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Domestic animals

The animals that are kept at home are called domestic animals. Domestic animals include pets and livestock. Pets include cats, dogs and pigeons.

Livestock

Livestock or farm animals are kept for their products. Livestock can be classified according to the products they offer. Livestock can be classified as:

Poultry

These are domestic animals that are kept for eggs and meat. Examples of poultry are chicken, ducks, turkeys and geese. Chickens can be classified as either layers or broilers. Layers are the chicken kept for eggs. Broilers are kept for meat.

The table below shows poultry products

Animal type	Product
chicken (layers)	eggs
chicken (broilers)	meat
ducks	eggs and meat
turkey	eggs and meat
geese	eggs and meat

Systems of rearing poultry

Free range system

- Oldest system and adopted only when adequate land is available

- Rearing of poultry by letting them loose on ground (Field) called as range
- A range should provide shelter, greens, feed, water, shade etc
- Foraging is major source of feeding for birds → Shelter is usually provided by temporary roofing supported by ordinary poles



Advantage of free range system

It is cheap

Disadvantage

- It is easy for diseases to spread
- Poultry may be eaten by animal
- Poultry can easily be stolen

Deep Litter System

- Poultry birds are kept in large pens on floor, mainly for broilers
- Floor is covered with litters , such as straw, saw dust or leaves up to depth of 2-3 inches
- Bird density: 5-7 birds per square meter

Deep Litter System



Advantages

Birds have easy access to feeds and water

Easy collection of eggs

Provides good protection to bird

Immunization and treatment easily provided.

Disadvantages

It is expensive to begin

Easy spread of diseases

Cage system



- Rearing of poultry on raised wire netting floor in smaller compartments, called cages. Cages of 1 to 10 birds may be constructed
- Initially introduce for individual egg & pedigree recording & culling of poor layers

- At present, 75% of commercial layers in the world are kept in cages

Advantages

- Suitable for keeping high density of birds, when space is limitation
- Scientific management practices can be followed
- Feeders and waterers are attached to cages from outside, except nipple waterers, for which pipeline is installed through or above cages
- Auto-operated feeding trolleys and egg collection belts can also be used
- The droppings are either collected in trays underneath cages, on belts or on floor or deep pit under the cages

Disadvantages

It is expensive to construct.

Bird habits

- fighting
- feather pecking
- egg eating

Preventing egg eating habit

Egg breakage is one of the main reasons hens begin eating eggs. Reducing or eliminating egg breakage minimizes the chances your hens will get a taste for raw egg.

- Avoid bright lighting near the nesting boxes.
- Don't disturb hens in the nests.
- Make sure you have enough space for each hen in the coop.
- Keep fresh feed and water available at all times.
- Set up a second feeding station if one hen is bullying the others by guarding a single feeding station.
- If possible, provide hens with space outdoors to roam or at least a run with fresh grass and bugs.
- Beak cutting

Cattle

These are livestock that are either kept for meat or for milk. Cattle include cows and bulls. Cattle can be grouped into;

- a) **Beef cattle**, which are kept for meat for example, Boran, Hereford, Sahiwal, and Redpoll.
- b) **Dairy cattle**, which are kept for milk. Examples of dairy cattle include the Fresian, Guernsey, Ayrshire Jersey.

Sheep

These are domestic animals that are kept for their meat and their wool.

The meat of sheep is called mutton. The wool is shaved and made into clothes.

Examples of sheep are Merino (kept for mutton and wool) and Dorper (kept for mutton).

Goats

Goats are livestock that are kept for their meat and for milk. Examples of goats are Toggenberg (kept for milk and meat) and the East African goat (kept for meat).

Care of animals

All the domestic animals need to be taken care of in various ways. Livestock can be taken care of in the following ways:

- Providing shelter
- Feeding them
- Giving them water
- Giving them medical care to get rid of livestock diseases
- Protecting them against parasites and predators

Providing shelter for livestock

Buildings and constructions in a farm are called farm structures. The buildings include animal houses and animal sheds while constructions include fences and crushes. All the buildings and constructions are necessary if we have to care for livestock properly.

What factors do we consider when constructing farm structures?

1. **Drainage** - the structure must be constructed at a place with good drainage to ensure that the animal structure is always dry and that no livestock parasite can breed around.
2. **Security** - the animal structure should be appropriately close to the farm-house so that the farmer can keep an eye on the animals to be able to protect them from thieves or wild animals.
3. **Noise** - the animal structure needs to be located at the place with least noise. Poultry for instance get stressed if there is too much noise. This reduces their rate of laying eggs.
4. **Water**-water and other facilities like adequate lighting and warmth should be available.
5. **Wind direction** the structure should be shaded from direct wind. They should also not be erected where bad smells from the animal stalls blow away from the farmhouse.
6. Some animals for example poultry require the floor to be covered with litter for example wood shavings.

The intention is to keep the floor of the animal structure dry and warm so that they don't get sick.

All animals need housing to protect them from rain, sun, and other things that may harm them. The animal house should be well maintained and repaired every time they are not intact. The animal house should be cleaned to keep away disease-causing germs and pests. The houses should also be dusted with insecticide and pesticide.

Feeding Livestock

Animal feeds are classified into four main groups

1. Pasture

These are animal feeds that are grazed directly in the field by animals

They are classified into grasses and legume

- (i) Legume: these provide animals with proteins e.g. glycerine, lucerne, clover and desmodium
- (ii) Grasses: they mainly provide animals with carbohydrates e.g. Rhodes grass, guinea grass

2. Fodder crops

These are crops grown for the purpose of feeding animals.

Food crops are cut and taken to the animals, e.g. sweet potato vines, maize stalk, sunflower heads, kale and oats.

3. Commercial feeds

They are also called concentrates. They are made in factories and sold in special shops known as agrowshops. They contain high nutrient value per unit

They carry specific nutrients.

The concentrates are further subdivided into:

- (i) *Energy or carbohydrates concentrates*, which are rich in carbohydrates. Examples are molasses and cereal grains such as maize meal, which come from plants. Groundnuts or cotton-seeds may be consumed as fat concentrates since they provide energy from the oils they produce.
- (ii) *Protein concentrates*, which are rich in proteins such as fishmeal, blood meal, skimmed milk, all of which are from animals, while cotton-seed cake, groundnut cake and soya beans are protein concentrates from plants. Legume seeds for example peas and beans are also protein concentrates.

4. Conserved feed

These are animal feeds that are harvested in plenty and stored for future use

They can be stored or preserved while green or dried. They include **hay** and **salige**

Balanced diet

Just like human beings, livestock need a balanced diet to provide the nutrients needed to stay healthy and to produce products such as meat and milk of better quality. The nutrients needed are shown in the table below

Constituent	Why it is needed	Feeds containing the nutrient
Protein	Body growth and repair To make good quality products such as milk, eggs and meat	Protein concentrates, mixed pastures, lucerne grass, legumes, layer's mash / broiler's mash / chick mash, weaner
Carbohydrates	Energy production. To make good quality products such as milk, meat, eggs, wool	Sweet potato vines, maize stalks, crushed maize cobs, napier grass, wheat bran, layer's mash/ broiler's mash/chick mash, rabbit pellets.
Fats and oils	Energy production Formation of some parts of	Natural pastures, energy concentrates such as groundnuts, fish meal
Minerals and vitamins	Formation of bones and teeth. Body growth Resistance to	Salt licks, concentrates, kales, sweet potato vines
Facilitates the roughages	Ease of digestion. Passing of the faeces easily	Natural pasture, fodder crops, napier meal, wheat bran
Water (clean)	To transport things in the body for good digestion The body cannot function	Direct intake of water, fresh fruits and vegetables

Animals need water in adequate amounts. The water must be clean and the containers in which water is put should be clean.

Animals that are not fed on a balanced diet may have the following characteristics:

- Animals look emaciated, they are thin and weak. The young animals are stunted growth.
- The animals have very weak or poor resistance to diseases or infections,

- The bones of the animals are soft, poorly formed, show signs of rickets and can break easily in case of accidents.
- The yield of the animal products like eggs, milk or wool, drops consistently

The animals may finally die of malnutrition if the situation persists for long.

Animal feeds can be grouped into concentrates, roughage, supplements, additives and animal products.

Methods of grazing

Grazing is the direct use of pastures by livestock.

The method of grazing animals are classified as

- (a) Rotational method of grazing
- (b) Zero grazing or stall feeding
- (c) Herding

Herding

In this type of grazing, the farmer guides the animals to where good pasture and water sources are available. The animals get good attention and care. The work is tiresome for the herder as he has to go with the animals to where the pasture is and waits till the animals have fed, then take the animals to a source of water before finally taking them back home.

Advantages

1. No huge expenses for fencing or water supply.
2. One herdsman can look after hundreds of animals. The labour cost is reduced.
3. Animals are free to move about so they have plenty of exercise.
4. The farmer doesn't have to own a lot of land. Pasture can be rented for use for an agreed period.

5. Animals get to eat a variety of natural pastures.
6. Animals are not stressed because they experience a natural environment.

Disadvantages

1. Diseases are easily spread among the animals in a herd because they are always close together.
2. Animals may mix with other herds, which may cause spread of diseases.
3. The animals may sometimes be very far from veterinary services.
4. The herdsman has to travel over long distances. This can be very tiring.
5. The herd uses a lot of energy for movement, so there is reduced production of milk.
6. The animals cannot be controlled at all times so they may trample on and spoil the pasture.

Zero grazing

Zero grazing is also called **stall-feeding**. The animals are kept in house called a stall. The farmer harvests the pasture or fodder and takes it to the animals. It is very popular in keeping dairy cows for milk. It is common in areas where land is small.

Advantages

1. Livestock cannot get disease easily since their movement is restricted.
2. The feeds are used to the maximum.
3. Many animals can be fed on a very small area.
4. Manure is easily collected since it is in one place.
5. Animals can be observed from close quarters.
6. The animals are more productive.

Disadvantages

1. Diseases can easily spread to animals in the same enclosure because stalls might be too close.
2. It is expensive to start because stalls have to be built.
3. Requires a lot of labor, especially in planting, caring, harvesting and transporting feeds.
4. Due to limited movement, animals do not have the chance to exercise.

Rotational grazing

Here the animal graze in pastures which are divided into portions. The animal graze in each portion at a time.

(a) Tethering

An animal is tied or tethered to a post, a peg or a tree.

Advantages

1. Requires less labor
2. Expensive fencing is not necessary
3. Very good use of pasture because grazing is carefully controlled.

Disadvantages

The animal can choke on the ropes if poorly tethered

- #### **(b) Strip grazing** - Animals are kept on strips of land. The fence is moved once the animals have eaten all **the** pasture on the strip of land.

Advantages

1. Maximum use of pasture can be achieved.
2. There is no need to spend money on expensive fences.
3. Excess pasture can be harvested and stored.

Disadvantages

You need to have very high quality and well maintained pasture so that animals have most nutrients,

- #### **(c) Padlocking** or paddock grazing -Animals are kept within a fenced area called a paddock.

Advantages

1. Allows for harvesting and storage of pasture.
2. Requires a small piece of land.

Disadvantages

1. It is expensive to establish the paddocks and supply water.
2. Can only be done with a few animals.

Livestock parasites

A parasite in an organism that feeds on another.

External parasites include ticks, fleas and mites

Internal parasites include worms (tape worm and round worm)

What effects do external parasites have on livestock?

- They cause irritation on the animal and make them irritable and uncomfortable.
- The animals may eventually die from the diseases transmitted by parasites.
- They suck blood from the animal and make them suffer from anaemia.
- They transmit diseases to the animals.
- They damage the skin or hide making them to have low value and so the farmers lose on profit.

How can external parasites in livestock be controlled?

1. Dipping or spraying the animals with acaricide.
2. Hand picking the ticks from the animals and destroying them by burning.
3. Hard-dressing the animals with some medicine on the skin.
4. Applying some powder medicine inside the animal house to kill the parasites.
5. Practicing rotational grazing denies the parasite a host when the livestock is moved to a different area.
6. Deworming

Deworming is the administering of medicine orally to live stock in order to control internal parasites

- (i) **Drenching** involves administering liquid medicine to livestock using a drenching gun

- (ii) Dosing involves administering solid medicines in form of tablets to livestock using a dosing or bolus gun.

Drenching



Livestock diseases

Disease is a condition of the body that is different from the normal condition of the body. When an animal is diseased, then we say it experiences the effect of disease which is called illness or sickness.

What causes diseases in livestock?

There are many things that may cause illness in livestock:

Living organisms are the major cause of livestock diseases. Such living things or disease germs include bacteria, fungi, virus and protozoa.

Lack of certain nutrients in the food.

Food poisoning which includes eating rotten feeds, chemicals, plastic materials, or some animals such as toads (which may be taken in the water the animals drinks).




Effects of livestock diseases



These may be:

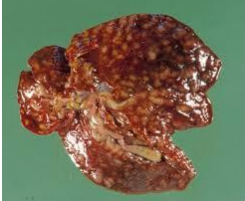
1. Reduced quality of products e.g. poor hide and skin.
2. Lowered or reduced yield or product.
3. Transmission of disease to humans such as tuberculosis from infected milk or brucellosis.

4. Death of infected animal

Common livestock disease and their symptoms

Disease	Causative organism	Animal affected	Symptoms
Anthrax	Bacteria	Camel, sheep, cattle, goats	 <ul style="list-style-type: none"> - Sudden death of animals. - Unclotted blood-stained discharges through the mouth, nose and anus
Foot and mouth disease		Camel, sheep, cattle, goats, pig	 <p>Lameness in a number of animals</p> <p>Salivation (drooling)</p> <p>Smacking of the lips, grinding of the teeth</p> <p>Vesicles/lesions in the mouth (on the tongue, gum, cheeks, lips)</p> <p>Unwillingness to move or stand</p>
Newcastle disease	virus	bird	

			<ul style="list-style-type: none"> - Nervous signs such as loss of balance, circulation, head tremor, wing and leg paralysis - Coughing - Diarrhea
Lumpy skin disease	Virus	cattle	 <ul style="list-style-type: none"> - Appearance of painful cutaneous nodules in the body, especially the head and neck, genitalia and udder. - Lesion develop in nostril and in the mouth - All the superficial lymph nodes are enlarged
Fowl pox	virus	chicken	 <p>wart-like skin lesions that progress to thick scabs</p>
Coccidiosis	protozoa	Chicken, rabbit	loss of appetite, weight loss or decreased weight gain, diarrhea (which can be bloody),

			 <p>dehydration and death</p>
Avian influenza	virus	chickens, turkeys	decreased egg production, depression, respiratory signs suggestive of a cold, swelling of the face, possibly some nervous signs and diarrhea
Snuffles	bacteria	rabbit	The bacteria can affect the eyes (discharge, redness, squinting) and/or nose (sneezing, discharge), thus giving the disease its name “snuffles.”
myxomatosis	virus	Rabbit	swelling and discharge from the eyes, nose and anogenital region.
Rinderpest	virus	cattle	fever, oral erosion, diarrhea
Mastitis	bacteria	Cattle Goat sheep	<ul style="list-style-type: none"> • The udder such as swelling, heat, hardness, redness, or pain; and • The milk such as a watery appearance, flakes, clots, or pus.

Revision questions and answers

1. Why would an egg from a layer not hatch into a chick after it has incubated for 21 days?
When the egg is not fertilized
When the egg lacks a yolk
When the egg was damaged
2. (a) State two types of chicken which are kept for special purpose.
Broilers
Layers
Dual purpose
(b) name the purpose of keeping one of the type mentioned in (a) above.
Broilers for meat
Layers for eggs
Dual purpose: for both eggs and meat
(c) Name one advantage of keeping local breeds of chicken.
They are resistant to disease
They are easy to feed
3. Name one breed of pig commonly kept in Uganda.
Local breed, large white, saddle back
4. Which type of sheep is reared for wool?
Merino sheep
5. Why is it possible to control the spread of cattle diseases in a paddock system?
The cattle locked are not exposed to infected ones
Infected cattle can be separated
6. Give any one reason why farmers prefer keeping cross-breed cattle other than the exotic ones.
To increase resistance to disease
7. Give any one characteristic that can help you distinguish between a hen and a cock.
Hens possess small crowns while big crown
Cock possess big comb whereas hen do not
8. How can a poultry farmer prevent hens from eating their own eggs?
By debeaking
Giving them food on time
Providing dark laying places

Providing enough space

9. The two lists A and B below, show the diseases and the animals they affect. Match the items in list A with those in list B correctly by completing the table below.

	<u>List A</u>	<u>List B</u>
	New castle	cattle
	African swine fever	Dogs
	Rabies	pigs
	Rinderpest	fowls

(a)New castle	fowls
(b)African swine fever	pigs
(c)Rabies	dogs
(d)Rinderpest	cow

10. (a) What do you understand by ‘dual purpose’ cattle?

Dual-purpose cattle are cattle kept for milk and beef

(b) Give any two common local breeds of cattle kept in Uganda

(i) Zebu cattle

(ii) long horned cattle

(c) Suggest any one reason why cattle keepers practice cross-breeding.

To improve on milk production

To improve on beef production

11. Give any one disadvantage of keeping poultry on a free-range system.

Birds can easily catch diseases

Bird can easily be eaten or stolen

One cannot determine how much they have eaten

12. Give any one sign you would see on cattle suffering from the following diseases:

(a) Anthrax:

Blood sports in milk

Running nose

Discharge a dark bloody stool

(b) East coast fever

Loss of weight

Laziness

Diarrhea

High body fever

(c) Nagana

Drossiness

Loss of weight

(d) Foot and mouth

Sore foot

Drooling from the mouth

13. A poultry farmer has his chicken passing out blood –stained dropping and have drooping wings

(a) What disease is likely to have attached the farmer`s birds?

Coccidiosis

(b) Suggest two ways in which the neighbors to the farmer can prevent their birds from contracting the above disease.

(i) **Keeping infected birds from healthy ones**

(ii) **vaccination**

(c) Why should the farmer separate the birds with the above given conditions from the rest?

To prevent healthy birds from acquiring disease from the infected bird.

14. Give the meaning of the following words as used in cattle –rearing

- (a) Insemination: **inserting the semen of male cow into the vagina of a female cow for fertilization.**
- (b) Crossbreeding: **where a local and exotic breed mate to produce an intermediate offspring**
- (c) Castration: **Activity carried out on a bull to make it unable to have sex and reproduce.**
- (d) On heat: **this is a period of time when a cow is restless in desire to mate with a bull.**

38. Give one way in which energy from animals can be used.

- **Ploughing, transport, pulling carts**

The diagram below shows one of the methods of grazing goats in Uganda.

Study it and use it to answer question.



15. (a) Name the method of grazing goats shown in the diagram.

Tethering / roping

(b) Give two advantages of using the methods shown in the diagram.

- (i) control over grazing**
- (ii) Prevents destruction of farmer's crop**
- (iii) prevent the animal from straying**
- (iv) Gives a farmer to do other activities**

(c) Write down one disadvantage of using this method.

- Animal can easily be stolen**
- Animal is exposed to predators**

16. (a) Name the type of cattle kept for milk production.

Diary cattle

(b) Give one example of exotic breeds of cattle which are the best for milk production.

Jersey, freesia, Sahiwal

(c) Write down two activities a farmer should do in order to get clean milk from a cow.

- (i) washing hands, udder, utensils
- (ii) filtering milk
- (iii) covering milk containers
- (iv) test for mastitis

17. Why do farmers carry out de –beaking in poultry farms?



Debeaking is cutting of poultry to prevent cannibalism and egg eating

18. Give any one advantage of castrating farm animals.

- **prevent poor bread**
- **prevent venereal diseases**
- **make male easy to handle**

19. (a) Give any two disadvantages of keeping local breeds of poultry

- (i) **Take long to mature**
- (ii) **Produce a few eggs.**

(b) Apart from getting money, give any two ways a farmer benefits from keeping poultry.

- (i) **Get meat**
- (ii) **Get eggs**
- (iii) **get manure**

20. Name the cattle disease whose sign is a swollen and painful udder.

Mastitis

21. Give any one exotic breed of sheep kept for wool production.

Merino, Romney marsh, corriedale



Sheep kept for wool



22. (a) Apart from egg eating, name any one other vice of poultry.

- **Feather pecking**
- **Cannibalism**

(b) Give any one cause of egg eating in poultry

- **boredom**
- **lack of enough calcium in the diet**
- **Delay to pick eggs**
- **lack of food**

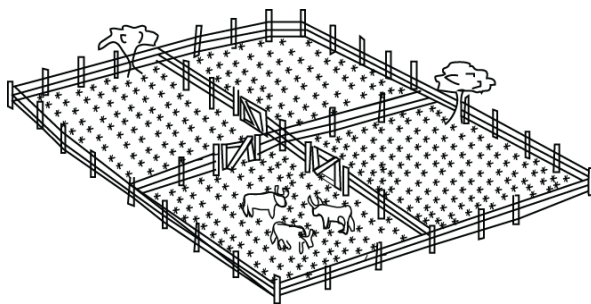
(c) State any two ways of preventing the egg eating vice in poultry.

- **make laying boxes dark**
- **give enough food with calcium**
- **timely picking of eggs**
- **provide enough space**

- **provide vegetables**

23. The diagram below shows a system of grazing cattle.

Study and use it to answer the questions that follow.



(a) Name the system of grazing cattle shown in the diagram above.

Paddock system

(b) Besides restricting the animals, give two other advantages of this system of grazing cattle.

(i) **Gives pasture time to grow**

- (ii) **Control breeding of pest**
- (iii) **Control soil erosion**
- (iv) **Give animal enough exercise**
- (v) **Prevent overgrazing**
- (vi) **Isolate sick animals**

(c) State any one disadvantage of the system of grazing cattle shown in the diagram

- **It is expensive**
- **Requires a big piece of land**

24. Give the use of a drenching gun to cattle farmer.

A drenching gun is used to administer drugs to animals.



25. Give any one reason why sheep farmers carry out docking.

To make mating easy i.e. docking cutting off sheep's tail



26. How can foot and mouth disease be controlled?

By quarantine

27. (a) Name two systems of keeping poultry that enable a farmer to keep large number of birds

- (i) **Deep litter system**
- (ii) **Cage system**

(b) State any two viral diseases that can spread easily in the above system of poultry keeping

- (i) **Fowl pox**
- (ii) **avian flue**

28. State any one sign of the snuffle disease in rabbits

Sneezing, running nose

29. (a) Which breed of cattle is obtained by mating a pure local breed and an exotic breed?

Hybrid

(b) Give any two reasons why some farmers prefer keeping local breed of cattle to exotic breeds.

(i) **they are resistant to disease**

(ii) **less affect by parasites**

(c) State any **one** characteristic of dairy cattle.

Big udder

30. Give any one disadvantage of overcrowding chicken in their house.

- **Develop bad habits**

- **Easy spread of disease**

31. (a) What germ causes mastitis in cattle?

bacteria

(b) Give any two signs of mastitis.

(i) **swelling**

(ii) **increase in temperature**

(c) State any one of way of controlling mastitis in cattle.

Hygiene

antibiotics

32. Give any one way in which farmers can improve on the quality of local breeds of chicken

By cross breeding