

LIVESTOCK MANAGEMENT MANUAL

For Introductory Courses

By

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PART I

APPROACHING ANIMALS

- When approaching an animal whether in a shed, stall or paddock, always speak to it before touching it.
- Approach the animal from the left side and handle from near the neck or possibly the head (beware of horns in case of cattle and buffalo).
- It is not desirable to carry a stick with you. In case, however, a stick is carried with, it preferably be kept hidden.
- Get some information about the animal from its attendant or owner (whether quiet or vicious); the animals usually are not quiet with the strangers.
- Treat strange animals with suspicion but do not let the animal suspect that you are afraid of it.
- The animal should have a head-collar or a halter on; if required, use two ropes on the head-collar and tie one to each pillar ring (more so in case of stallion and bull).
- Never handle the hind quarters or hind legs without having an animal's head held and a foreleg lifted/restrained.
- Take hold of the fore-lock (in horse), ear or nose until a halter has been put on. Do not grasp nose tightly to obstruct breathing.
- It is important never to make a sudden snatch at a head-collar which alarms the animals and may make it suspicious on future occasions.
- Young animals are inquisitive and may approach a person of their own accord.

- Many animals can be trained to come when called; always have a halter or rope ready to put on them. Some fodder or a piece of bread may be used to attract an animal.
- Some animals kick backwards, others forwards and laterally with their hind legs. Some cattle kick both ways.
- Bulls especially over a year old are often treacherous and should be properly secured before being approached by a stranger. They are usually rung before they are one year old.
- It is wise not to trust a bull.
- When haltering a horned animal, it is best to slip the poll-piece of the halter over the horns and ears before adjusting the loop round the nose so that the beast may not take the halter off and break loose.

EXERCISES

1. Give five very important precautions to be observed in approaching large farm animals.
2. Which way the horse and cattle may generally kick?
3. Why a stick should not be openly carried with you while approaching an animal?

POINTS OF THE BODY OF THE HORSE

The points of the animal are the terms used to indicate the several regions of the body. Commencing at the top of the head, the part immediately between and behind the ears is called the “poll”; the “fore-head” is from the poll down to the level of the eyes (Figure 1). From the level of the eyes downwards to the nostrils we have the face and the lower part, including nostrils, mouth and chin, is generally termed the “muzzle”. If a finger is passed into the nostril at its upper angle, it enters a blind pouch or cul-de-sac, which is known as the “false nostril”.

Starting again from the poll, the top of the neck from which the mane springs is called the “crest”, and passing the hand down this we come to the “withers”; they are situated immediately over the top of the shoulder-blade. Behind the withers lies the “back” and behind the back are “loins”, “croup” and “dock”, respectively. The back runs as far from behind the shoulder-blade as a saddle reaches, the loins from there to the top of the quarter, and the croup from there on to the root of the tail or dock. Coming back to the head, the space between the branches of the jaw is called “jowl”, and just behind it is the “throat”. Running down the lower part of each side of the neck, from the angle of the jaw to just in front of the shoulder, is a well marked shallow groove in which the large blood vessels of the head and neck lie, is called “jugular groove”. On the near (left) side the “gullet” also lies in this groove, and its position may be accurately noted whenever the animal swallows a mouthful of feed. Beneath these grooves and in the center line, the “windpipe” is found and may be traced from the throat to the base of the neck where it enters the chest.

At the lower part of the neck where it joins the body is the “breast”, in the center of which may be felt the point of the breast-bone. The ribs, eighteen in number, springing from the back-bone above and attached to the breast-bone below, form a cage for the organs of the chest and belly which extends from between the front of the shoulders to the loins. They may be felt from behind the shoulder backwards and the space between the last rib and the hind-quarter is termed the “flank”. The “fore-hand” includes head, neck and fore-limbs. The “quarters” are the whole of the parts from flank to tail.

The shoulder-blade slopes downwards and forwards to the “point of the shoulder”, where with the “arm-bone” or “humerus”, it forms the shoulder-joint; the latter being continued backwards and downwards to the “elbow-joint”. The “fore-arm” reaches from the elbow to the knee. The bone forming the “point of the elbow” may be felt projecting prominently at the back of the elbow-joint. On the inner side of the arm may be noted a horny prominence, the “chestnut” or “castor”.

From below the knee to the next joint, the bone running down the front of the leg is termed the “cannon”, “shank” or “shin” and the tendons from the bend of the knee down the back of the same area are called “back-tendons”. This brings us to the “fetlock” joint and below this the “pastern” slopes downwards and forwards to the “hoof”. Behind the fetlock, in a tuft of hair, is a small horny mass. This is known as the “ergot”. The region round the top of the hoof is called the “coronet” and usually there is a slight bulging forward of the skin at this point.

Commencing now at the top of the hind-quarter, we find about a good hand’s breadth behind the last rib, a long prominence just beneath the skin, the “point of the hip”. The projection of the quarter just below the root of the tail or “dock” is the point of the quarter” or “buttock”, and about midway between the point of the hip and buttock, lying deeply in the muscles is the “hip joint”. The hip bone runs from the hip-joint to “stifle”, which is the

large joint found behind the lower part of the flank; from here the “thigh”: runs backwards and downwards to the “hock-joint”, and the prominent bunch of muscles found over the outside of the lower part of the thigh is often called the “gaskin” or “second thigh”. The “hamstring” is the thick strong tendon running from the muscles at the back of the thigh to the “point of the hock”. Below the hock the same terms are used as in the fore-leg. The “chestnut” in the hind-leg is situated on the inner and lower part of the hock and is smaller than the corresponding one on front leg.

EXERCISES

1. Define “point of the body”.
2. Label various points of the body on the given line drawings of horse, buffalo/cow and sheep/goat.
3. Compare the points of the bodies of the horse and buffalo/cow and prepare a list of such points that are not common in these species.

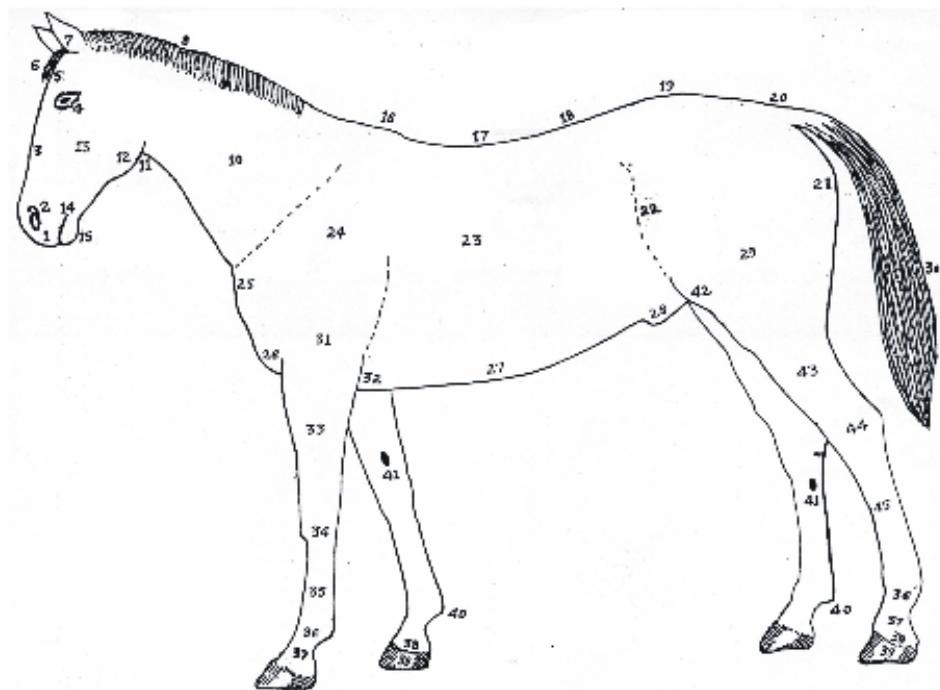


Figure 1. Body points of the horse

Head and Neck		Trunk		Limbs	
1.	MUZZLE	16.	WITHERS	31.	ARM
2.	NOSTRILS	17.	BACK	32.	POINT OF ELBOW
3.	BRIDGE OF NOSE	18.	LOINS	33.	FOREARM
4.	EYE	19.	CROUP	34.	KNEE
5.	FOREHEAD	20.	DOCK	35.	FORE CANNON
6.	FORELOCK	21.	BUTTOCK	36.	FETLOCK JOINT
7.	EAR	22.	FLANK	37.	PASTERNS
8.	CREST	23.	RIBS	38.	CORONET
9.	MANE	24.	SHOULDER	39.	HOOF
10.	NECK	25.	POINT OF SHOULDER	40.	ERGOT
11.	JOWL	26.	BREAST	41.	CHESTNUT
12.	LOWER JAW	27.	UNDERLINE	42.	STIFLE JOINT
13.	FACE	28.	SHOULDER	43.	GASKIN
14.	MOUTH	29.	THIGH	44.	HOCK JOINT
15.	CHIN	30.	TAIL	45.	HIND CANNON

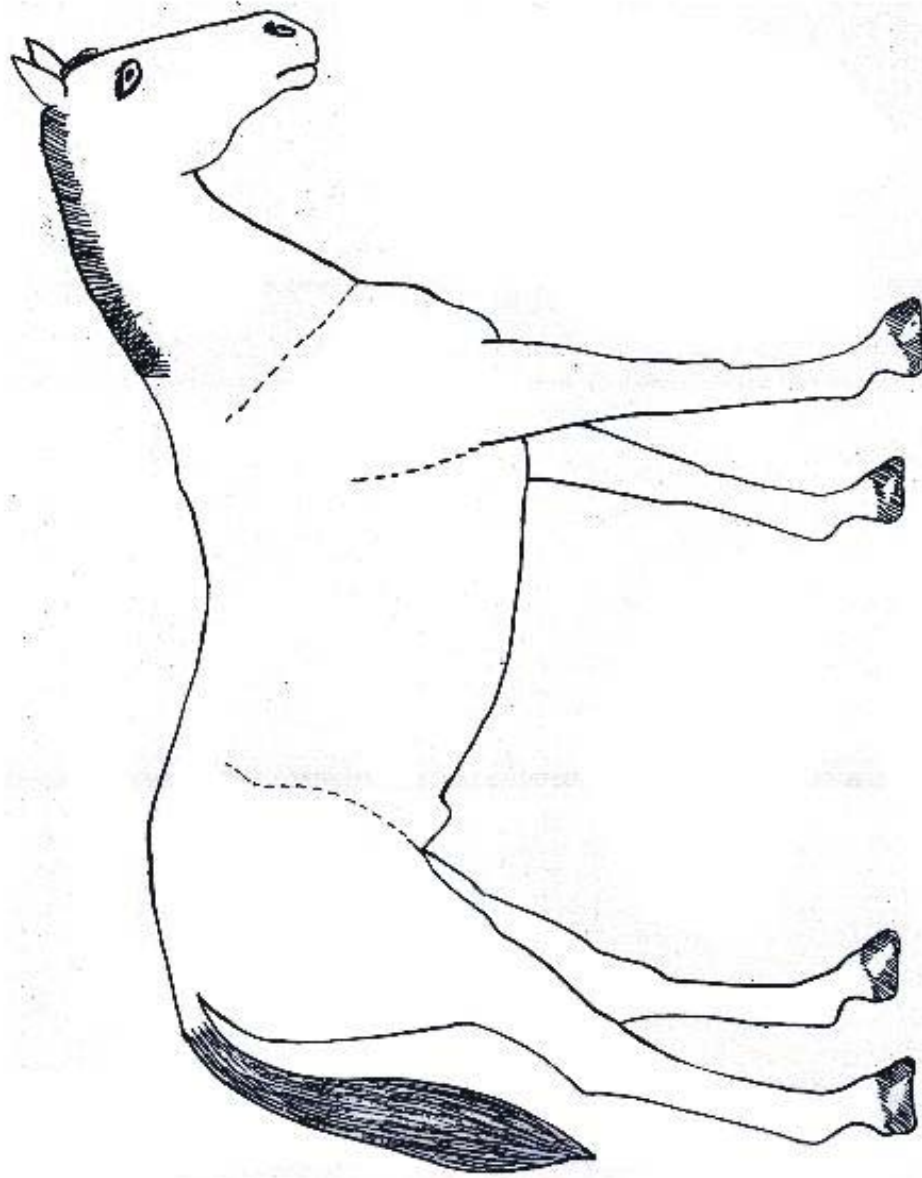


Figure 2. Body points of the horse.

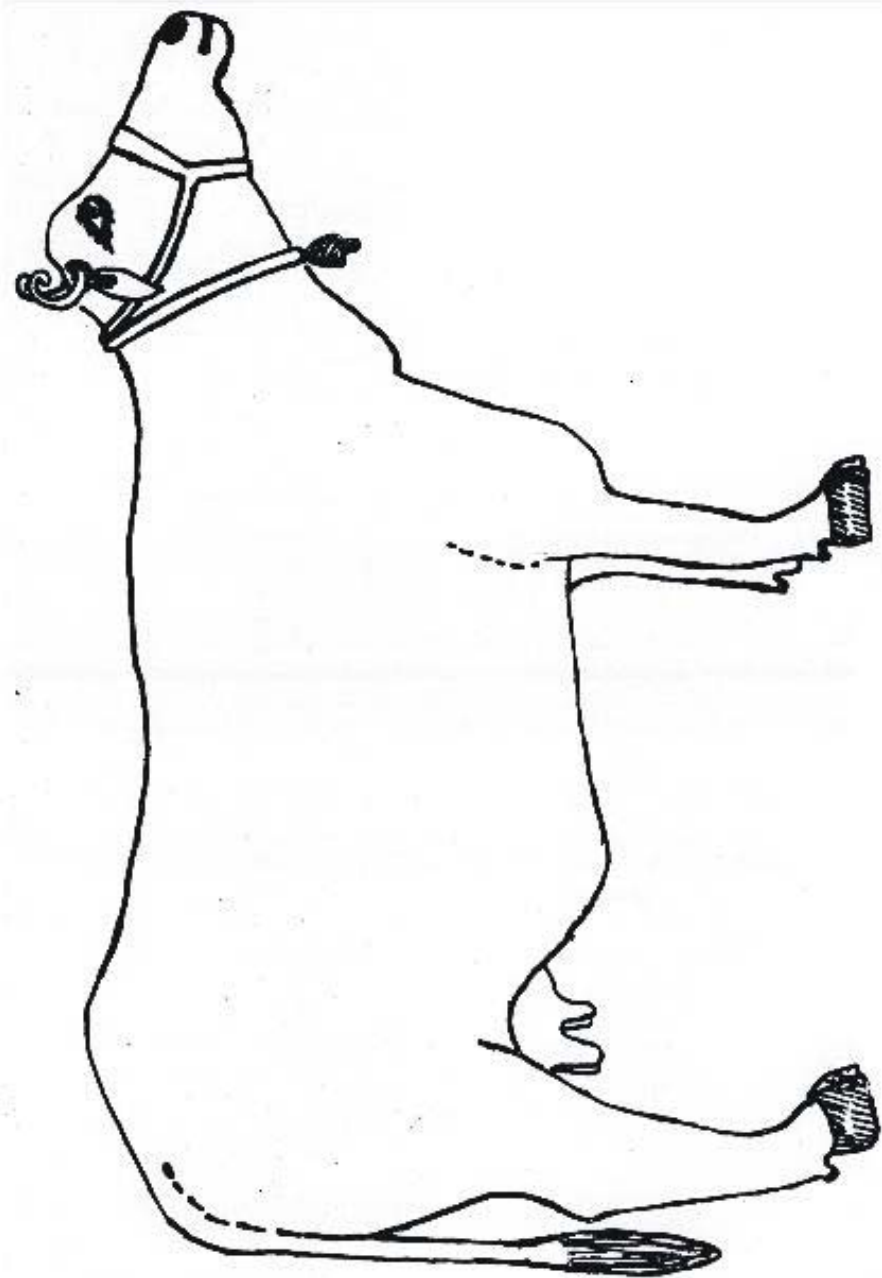


Figure 3. Body points of the buffalo.

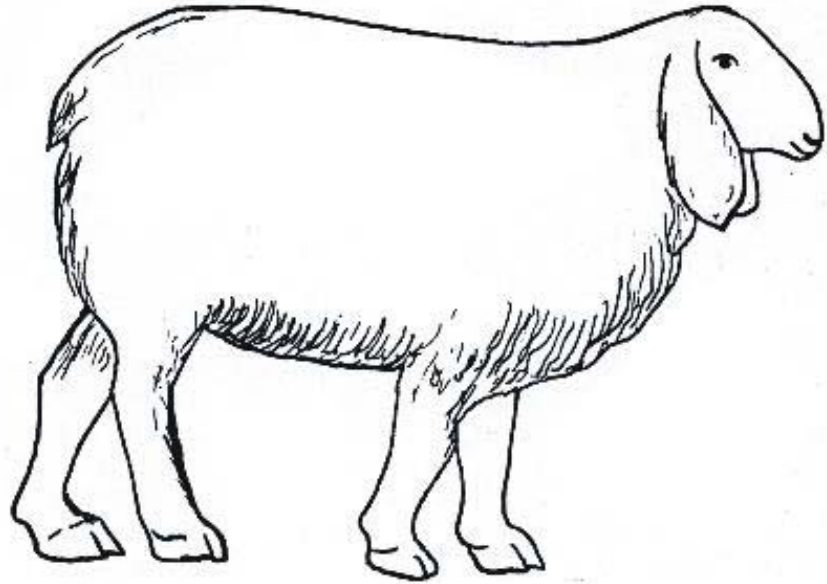


Figure 4 (a). Body points of the sheep.

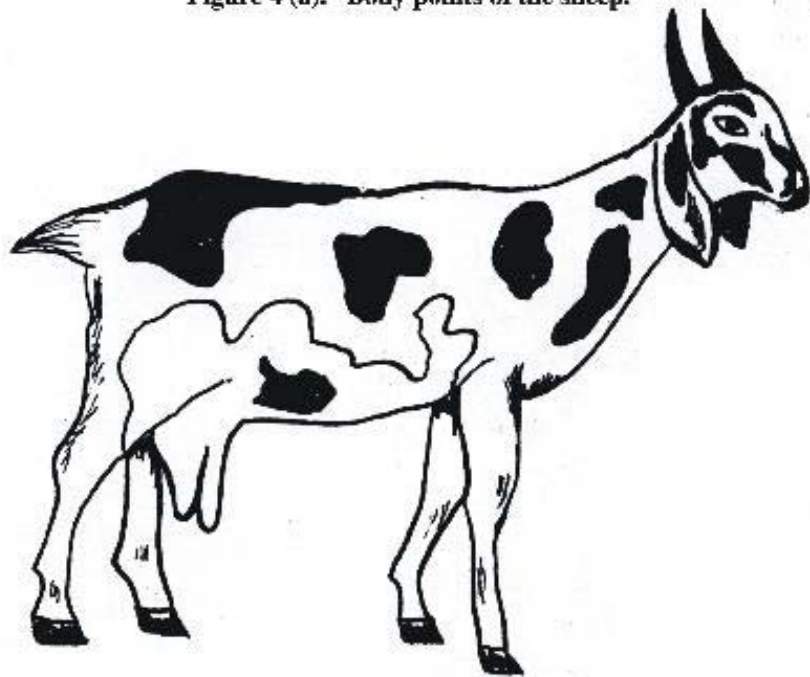


Figure 4 (b). Body points of the goat.

HANDLING AND RESTRAINING ANIMALS

Handling and restraining means controlling animals for various purposes such as:

- For giving them medical treatment and for surgical operations.
- For shoeing.
- For examination of their buccal cavity, eyes, feet, or any other parts which are not otherwise clearly visible.
- For ringing bulls.
- To check them from biting other animals or attendants.

Restraining can be effected by using various devices such as halters, head-collars, twitches, muzzles, gags, side lines, hobbles, etc.

HALTER

It is one of the simplest controlling devices for horse, cattle, and buffalo.

To make a halter

Making of a halter is difficult to describe in words. About 3 meter long rope is laid on the floor, at about one meter from the left hand end, untwist the strands sufficiently to enable the right hand part to be passed through to make a loop of about 2.5 cm diameter. Lay the rope down as before. Close to the loop (on right hand side), make another untwisting and pass the left end through it. Pull up tight, bind the splice thus made with a few turns of string. To form the poll-piece, untwist the strands of the right hand length, about 25 cm from the loop already made and pass the left hand end through it for a short distance. Make an overhand knot to fix. Bind on either side with string. Now pass the long right hand end through spliced loop first made. This forms the nose-band. Halter is now complete. To suit different animals, the knot in poll-piece can be adjusted to fit the head.



Figure 5(a). Halter.

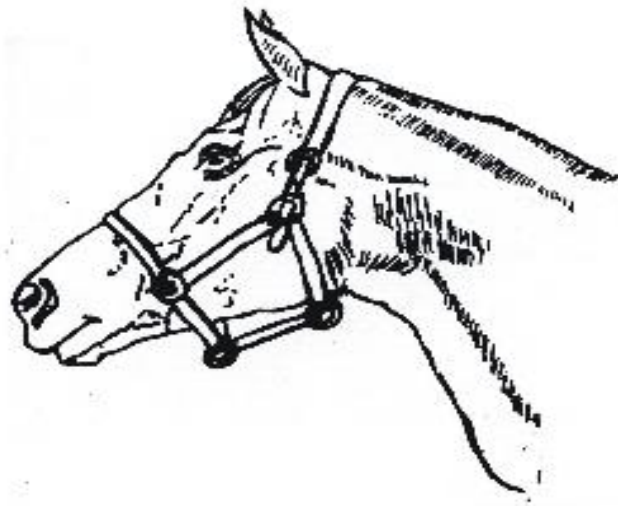


Figure 5(b). Head collar.

To halter a horse

Loosen the nose-piece. Put the left arm through the poll-piece of halter, i.e., loose end, over the fore-arm; hold the ear or forelock with the right hand; place the left hand on the horse's nose and slip the nose-band over the nose and the poll-piece over the ears with the right hand and adjust the poll-piece to the required tightness. The (spliced) loop of the halter must be on the left side.

HEAD-COLLAR

It is an effective device for controlling animals. Mostly it is used with horses, however, may be usefully applied to cattle and buffaloes. It consists of a poll-piece, two cheek-pieces, a nose-band, a throat-piece, and a jowl-piece.

TWITCHES

These are generally used with animals when slight pain is to be inflicted. Repeated and continued use of twitch should be avoided because it makes them difficult to handle about head. Twitch should only be applied immediately before the necessary restraint is required. There are different types of twitches such as stick twitch, loop twitch and leg twitch.

Stick twitch

It consists of a piece of stout wood about one meter long carrying a 1.5 cm hole about 3 cm from the end. Through this hole is inserted a piece of rope. While applying a twitch, the horse, etc., should be haltered and may be backed into a corner of a stable yard. Take the twitch stick under the right arm and stand on the near side opposite the left shoulder. Put the thumb and last three fingers of left hand through the loop of the twitch, but leave the index finger out to prevent the loop slipping over wrist. Take the animal in confidence and get a good hold of the upper lip, leaving the nostrils free and with the right hand rapidly twist up the stick. Take as tight a hold as necessary but do not be unduly severe. The twitch helps restrain the animal by causing a harmless pressure upon a sensitive area of the upper lip. It also diverts animal's attention from the part being manipulated and affords a stronghold upon the head of animal like horse. If it is not possible to apply twitch on the upper lip then the lower lip or an ear may be used.

Loop twitch

It consists of a rope with a running noose on its one end. The running noose on the end of a pliable rope is passed over the poll, into the mouth and pulled tight. It may be used very carefully since it is liable to cut the commissures of lips.

Leg twitch

It is an ordinary tourniquet applied 10 cm above the knee or hock of the horse to make the leg powerless to move.

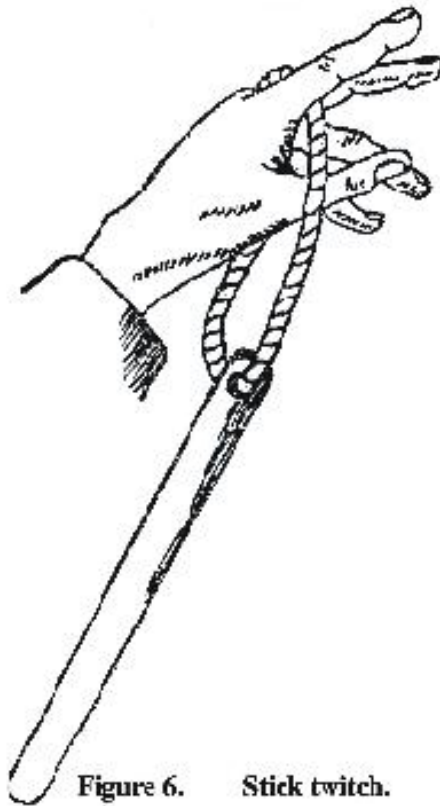


Figure 6. Stick twitch.

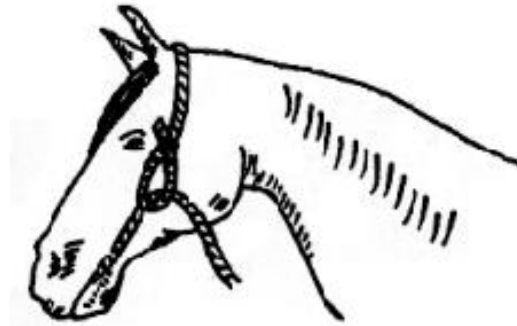


Figure 7. Loop twitch.



Figure 8. Leg twitch.

GAGS

Gags are means for keeping the two jaws apart for examination of mouth, teeth or for passing the probing in horse, cattle and buffaloes.

Several types of gags are in use. These are mostly made of metal. The one in common use with large animals here is called VARNELL'S MOVABLE GAG. The bars of gag or mouth pieces fit into the interdental space. The tongue must always be free. The bars

should be covered with rubber or leather to prevent damage to gums. Gags are also available for use with small animals such as sheep, goats, etc.

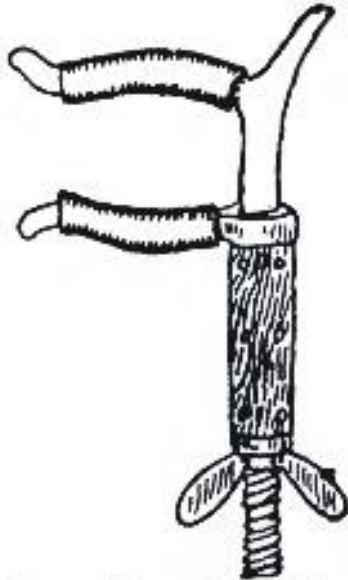


Figure 9. Varnell's gag.

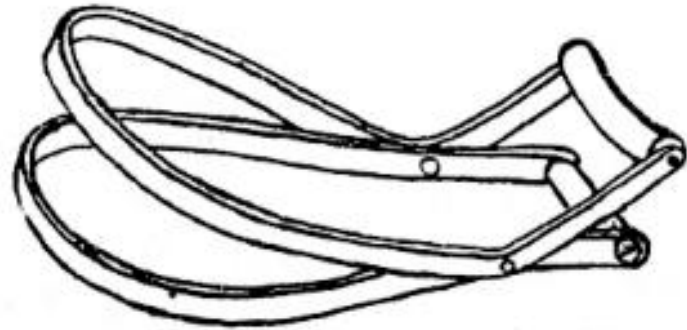


Figure 10. Linton's gag.

BULL RINGS

These are used for restraining powerful bulls. They are generally made of two semicircular pieces hinged together and may be made of copper, aluminium, or some other alloy which does not rust.

There are small as well as large rings which are used according to the age and size of animal. The ring is applied through the nasal septum about 1 cm back from the nostrils. A hole is first punched with a special bull puncher. When punching the hole, care should be taken not to punch it too far back. This is a common mistake. It results in too little space being available in that part of the ring lying outside the nostrils to accommodate a rope or a chain. Bulls are generally rung at the age of 10 to 14 months. Some bulls need a new ring every year due to greater amount of wear and tear.

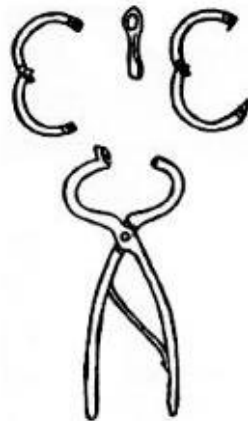


Figure 11. Bull ring and bull puncher.

MUZZLES

Three kinds of muzzles are in common use, namely leather, wire and string muzzle.

Leather box muzzle

This is better but an expensive muzzle.

Wire muzzle

It is less comfortable but durable and cheap.



Figure 12. Different types of muzzles.

String muzzle

It is cheaper and equally usefull and can even be made at home.

Muzzles are used to prevent animals from eating their bedding, to prevent biters from injuring people or other animals, to prevent mares, etc., from biting their youngones. Calves are muzzled to prevent them from suckling their mothers. The muzzles should not be put on too tightly otherwise the animal resents its reapplication. Muzzles are taken off at feeding time.

CRADLE

Ten or twelve pieces of wood having pointed ends are strung on the two pieces of cord and put around the neck of the animal and tied along the crest. It is helpful in preventing an animal from getting his head to a fore or hind limb in case of blistering or wounds. It is also helpful in restraining cow/buffalo/goat from sucking their own milk. It allows very little vertical or lateral flexion of head if properly applied.

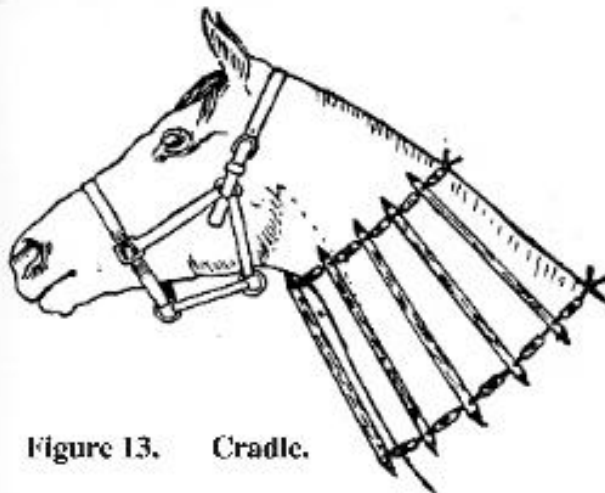


Figure 13. Cradle.

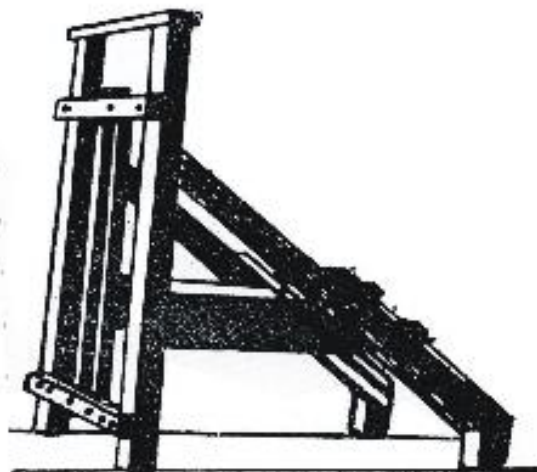


Figure 14. Crush.

CRUSH

Crush or trevis is especially useful for controlling large animals for the purpose of treatment, operations such as dehorning, docking and for shoeing. Different types of crush are used. These usually consist of four posts well driven into the ground and cemented there with two or more crosspieces at each side and end. Those at the end and/or at the front are removable.

EXERCISES

1. Give one important function of each of the tools given below:
 - a) Mouth gag
 - b) Cradle
 - c) Stick twitch
2. Why do camelmen put string muzzles on the mouths of camels during long journeys?
3. What is the proper age for ringing a young bull?

CASTING ANIMALS AND CHEMICAL RESTRAINT

For restraining, casting of animals is considered an effective method.

CHOICE AND PREPARATION OF SITE FOR CASTING

The best place to choose is a grass field convenient to stable/yard for most of the farm animals. There should be plenty of room for men to assist. There should be no objects against which the animal may damage itself. If the animal has to undergo surgery or has wound (s) on its body then take care that there is no fifth or straw or litter to contaminate wound (s). There should be no stones or bricks on the site which should be reasonably level.

Extremes of weather, as far as possible should be avoided. Before the animal is cast it is well to arrange for assistance of adequate number of men. It is not advisable even with a docile animal before being cast. There is otherwise a risk of injury or even rupture of abdominal organs distended with food.

To minimize risk of injury, a plentiful bed of clean paddy straw damped with water or antiseptic solution is needed. Excessive straw is undesirable since it intends to get bunched up among animal's feet and ropes do not run freely. For surgical operation better use a tarpaulin.

CASTING HORSES

The following methods are employed for the purpose:

- i) The use of hobbles
- ii) The use of side lines (single as well as double)

The application of hobbles is mainly done in case of major operations such as castration; its detailed discussion is therefore, not in the perview of this manual.

Single side line

The use of cotton web is ideal for a good side line. A slipping knot is given at the pastern. The side line is then passed between the two fore-legs and the free end taken round the neck and brought up from over the off shoulder to the near side and a knot applied near the point of elbow, drawing the hind-leg a little bit forward.

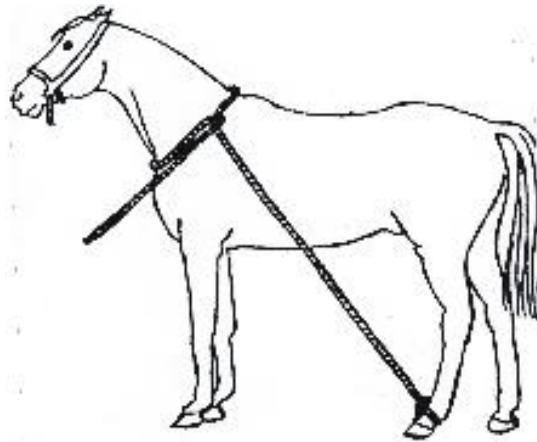


Figure 15(a). Single side-line.

Double side line

A slipping knot is given at the near hind pastern, the knot being on the outside. The side line is then passed between the fore-legs and given a turn. The free end is then passed under the previous turn of the side line and passed over the shoulder onto the off side. The side line is then wound round the off fore-limb in a similar fashion as was done on the near side and then it is passed round the pastern and a knot applied on the outside. Both the hind-legs are slightly brought forward during the operation.

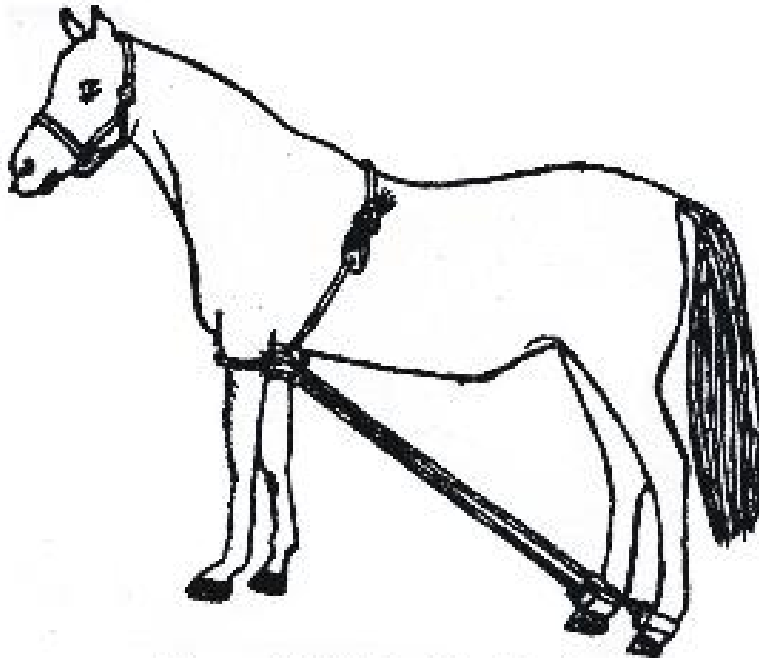


Figure 15(b) Double side-line.

CASTING CATTLE/BUFFALOES

These animals are cast for a variety of reasons such as for surgical operations, trimming of feet and sometimes for better control at a difficult calving.

Procedure

A running noose is made at one end of a 10 meter long rope and passed around the base of horns. In case of polled animals, the noose can be placed round the neck. A half hitch is made round the neck, a second round the chest immediately behind elbows, and a third round the abdomen in front of udder or scrotum. The rope is pulled by two men and the animal will sink to the ground. The feet may then be secured to each other or to a fixed object. The first half hitch, i.e. round the neck may be dispensed with if a sufficiently long rope is not available. If the head is forced round well into the shoulder of the same side on which the ropes cross and all slacks tightened before the men on the rope pull it, the animal will certainly fall on the side opposite to that towards which its head is turned. When the animal sinks to the ground one or two men must keep the head and neck down while the legs are secured. When head is firmly held down, struggling will be less and there is less danger of breaking a horn and the animal cannot rise until the head is released.

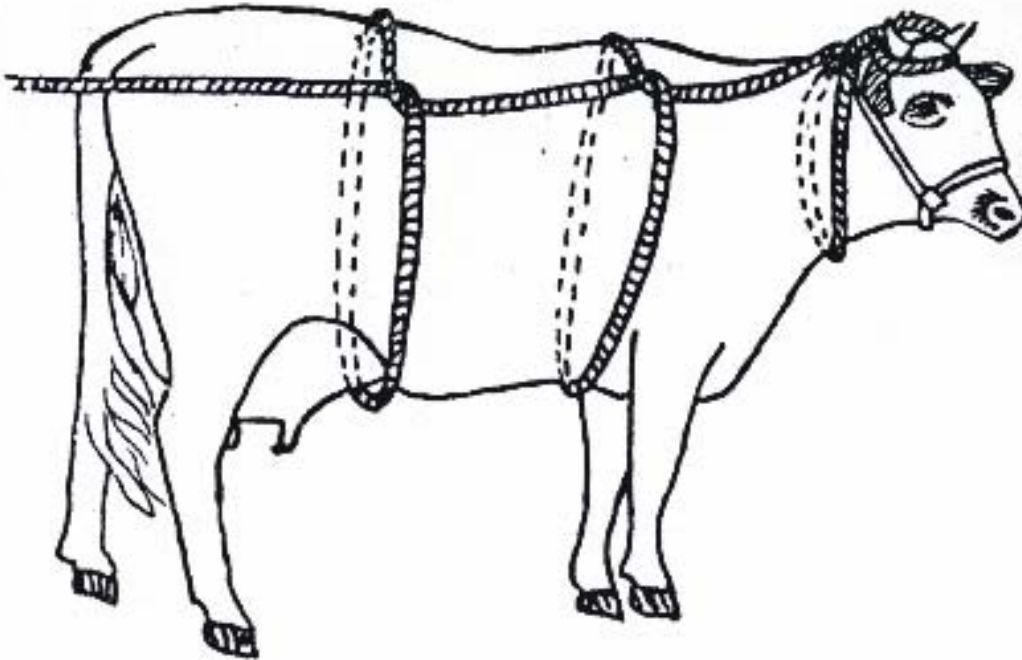


Figure 16. Application of rope for casting a cow.

EXERCISES

1. Why the use of 'tarpaulin' is preferred for an animal to be cast for a surgical operation?
2. Why a few hours fasting is considered necessary for animals prior to their being cast?

Chemical Restraint

Highly nervous and/or vicious large animals can be calmed before casting by administering tranquilizers such as largactil or other chlorpromazine compounds or depressants such as chloral hydrate or barbiturates. The drugs minimize struggling and make application of ropes and tools easier. The narcosis or subnarcosis attained should not be so great as to leave the animal weary for a long time. For buffalo and cattle, chloral hydrate is the most common drug used since it is cheap, efficient, and can be easily administered orally as a drench or in the form of electuary or in drinking water. The dose varies from 15 to 45g for buffalo/cattle and 2 to 4g for sheep, depending on the size of the animal. The animal should preferably be fasted for about 18 hours before administering the drug, which is done about one hour before the actual handling of the animal. Camels and elephants can also be chemically tranquilized.

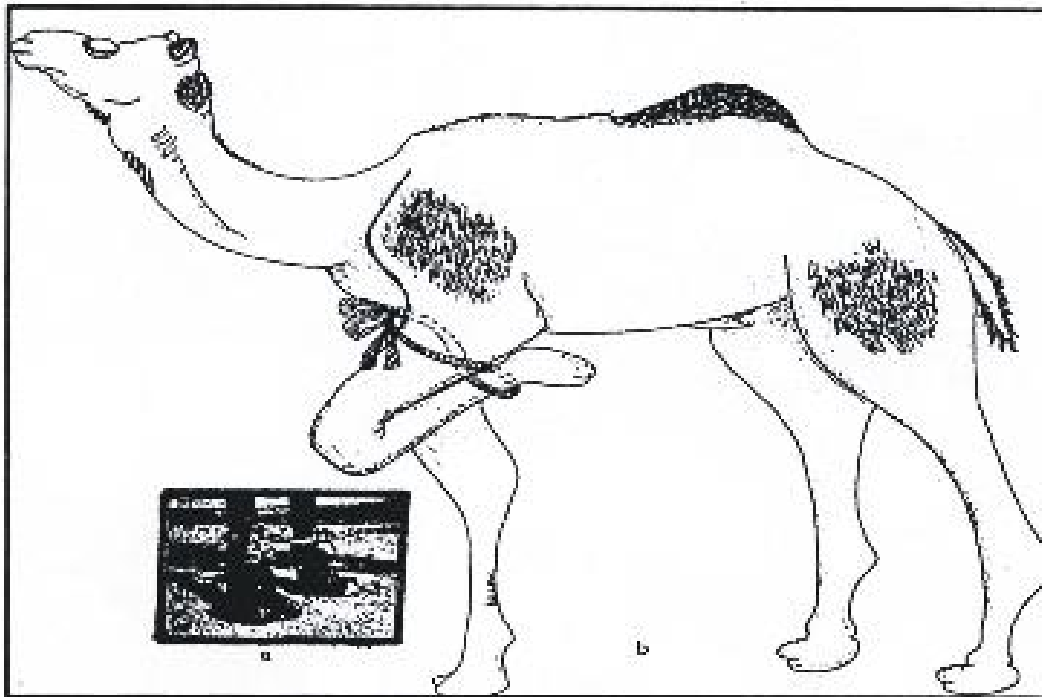


Figure 17(a). Restraining of forelimb in a standing camel with a rope. a) both the forelimbs, b) one forelimb.

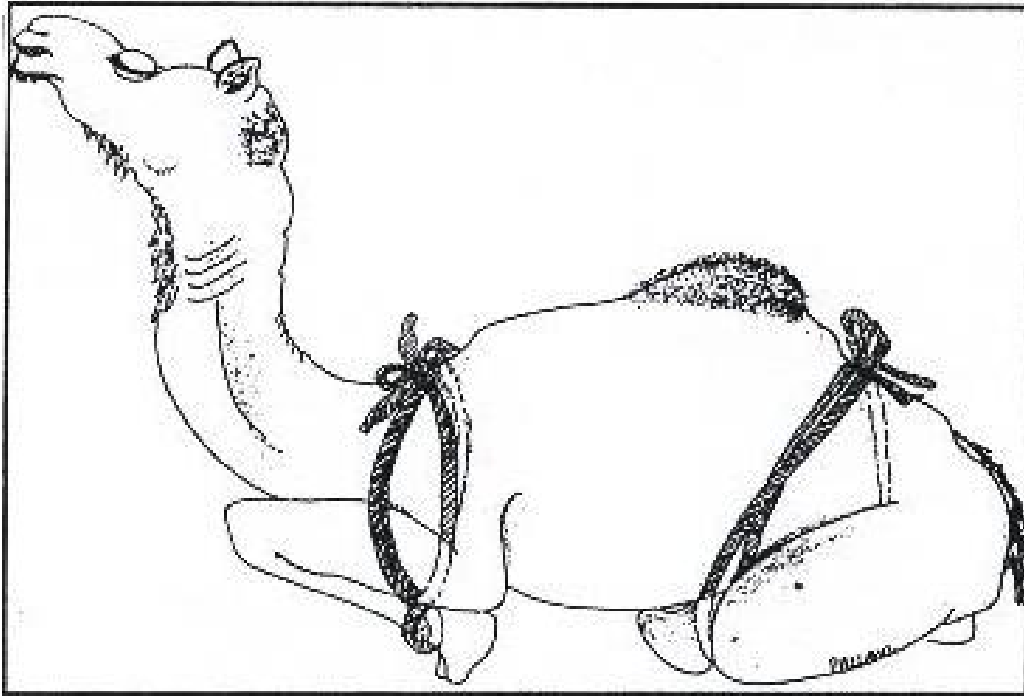


Figure 17(b). Restraining a sitting camel with ropes around forelimbs and neck and hindlimbs.

LIFTING UP OF FORE/HIND LIMB OF A HORSE

To pick up the near fore-leg of a horse one should stand in front of the near shoulder facing the tail. First speak to the animal then run the left hand down the neck, withers and elbow to midway between the knee and fetlock. A horse accustomed to being handled will generally lift up his leg when told to do so, but should he refuse, lean against his near shoulder to shift his balance on to the off fore-leg. If he still refuses, grasp firmly round the pastern, screw the hand round slightly to make the skin move over the bones and tendons, and if the horse still does not lift the leg, jerk your left elbow against the back of his knee and lift the foot up forcibly. To pick up off fore-leg stand on the off side and reverse the hands. When the foot is raised, hold the toe with the back of hand towards horses tail and fingers pointing to the front. Stand upright and keep the horse's knee well fixed. Do not keep the leg lifted up for unduly long time.

To pick up the left hind-leg stand in front of the left flank, keep the left arm almost straight and run the hand down the back, quarters, buttock and hock to halfway down the left hind cannon. Draw the leg up and forward, i.e., towards horse's head. Seize the front of the hoof with the right hand and with the left hand grasp the Achilles tendon tightly. While doing this take a short step forward, i.e., bring the whole leg slightly back and rest the hoof on the left thigh. On lowering the leg, retain the grasp on the Achilles tendon till the foot is near the ground; this lessens the horse's ability to kick.

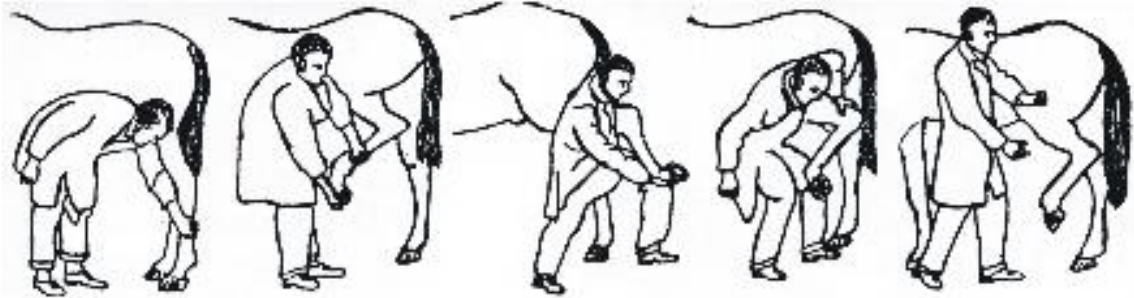


Figure 18. Picking up, holding and releasing a horse's hind-leg.

EXERCISES

1. Which way to face while picking up the off fore-leg of a horse?
2. Name the tendon that has to be grasped tightly during picking up the right hind-leg of a horse.

CATCHING AND HANDLING OF SHEEP

If sheep are to be caught or handled for any reason, they should first be confined to a small shed. Sheep may best be caught around the neck, by the hind-leg or by the rear flank. They should never be caught by the wool. Such rough treatment results in badly injured skin and tissue underneath, which may require weeks to heal. As a result of such handling market sheep will exhibit a damaged carcass and the fleece will lack uniformity because of the disturbance in the injured area.

In handling sheep, the fingers should be kept together. In this way, the correct touch is obtained in the palm of the hand, and the wool is not disarranged. In observing the fleece and skin, the wool should be parted well down on the shoulder side and leg. Opening the fleece on the back should be avoided as it will allow water to run in.

Catching

- i) Confine the animals in a small area.
- ii) Move up quietly on the desired animal after working it into a position near you.
- iii) With a swift sure movement grasp well up into the right rear flank with the right hand.
- iv) Holding firmly with the right hand, quickly grasp under the lower jaw with the left hand.

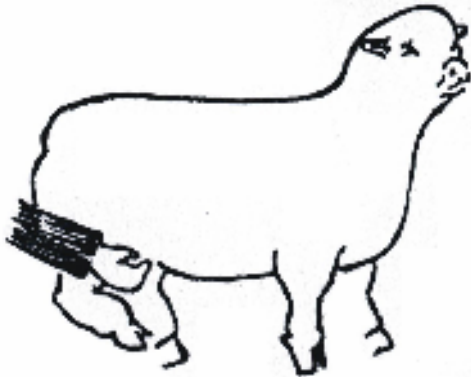


Figure 19. Catching sheep.



Figure 20. Holding sheep.

Holding

- i) With the left hand firmly grasp a fold of flesh under the lower jaw.
- ii) Place the right hand securely over the dock; the right hand in this position can be useful in moving the animal.
- iii) As the animal quiets down the right hand may be removed.

EXERCISES

1. By which parts of body, sheep may be caught for their proper handling?
2. While holding sheep, why the right hand is placed over the dock?

LEADING ANIMALS

LEADING A BULL

As with all domesticated animals, a certain amount of training is necessary for young bulls. From an early age they should be taught to lead in hand and to walk freely and normally. This is particularly important if they are to be exhibited in shows or for sale.

They should be haltered as young as possible or provided with a small head-collar and led for a short time every few days. After about six or seven months age they should be exercised for about half an hour, gradually increasing to one hour or more every day. At about ten months to one year age, they will be rung. As the bull grows older and stronger, a rope and chain attached to a stout leather head-collar will be needed.

In teaching them to walk they should be made to walk energetically in a straight and balanced fashion and at first an extra man may be needed to keep them moving and prevent any hanging back. As they learn it should be possible to lead them without any pressure from chain this only being necessary to control them at intervals. Vicious animals may be led by two men holding the respective rope attached to the left/right ring of the stout head-collar. The men should make the animal walk somewhat ahead of them to avoid any risk of being hit by the bull.

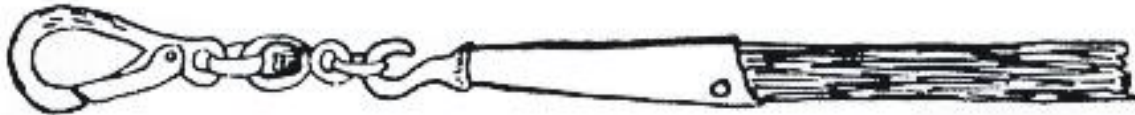


Figure 21. Bull leader.

After leading on quiet roads, cartpaths, etc., is satisfactory, they should be accustomed to traffic on busier roads. The led animal must face the on-coming traffic which means that the bull is led on the right hand side of the road with the attendant walking on the bull's left side.

LEADING A HORSE

A colt should be led with a rope longer than an ordinary halter shank but held close to the head, the surplus rope being coiled in the left hand, never wound round the wrist or arm. A webbing halter or a small head-collar is better than a rope halter.

To lead a horse, a halter, bridle or head-collar with shank is necessary. When horses, even though known to be quiet, are to be led for any distance upon a public thoroughfare, a bridle should always be used. The person leading should walk on the horse's left, opposite its head, placing himself at about half-an-arm's length from the head. The right hand should hold the reins close to the horse's mouth, firmly but not roughly. The natural motion of the head when walking should not be hindered by a tight hold. The left hand holds the loose ends of the reins or rope, coiled but never wrapped round the hand.

For leading a stallion, an unjointed snaffle is used. A chain from the right-hand ring of snaffle through the left ring, is attached to a short bar to keep him off the man who is leading him, and the other end of the bar is attached to a leading strap. Two reins run to the stallion-roller to keep his head up and a third rein or strap running to the roller on the right side lower down, stops him from turning his head too far in the direction of the leader.

EXERCISES

1. Why is it necessary to teach a bull to be led in hand at an early age?
2. What is the appropriate age for ringing a bull?
3. While leading a horse, why the surplus rope should not be wound round the wrist or arm of the man leading it?
4. Draw the diagrams of the Figures 5 (b) and 20 given in your note book.

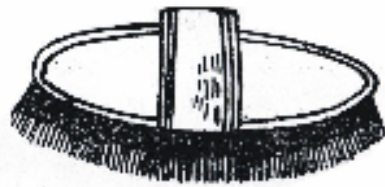
GROOMING AND CLEANING

Grooming and cleaning are important management practices which help to make and keep the body fit and clean. Proper grooming and cleaning are necessary to make the animal more attractive in appearance and to assist in maintaining best health and condition. Horses that are stabled should be groomed thoroughly once a day. Those that are worked or exercised should be groomed both before leaving for work and immediately on their return to the stable. The recommended grooming procedure for heated, wet or sweating animals is as follows:

GROOMING EQUIPMENT

i) Rubber or metal curry comb

Curry comb is used to groom animals that have long thick hair coat, to remove caked dung and to loosen the matted dirt in the hair. Curry comb should be applied gently in small circles rather than with pressure and in long strokes. It should not be used below the knee or hock, about the head or over bony prominences. Curry comb should not be used in grooming animals that have been recently clipped.



Body brush



Dandy brush



Curry comb



Mane and tail comb



Sweat scraper

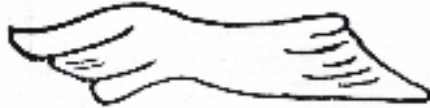


Figure 22. Grooming equipment.

ii) Body brush

It is the principal tool used for grooming. It can be used for brushing entire body.

iii) Dandy brush

Dandy brush is made from stiff fibres usually about 5 cm in length. It may be used instead of a curry comb for removing light mud from the skin and also be used for brushing mane and tail.

iv) Mane and tail comb

This implement is used in combing out matted mane and tail.

v) Grooming cloth or piece of sponge

Any piece of cloth in the form of a towel, burlap cloth etc., may be used for this purpose.

vi) Sweat scraper

This is used for the purpose of removal of excessive perspiration from heated, wet and sweating animals.

vii) Hoof pick

This is used for cleaning hooves of an animal from the lower side.

DETAILED GROOMING PROCEDURE

Clean out feet by using the hoof pick. Work it from heel towards the toe. While cleaning the toe, inspect for loose shoe and any other foot disease. Groom the body with curry comb in the right hand and brush in the left hand. Begin on the left side of horse at the neck and then proceed to withers and shoulders, fore-leg up to knee, back of the animal, side, belly, croup and hind-leg down to the hock. Clean the dirt and hair from brush with the curry comb. Some horsemen prefer to curry comb first followed with the use of brush rather than to use both articles at the same time. Curry comb gently and brush vigorously. Stand well away from the animal at an arms length by keeping arm's stiff. Throw the weight of your body against the brush. Brush the hair in natural direction. Brush with care the parts like flanks, between fore-legs, hind-legs, at the point of elbow-joint and in the fet-locks. After completing the grooming on the left side of the body, transfer the brush to the right hand, curry comb to the left hand and groom the right side of the animal the same way as described for left side.

The body brush can first be used in brushing the head then the mane and tail can be combed and brushed with either body brush or with dandy brush. The mane is brushed downwards and tail should be washed out with warm water and soap. Lastly, use the grooming cloth or piece of sponge. Wipe out the eyes, ears, nostrils, lips, sheath and dock.

The thoroughness of grooming can be checked as follows: pass the finger tips against the direction of hair. If the skin and coat are not clean, the fingers will become soiled with dirt and grey lines will appear on the coat marking the neglected areas such as eyes, lips, sheath and dock.

Wash and disinfect grooming equipment using warm water and soap.

GROOMING OF DAIRY ANIMALS

As a general rule the dandy brush and curry comb are the main tools used for grooming of dairy animals and the whole process is much more superficial than in case of horses. Theoretically, a dairy animal's coat should receive as much attention as a horse's. In the first place, dairy animals do not work or wear harness and a buffalo/cow generally licks herself practically all over and removes a good deal of dirt in the process. Dairy animal grazing in a pasture lick themselves freely.

The grooming of dairy animals includes the washing of their udders with warm water containing an appropriate antiseptic solution and the final "drying" of these with boiled, damp cloth. By "drying" is meant removing the superfluous water which would otherwise drop into the milk-pail. It is advisable, however, to leave the surface of the udder damp as this prevents dry dust, etc., from falling into the milk. This last operation should be carried out immediately before milking. The actual brushing of the coat should be finished at least two hours before milking so as to allow the dust which is raised and distributed in the atmosphere time to settle before milking commences. When buffaloes/cows are outside all day it is best to leave the grooming until after milking, unless there is a separate milking shed. The process of grooming dairy animals is similar to that employed for horses. It is advisable to periodically clip the tail, flanks and quarters of milking animals.

EXERCISES

1. How would you differentiate between a "body brush" and a "dandy brush"?
2. What are the main uses of a sweat scraper and a hoof pick?

JUDGING LIVESTOCK

The essential qualifications that a good livestock judge must possess and the recommended procedure to follow in the judging assignment, are as follows:

Qualities of a Good Judge

- “Livestock-mindedness” and a desire to know animals thoroughly.
 - A clear knowledge of the ideal or standard type and ability to recognize desirable and undesirable points of conformation.
 - Quick and accurate power of observation.
 - Ability to form a mental image of many individual animals and to rank them by making comparisons.
 - Reasoning power that takes into account practical considerations.
 - Ability to reach a definite decision based on sound judgment.
 - Extreme honesty and sincerity in order to avoid bias or prejudice.
 - Steady nerves and confidence in one’s ability to make close independent decisions based entirely on the merits of the animals.
 - A good philosophy for all judging is to do the best work possible at the time and have no regrets about the results.
 - Evaluate and rank the individual animal according to its appearance on the day of judging, regardless of its rank at a previous show.
 - Sound knowledge acquired through practice and experience in order to give effective reasons for decisions.
 - A pleasant and even temperament. Good judges, however, do not fraternize with exhibitors or friends along the ringside.
 - Firmness to stand by and defend one’s placings without offending or in any way implying that one’s decisions are infallible.
- Students in practice and in contests should always work independently.

LOGICAL PROCEDURE IN EXAMINING

The examination of any class of livestock should be systematic and thorough. This is especially true in close competitive judging such as is encountered in the show-ring.

The animal being examined should first be looked over from a distance, so that views from the front, side and rear may be secured. This general inspection should furnish a good idea as to the size, balance, width and depth of body, compactness, the make up of head, length of neck, straightness of lines, closeness to the ground, straightness of legs, and breed, type and character of the animal. Next, the impression gained through distant inspection should be verified by handling. In case of sheep fleece should also be examined.

As an example, the procedure for examining sheep is given below:

- Examine covering and strength of top from rump to top of shoulder.
- Grasp neck for fullness and examine head for evidence of scurs.
- Place hand over points of shoulders to check both width and covering.
- Feel brisket’s firmness, also place one hand on top of shoulder, the other on the floor of the chest to determine depth of heartgirth and chest.

- With thumb on outside of leg, fingers on inside feel the muscling for plumpness and manner in which it carries down to the hock.
- Check in turn width of rump, covering of loin edge, and spring of rib including covering. Also pinch the dock and measure width of thigh in the same manner.
- Place one hand on top of rump, the other in the middle of thigh to measure the depth of twist.
- To examine the fleece part it with the back of each hand, palms held up and open to reflect light onto the fleece on shoulder, side and thigh.

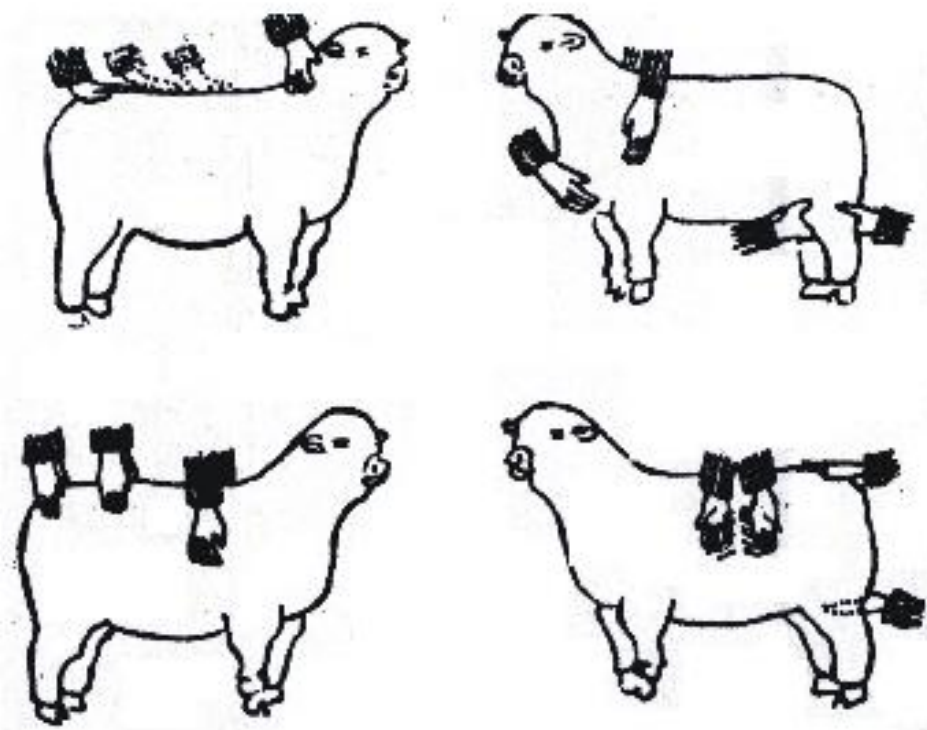


Figure 23. Procedure for examining sheep.

GUIDE LINES FOR JUDGING DAIRY ANIMALS

The following rules can serve as a guide to maintain reasonable degree of uniformity for judging variable type characteristics:

- The first place individual should be well-balanced, smooth, symmetrical and of proper size with a deep body, possessing outstanding dairy character, strong legs and a good udder and should be free from any major defects.
- The bottom place individual is the one that appears the most unattractive, is unbalanced and lacking in symmetry and has one or more major defects.

- Place larger animals over smaller ones if both are alike in points of conformation. In other words, size is usually considered an advantage if the animal is not coarse or too large.
- Small but smooth, well-balanced animals are usually placed over larger animals that have a major defect, or over larger animals that lack smoothness and symmetry. In other words, a small good animal with plenty of quality is preferred over a large one that can be criticized on a number of points.
- In buffalo/cow classes it is a safe rule for close placings to choose the animal with the best udder.
- A broken-away or pendulous udder puts the buffalo/cow at the bottom of the class, regardless of other good points of conformation. If two or more animals in the class have such udders, they are then placed on points of body conformation. But this is the only exception to the rule.
- If the floor of the udder where the teats attach, hangs lower than the point of the hock on the buffalo's/cow's leg, the udder is definitely pendulous. This is also a good rule for determining whether an udder hangs too low.
- There are various degrees of deviation for any point that is under consideration. The advantage one buffalo/cow is given over another depends directly upon the degree or extent of the defect.
- An animal good or outstanding in all points but one, if this point is not important (this does not include the udder), can usually be placed in second position with strong justification. Examples of such points are a high tail head, heavy withers, easy loins and other similar points. Assigning such animals to second place indicates that the good qualities are appreciated but that the animal cannot be placed at the top,
- The legs should be observed while the animal is both in motion and at rest. The strength and set of the legs can best be noted while the individual is moving. The strength of the fore udder attachment can be studied at the same time and a swinging udder caused by a loose fore attachment can easily be detected.
- Each animal should be observed several times to note whether the individual settles when standing in one position. Weaknesses here, that may have been overlooked previously can definitely influence the placings.
- In general, the same points of judging except breed type, apply to all breeds.
- Keep the ideal in mind and the ideal conformation for each specific point and then select buffaloes/cows (or bulls) for the top placing that most nearly conform to these ideals. A careful analysis of each individual will expose deviations. Always keep in mind that for buffalo/cow classes, individuals toward the top of the class must have good udders.
- The points that should always be given careful consideration and that are most important in judging are size, topline, depth of body, udder, legs and general appearance with good breed type, smoothness and general blending of parts throughout the body.
- Select buffaloes/cows, with outstanding dairy character and general good 'type' and which appear to be the useful, hardworking kind that will wear well with age when conformation differences begin to resolve themselves into economic values.

EXERCISES

1. What should a dairy animal look like, angular or rectangular?
2. What is the significance of “Wedge Shape” in dairy animals?
3. Enumerate the qualities of a good livestock judge.
4. Discuss the qualities of a desirable udder of a dairy buffalo.

JUDGING OF DAIRY ANIMALS

True dairy type is characterized by absence of fattening and fleshing with a capacity to eat large quantities of feed, which is utilized for milk rather than for meat production. The leanness of a dairy animal is not due to emaciation but due to function. When a dairy animal is dry she builds up reserves which are milked off after calving but a beef animal does not do so to that extent.

The true dairy type is usually described as ‘Wedge-shaped’ (side wedge, top wedge and front wedge) with her characteristic angular appearance.

The back and hind-quarters should be sparsely fleshed with little fat, but strong and well developed. The hip and pin bones should be wide apart and prominent to give a wide attachment for the udder. More than any other feature, the udder indicates the specialized function of dairy stock. It should be large and capacious with even development of all the four quarters which should not be fleshy or pendulous; the teats should be uniform and properly shaped and of a convenient size. The blood supply of the udder must be plentiful to provide adequate nutrients for manufacture of milk. In good milkers, it is indicated by the number of veins that stand out under the skin of the udder itself and larger milk veins which can be seen along the base of abdomen. The udder should be of fine texture with fine skin and hair. Certain other features such as bright, alert and prominent eyes, openness of nostrils, large lung capacity; thin, soft, and pliable coat with fine hair and general evidence of thriftiness, give an indication of the constitution of the animal and her well being.

Sunken or dull eyes, harsh coat, pinched nostrils, sickle hocks, etc., are all signs of ill health or physical deformities which indicate lack of capacity to stand the strain of heavy production. Good quality in buffaloes/cows is indicated by soft skin of udder, fine bones, a flat rib, well sprung towards the base of the abdomen and with plenty of space between the ribs and a large food capacity with a minimum of fleshing. She must have the ‘dairy’ temperament’, which implies alertness combined with femininity and docility. A good dairy animal, further, should have a broad muzzle with strong jaws, sound feet and relatively straight pasterns. The buffalo/cow must have all the characteristics and points of the breed to which she is considered to belong.

Unified score cards for female and male animals as approved by the American Dairy Science Association are reproduced below. With certain modifications, these can be used for judging dairy animals here too.

SCORE CARD FOR A DAIRY COW

General Appearance-30 points

Attractive individuality, with femininity, vigour, stretch, scale, harmonious blending of all parts and impressive style and carriage. All parts of a cow should be considered in evaluating a cow’s general appearance.

Breed Characteristics

Head:	Cleancut, proportionate to body	
Muzzle:	Broad with large, open nostrils	
Jaws:	Strong	10
Eyes:	Large and bright	
Forehead:	Broad and moderately dished; bridge of nose straight	
Ears:	Medium size and alertly carried	
Shoulder blades:	Set smoothly and tightly against the body	
Back:	Comparatively straight and strong	
Loin:	Broad and nearly level	
Rump:	Long, wide, and nearly level from hook bones to pin bones; cleancut and free from patchiness	10
Thurls:	High and wide apart	
Tail head:	Set level with backline and free from coarseness	
Tail:	Slender	
Legs and feet:	Bone flat and strong, pasterns short and strong, hocks cleanly molded	
Feet:	Short, compact, and well rounded with deep heel and level sole	
Fore-legs:	Medium in length, straight, wide apart, and squarely placed	10
Hind-legs:	Nearly perpendicular from hock to pastern from the side view and straight from the rear view	

Dairy Character-20 points

Evidence of milking ability, angularity and general openness without weakness; freedom from coarseness, giving due regard to period of lactation.

Neck:	Long, lean and blending smoothly into shoulders; cleancut throat, dewlap and brisket	
Withers:	Sharp	
Ribs:	Wide apart; rib bones wide; flat and long	20
Flanks:	Deep and refined	
Thighs:	Incurving to flat and wide apart from the rear view, providing ample room for the udder and its rear attachment	
Skin:	Loose and pliable	

Body Capacity-20 points

Relatively large in proportion to size of animal, providing ample capacity, strength and vigour.

Barrel:	Strongly supported, long and deep; ribs highly and widely sprung; depth and width of barrel tending to increase toward rear	10
Heart girth:	Large and deep with well sprung fore-ribs blending into the shoulders; full crops; full at elbows; wide chest floor	10

Mammary System-30 points

A strongly attached, well-balanced capacious udder of fine texture indicating heavy production and a long period of usefulness.

Udder:	Symmetrical, moderately long, wide and deep; strongly attached, showing moderate cleavage between halves; no quartering on sides; soft, pliable and well collapsed after milking; quarters evenly balanced	10
Fore-udder:	Moderate length, uniform width from front to rear and strongly attached	6
Rear-udder:	High, wide, slightly rounded, fairly uniform width from top to floor and strongly attached	7
Teats:	Uniform size, of medium length and diameter, cylindrical, squarely placed under each quarter, plumb and well spaced from side and rear views	5
Mammary veins:	Large, long, tortuous and branching	2

SCORE CARD FOR A DAIRY BULL

General Appearance-45 points

Attractive individuality, with masculinity, vigour, stretch, scale, harmonious blending of all parts, and impressive style and carriage. All parts of a bull should be considered in evaluating a bull's general appearance.

Breed Characteristics

Head:	Cleancut, proportionate to body	15
Muzzle:	Broad with large open nostrils	
Jaws:	Strong	
Eyes:	Large and bright	
Forehead:	Broad and moderately dished, bridge of nose straight	
Ears:	Medium size and alertly carried	
Shoulder blades:	Set smoothly and tightly against the body	
Back:	Straight and strong	
Loin:	Broad and nearly level	
Rump:	Long, wide, and nearly level from hook bones to pin bones; cleancut and free from patchiness	
Thurls:	High and wide apart	15
Tail head:	Set level with backline and free from coarseness	
Tail:	Slender	
Legs and feet:	Bone flat and strong, pasterns short and strong, hocks cleanly molded	
Feet:	Short, compact, and well rounded with deep heel and level sole	
Fore-legs:	Medium in length, straight and wide apart, squarely placed	
Hind-legs:	Nearly perpendicular from hock to pastern from the side view, and straight from the rear view	

Dairy Character-30 points

Angularity and general openness, without weakness; freedom from coarseness.

Neck:	Long, lean, with medium crest, and blending smoothly into shoulders; cleancut throat, dewlap, and brisket	30
Withers:	Sharp	
Ribs:	Wide apart; rib bones wide, flat, and long	
Flanks:	Deep and refined	
Thighs:	Incurving to flat; wide apart from the rear view	
Skin:	Loose and pliable	

Body Capacity-25 points

Relatively large in proportion to size of animal, providing ample capacity, strength, and vigour.

Barrel:	Strongly supported, long and deep; ribs highly and widely sprung; depth and width of barrel tending to increase toward rear	12
Heart girth:	Large and deep, with well sprung fore ribs blending into the shoulders; full crops; full at elbows; wide chest floor	13

Show-ring judging or actual selections on the farm may not be fully accomplished by the aid of a score card. However, the score card serves as a guide and a complete knowledge of it will be useful both to the beginner and to the experienced judge.

EVALUATION OF DEFECTS

A summary of the 'Evaluation of Defects' published by the American Purebred Dairy Cattle Association, is presented below to serve as an approximate guide in this connection.

A serious defect may be defined as a gross fault that impairs productive performance and/or is important from the hereditary standpoint that the judge must be very critical in its evaluation. Some are considered serious enough to constitute a disqualification.

In a show-ring, disqualification means that the animal is not eligible to win a prize; any disqualified animal is not eligible to be shown in the group classes. In slight to serious discrimination, the degree of seriousness shall be determined by the judge. In evaluation a specific condition it is usual to consider its practical importance, including prevalence of the characteristic in herds and the attitude of dairymen toward it.

Disqualifications

(i) Total blindness, (ii) Permanent lameness, (iii) One or more blind quarters in buffaloes/cows, (iv) Very abnormal milk from an impaired quarter, (v) Only one testicle or abnormal testicles in bulls, (vi) Evidence of sharp practice, and (vii) Freemartin heifers, unless proved pregnant.

Serious discriminations

(i) Wry face (twisted) sideways (marked), (ii) Parrot jaw (pronounced), (iii) Badly winged shoulders, (iv) Very abnormal tail setting, (v) Bucked knees, blemished hocks, crooked hindlegs, weak pasterns, badly bowed pasterns, extreme toeing-out in rear or a marked spread of toe, (vi) Evidence of arthritis, crampy hind-legs, (vii) An extreme lack of size, (viii) Very abnormal milk or a partially impaired quarter, (ix) Broken udder attachment, (x) Over conditioned and (xi) Uncalved heifers showing evidence of having been milked.

Slight discriminations

(i) Blindness in one eye, (ii) A slight tendency toward a parrot or overshot jaw in a female, (iii) Loose shoulder attachment with a tendency to wing, (iv) Capped hip (point of hip knocked down), (v) Slightly wry tail or other slight deficiency about the tail

setting, (vi) Temporary lameness, (vii) Cropped ears, (viii) Slightly undersized, (ix) Temporarily abnormal milk, (x) A tendency toward weakness in udder attachment, (xi) Slightly unbalanced quarters, and (xii) Temporary or minor injuries which do not affect the animal's usefulness.

EXERCISES

1. For the purpose of judging of livestock what is meant by a 'serious defect' and a disqualification?
2. Give a list of defects that may lead to disqualification of dairy animals in a show-ring.
3. What is meant by a 'Score Card'?
4. Describe the characteristics of a desirable mammary system of a buffalo.