J.S.S 2 SECOND TERM SCHEME OF WORK

WEEK	TOPIC
1.	Farm structures and building
	Meaning and types
2.	Animals feed and feeding
	Meaning and types of feeds
3.	Classification of livestock feed
4.	Factors to consider before deciding animal feeds
5.	Animals' pests and diseases.
	Definition
	Causes of diseases in farm animal
6.	Farm animal diseases and control
	Bacteria
	Fungal
	Viral
	Protozoan
7.	Farm animal diseases
8.	Farm animal diseases
9.	Farm animals diseases
10.	Revision
11-12	Examination

WEEK ONE

FARM STRUCTURES

Meaning of farm structure

Farm structures are simple erections which are constructed in the farm site to make farm operations easier. They are usually very simple building which to are not made from concrete. Farm structures are constructed to serve specific purpose on the farm. They could be temporary or permanent dispending on their uses or the purpose they serve.

MEANING AND TYPES

a. PROCESSING STRUCTURES: These are structures used for the processing of different kinds of farm produce. They include shelling or hulling barns, smoking houses, slaughter shed, milk pasteurizing shed, drying shed, cassava mill, and rice mill. In addition, processing structures also include sheds designed and erected to accommodate (house) processing machines such as grinding machines, feed mills, oil palm press and rice mill.

b. STORAGE STRUCTURES: These are used for storing farm produce of different kinds. They include the following:

   i. Yam barn for storing yam;
   ii. Silos for storing grains;
   iii. Cribs for storing unshelled maize;
   iv. Rhumbus for storing grains;
   v. Compost pit for storing compost manure and
   vi. Silage pit.

c. UTILITY STRUCTURES: These are structures which provide service for the whole farm. They are useful for every aspect of the farm. Utility structures are wells, fences, dams, boreholes, irrigation carnals, animals dips, spray and water tanks

   i. DAMS: A dam is a structure used to hold water across a river a stream. They are made with stones, wood, mud or concrete. Dams make water available all year round for irrigation of crops, water for animals to drink and other farming operations.

   ii. CANALS: These are structures used to control the flow of water on the farm. There are two types of canals. These are the ***irrigation canal*** which are constructed to carry water form rivers, lakes or streams to the field where crops are growing. The ***drainage canal*** however, is a kind of gutter which is constructed for removing excess water from the farm.

   iii. FENCES: These are constructed round the farm to serve various purpose such as:

      i. To protect crops and animals
      ii. To prevent thieves from gaining access to the farm;
      iii. To mark or demarcate boundaries;

iv. To control farm animals grazing and breeding habit and;

v. To prevent animals from destroying the crops.

Fences are of different types such as the barbed wire fence; bamboo fence; wall (concrete) fence, electric fence, wire netting fence; post and range fence; and hedge or live fence.

d. MAINTENANCE STRUCTURES: These are structures built for the purpose of maintaining farm tools and implements. A major examples is the shed used as workshop such as for woodwork or metal work where tools are being repaired on the farm

e. FARM SHELTER: These are simple buildings erected at different points in the farm for various purposes. They are constructed from cheap and locally available materials and are usually abandoned or destroyed as soon as the farming operation for which they were built is completed. Hence, they are also called 'temporary buildings' or 'make shifts'. Commonly constructed farm shelters include sheds for rest or protection of farmers (workers) during rain or harsh sun; sheds for keeping machines, equipment and tools being used on a site, sheds for temporary storage of harvested produce before marketing or proper storage and nurseries for raising seedlings.

WEEK 2

FEED OF FARM ANIMALS

The food given to farm animals is called livestock feed or simply put 'feed'. The livestock farmer must supply his animals with the appropriate quantity and quality of feed for:

i. Growth

ii. Repair of worn out tissues

iii. Energy

iv. General well being of animals

v. High production of animal produce such as milk, meat, and egg production

TYPES OF FEED

Animals are fed with different kind of feeds which vary in composition and uses. Hence, they are classified according to the quantity of fibre and moisture in the feed into four. These are:

i. Basal or energy feeds

ii. Concentrates

iii. Roughages

iv. Supplements and additive

Basal of Energy Feeds

Basal feeds are feeds made to supply energy to the animals. They have crude fibre content less than 18%. They usually make up 60-90% of livestock ration. Examples are maize, rice, millet, guinea corn, roots and tubers like yam and cassava. Basal feed must be supplemented to meet the growth and maintenance need of farm animals.

Characteristics

It is high in carbohydrates or starchy food

It is low in fibre

It is low in protein

It lacks vitamins and importance minerals.

It is highly digestible,

It is acceptable to most farm animals especially the monogastrics.

Concentrates

These are feed or feed mixtures which provide all the primary dietary needs of farm animals. It may be either whole grain feeds or mixture of basal and supplement feed. Concentrates may be high in energy called energy concentrates or high in protein called protein concentrates. They have high nutritive value because they are important sources of energy, protein, minerals and vitamins. Examples are blood meal, bone meal, fish meal, groundnut cake, palm kernel cake, oyster shell cake, cottonseed cake and coconut cake. They are usually fed to monogastrics but can be used as supplements for some herbivores

Characteristics

It has low fibre content

It may be high in protein or energy

It is highly digestible

It is low in minerals

Roughages

Roughages are feeds which are high in fibre content. They add bulk to animal feeds and are relatively less digestible. Roughages are poor in nutritive value hence, animals fed on roughage need supplements. Roughages are fed mostly to ruminants (cattle, sheep and goat). This is because

other animals cannot digest hem. They include the vegetative part of plants or dry (preserved) vegetative matters. Roughages include:

a) Succulent feed: This is also called fresh forage or wet roughages. It include grasses, legumes, cereals and root crops grown for soilage (grazing) or silage. Silage refers to succulents which are stored in air-light containers such as silos in order to preserve their freshness.

b) Fodder or dry roughages

i. Hay: This is the young and succulent parts of grasses, legumes and other plant cut and dried for feeding animals. It is a cheap source of food for ruminants during the dry season. It is higher in nutrient than straw.

ii. Straw: This refers to the parts of harvested crops or grasses cut and stored for future use. After the ripe seeds have been harvested the remains of plants are cut, dried and fed to animals during the dry season.

iii. Chaff: This is the husk separated from grain during threshing. It is got from threshed grains such as maize, rice, cowpea an others.

Characteristics

They are high in fibre

They are low in protein and digestible carbohydrate.

They have poor digestibility

Supplements and Additives

Feed supplements are added to the main feed to supply nutrients that are lacking in the main feed or diet of the animals. They may be supplied separately or mixed with the feeds. Feed supplement include:

Cotton seed cake,

Soya bean meal,

Groundnut cake,

Egg shell meal,

Oyster shell meal,

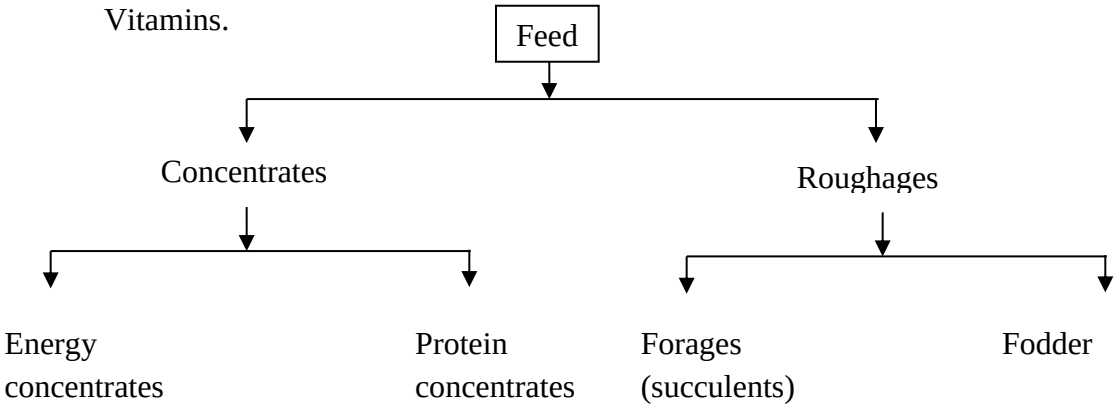
Bone meal,

Fish meal,

Salt licks,

Lime stone,

Vitamins.



WEEK 3

CLASSIFICATION OF FEED

Animals feed can be classified according to the nutrients they supply into the following:

i. Carbohydrates: these provide energy to farm animals for their activities such as growth, reproduction and milk production. Examples include maize, rice, millet.

ii. Protein: This is needed for growth and repair of worn-out tissues and fro production of antibodies. Examples of protein are fishmeal, bone meal, poultry offal, soya bean meal, groundnut cake, palm kernel cake and others.

iii. Fats and oil: This supply energy and keep the body temperature under control. Fats include palm oil, coconut meal, lard, cotton meal cake and so on.

iv. Minerals: These help to carry out vital body functions such as bone and teeth formation, blood clothing, egg shell formation and so on. Minerals include calcium, iron, phosphorus, iodine, potassium and others.

v. Vitamins: These are required for proper growth and development of animal. They help to keep the animal healthy. Examples are vitamins A, B, C, D, E and K.

vi. Water: This is constituent of body fluid. It helps to regulate body temperature, digest (breakdown) food and lubricate joints.

WEEK 4

FACTORS TO CONSIDER BEFORE DESIDING ANIMAL FEED

1. The physiological state of the animals whether for pregnant, dry or lactating or young animals.
2. The availability of the feed stuff
3. The composition of the nutrients
4. The age of the animals
5. The familiarity of the feed to animal
6. Palability of the feed.
7. The cost of feed stuff.

WEEK 5

DISEASES OF FARM ANIMALS

Meaning of Diseases

A disease is nay abnormality in health. It is a deviation from the normal functioning of any part of the animal body. Disease may manifest in form of infection, irritation or unfavourable condition. Hence, a diseased animal cannot perform the normal body processes. Disease results in ill health which may result in death.

Types of Diseases

A sick or diseased animal will show some or all the following signs.

i. Loss of appetite;
ii. High temperature;
iii. Persistent coughing;
iv. Sluggishness;
v. Watery, smelling or blood stained feaces;
vi. Discharge from the eyes, mouth, nostril or anus;
vii. Rough skin
viii. Dropping of tail or wings in birds;
ix. Emaciation;
x. Death.

Disease could be categorized into two. These are:-

i. Infectious Disease:- Infectious disease are the disease which can affect an animal without the animal coming in contact with the infected animal or infected materials. They are transmitted through the air, water, dust or other agents. Examples of contagious diseases are anthrax, fowl typhoid, conccidiosis and new castle disease

ii. Contagious Disease:- These disease can only affect an animal by physical contact with an infected animal. Examples of contagious diseases are foot and mouth disease, mastitis and contagious bovine abortion.

Animals can contact disease through the following:

i. Air.
ii. Contaminated feed and water.
iii. Dropping or feaces or infected animals
iv. Infected feeding materials e.g. water troughs, feed troughs and others.
v. Insect vectors.

WEEK 6

Common Disease of Farm Animals

The common disease of farm animals include the following

a) Cattle

i. Foot and mouth disease
ii. Rinder pest
iii. Anthrax
iv. Brucellosis or contagious bovine abortion
v. Mastitis
vi. Tuberculosis
vii. Trypanosomiasis
viii. Heart water disease
ix. Babesiosis or Tick-borne fever
x. Kirchi (Cowpox or streptothricosis)

b) Sheep and goats

i. Blue tongue
ii. Kata (stomatitis or pseudorinderpest)

iii. Contagious ethyma or dermatitis

iv. Foot rot

c) Pigs (swine)

i. Swine fever

ii. Swine erysipelas (Diamond skin disease)

iii. Contagious abortion of swine

iv. Transmissible gastoententis (TGE)

v. Roundworm infection (Nemathelminthes)

d) Rabbits

i. Sore hock

ii. Mange

iii. Bloat

iv. Coccidiosis

e) Poultry

i. New castle disease

ii. Fowl pox

iii. Fowl typhoid

iv. Coccidiosis

v. Chronic respiratory disease (CRD)

Table showing common disease of farm animal

Name of disease	Causal organism (agent)	Animal affected	Symptoms	Mode of transmission	Body area affected	Effects	Treatments	Prevention on and control measures
Foot and mouth	Virus	Cattle	i. High fever ii. Loss of appetite iii. Blisters or sores on the muzzle (lips), tongue, cheek, udder and feet	By contact with infected animals, contaminated feed.	Legs	Serious loss of animals (death)	No effective treatment	i. Vaccination to prevent the disease ii. Isolation of diseased animals

			iv. Weakness and lameness v. Excessive salivation and foaming					iii. Slaughter and bury infected animals
Rinderpest or cattle plague	Virus	Cattle can also affect sheep, goat and pigs	i. High fever (rise in temperature ii. Loss of appetite iii. Blood stained diarrhea iv. Difficulty in breathing v. Grinding	i. Eating contaminated food. ii. Contact with infected animals	Entire body	High rate of animals	No treatment	i. Vaccination to prevent the disease ii. Isolation of infected animals iii. Quarantine iv. Kill and bury diseased animals

WEEK 7

COMMON DISEASES OF FARM ANIMALS

Name of disease	Causal organism (agent)	Animal affected	Symptoms	Mode of transmission	Body area affected	Effects	Treatments	Prevention on and control measures
Anthrax	Bacteria	Ruminants (cattle, sheep and goat)	i. High fever ii. Convulsion iii. Increased breathing rate iv. Black or blood stained discharge from mouth, eyes, nostrils etc. v. Sudden death vi. Welling out of neck, abdomen after death	Contact with infected animals and their products	Whole body	Sudden death of animals (sometimes without symptoms	If symptoms are noticed early, treat with antibiotics.	i. Vaccination ii. Isolation and slaughter of diseased animals should be burnt and buried.

Brucellosis (contagious bovide abortion	Bacteria	Cattle pigs	i. Inflammation of uterus and mammary glands ii. Abortion or pregnancy at 5^{th} – 7^{th} month as still birth iii. Retention of after birth	i. Direct contact with: – Infected after birth – Foetal fluid or aborted fetuses – Coition with infected bull. – Contaminated feed or pasture	Foetus (pregnancy)	i. Loss of foetus ii. Low rate of production iii. It is zoonotic (i.e. it can affect human beings).	No effective treatment	i. Vaccination ii. Report any occurrent to veterinary doctor
Trypano somiasis (nagana)	Protozoa (trypanosoms)	Cattle	i. Severe anaemia ii. Intermittent fever iii. General weakness iv. Hairs on tail often pull-out v. Staggering vi. Death	By tse-tse fly	The brain	i. Drop in the level of production ii. Death of animals	Use drugs such as Babesin, Bayer 2005 etc.	i. Use insecticide to kill vectors (tse-tse fly) ii. Good sanitation such as cleaning and burning of bush.
Bloat	Nutritional disorder	Ruminants (cattle, goat, sheep and rabbit)	i. Diarrhea ii. Prof use salivation iii. Swollen stomach iv. Vomiting v. Difficulty in breath vi. Death	Feeding on immature pasture	Stomach	Swollen stomach and digestive tract	i. Use defoaming agents such as groundnut ii. Pass a large tube into stomach to remove obstacle causing obstruct	i. Do not graze animals on immature pasture ii. Feed high protein supplements or feeds.

WEEK 8

COMMON DISEASES OF FARM ANIMALS

Name of disease	**Causal organism (agent)**	**Animal affected**	**Symptoms**	**Mode of transmission**	**Body area affected**	**Effects**	**Treatments**	**Prevention on and control measures**

Mastitis	Bacteria	Ruminants may affect pigs	i. Swollen under ii. High temperature iii. Discharge of pus from the udder iv. Yellowish smelling milk	Through injury especially on the teat	Udder	Drop in milk yield	Injection of antibiotics Massaging the mammary gland after injection	i. Good sanitation ii. Clean milking practice to avoided injury iii. Keeping the udder dry
Krchi (cowpox or streptothricosis	Bacteria	Ruminatns and igs	i. High lesion ii. Irritation iii. Loss of hair iv. Swollen udder	– Direct contact with infected animals	Skin	i. Poor production of hair and milk	Treatment of wounds with tetracy cline capsules	i. Regular bathing ii. Disinfect and feeding and milking equipment iii. Vaccination on slaughter and bury infected animals
Swine fever	Virus	Pigs	i. High temperature ii. Lost of appetite iii. Diarrohoea iv. Bluish discoloration at the ears, legs and snouth	Contact with infected pig	Whole body	Death of animals	No successful treatment, no available vaccine	
New castle disease (fowl plague)	Virus	Poulty	i. Sudden death without symptoms ii. Breathing difficulty iii. Loss of weight iv. Watery greenish diarrhea v. Diarrhea vi. Circling movement	Air borne spread ii. Contaminated vaccine and equipement iii. Infected birds	i. Nervous system ii. Respiratory tract	Loss of poultry birds	No effective treatment	i. Quarantine ii. Vaccination iii. Sanitation

WEEK 9

COMMON DISEASES OF FARM ANIMALS

Name of disease	Causal organism (agent)	Animal affected	Symptoms	Mode of transmission	Body area affected	Effects	Treatments	Prevention on and control measures
Fowl pox	Virus	Poultry	i. Blisters on comble, wattle and feed ii. Loss of weight iii. Reduced egg production	Bitting insects	Comb	Light weight poultry birds Low e.g. production	Use of antibiotics	iv. Vaccination on and sanitation v. Culling of diseased birds
Coccidiosis	Protozoa	Poultry, rabbits	i. Blood stained dropping or feaces ii. Loss of weight iii. Diarrhoea iv. Ruffle feathers	Feeding of infected feed, water and infected feaces	Digest ice tract	i. Reduced egg production ii. Death of animal	Use of sulphur drugs	i. Good sanitation ii. Use of coccidiotic tablets iii. Disinfect poultry houses before stocking
Chronic respiratory disorder (CRD)	Myuco plasma (virus like microbe)	Poultry	i. Nasal discharge ii. Swollen face iii. Breathing difficultry iv. Loss of weight	Breathing in of virus from contaminated feed, water or urine and	Air sac	iii. Loss of birds	Use of antibiotics	i. Sanitation ii. Good ventilation iii. Avoid use of dust litter
Mange	Lice	Rabbit	Loss o hair		iii. Skin		Dusting with chemical	i. Dust with powder ii. Good sanitation