

b. What is farm layout or farm planning?.

c. State five principles guiding farmstead layout.

d. Mention four importance of farm planning.

Step ii: Guide the students to give the meaning of agricultural system as well as farming systems.

Step iii: List the various farming systems, giving their meanings as well their advantages and disadvantages.

Step iv: Teacher allows the students to ask questions and provides appropriate answers to their questions.

 WRAP-UP/ASSESSMENT: Teacher summarizes the lesson content by mentioning and emphasizing the cogent points. He asks the following questions to evaluate the students:

a. What is agricultural system?

b. Define farming systems.

c. What is shifting cultivation?

d. Differentiate between nomadic farming and ranching.

e. Mention two advantages of ranching.

ASSIGNMENT: Which one should be encouraged in Nigeria, nomadic farming or ranching. Give at least three reasons for your choice.