



Animal Production Level II

Learning Guide #22

Unit of Competence: **Assist Basic Husbandry Practices of Draft Animals**
Module Title: **Assisting Basic Husbandry Practices of Draft Animals**

LG Code: **AGR APR2 M 07 LO3-LG-22**

TTLM Code: **AGR APR2 TTLM 0919**

LO 2: Select, catch and tie up draft animals



INSTRUCTION SHEET	<i>Learning Guide 22</i>
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Identifying Individual characteristics of draft animals
- Inspecting Legs and hooves of selected draft animals
- Catching of Selected draft animal and fitting working gear
- Riding and training Draft animal
- Identifying OHS hazards and Implementing risk assessment and control
- Keeping health and welfare of draft animals

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Identify Individual characteristics of draft animals according to specified criteria and nominated animals are selected.
- inspect Legs and hooves of selected draft animals for
- Catch Select draft animal quickly and gently and fit working gear
- Lead Draft animal to work area or rail quietly and calmly and safely secured.
- Identify OHS hazards continually, assess risks and implement suitable controls.
- Handle Draft animals safely

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 7.
3. Read the information written in the “Information Sheets 1,2,3,4,5 and 6 in page 7,10,14,18 and 21 respectively”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1” in page 6,9,13,17,20 and 23 respectively.



5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering all Self-check).
6. If you earned a satisfactory evaluation proceed to “next Information Sheet ”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #22
7. Submit your accomplished Self-check. This will form part of your training portfolio.



1.1. Identify individual characteristics of draft animals

Once farmers decide what kind of draft animal will be used, they must be choosing individual animals which are sound and able and have a considerable work expectancy and resale value. Selecting a good draft animal is a matter of evaluating both physical and behavioural attributes. Age, sex, conformation (shape), and temperament are helpful criteria for judging a draft animal's value. The farmer's total animal needs must be noted when judging an individual animal. If it is to be used as a pair, it should be roughly the same age and size as its work mate, and should be the same sex.

Age of cattle/oxen

Ideally, farmers should raise their own draft cattle or purchase them when they are very young. Oxen are, normally, put to work between the ages of three and four years. They may be trained at two to three years of age and given light work for a season. However, before the age of three, oxen have little power, and hard work can stunt their growth or cause abnormal development of bone and muscle. After the age of four, animals may be difficult to handle and train; they must be broken of old habits before their power can be used.

Although Oxen can work until they are 12 or older, many farmers prefer to sell them as soon as their work capacity tapers off. A common practice is to work oxen hard until age seven or eight, use them as reserve or alternate animal (or pair) for a season or two and then sell them for butchering.

Age of Equines

Recommended' ages for training and working equine animals are very similar to those outlined for cattle. However, in practice, these animals are worked until they are older because their meat is non valuable in our case. The age of a horse, donkey or mule can be determined by comparing the animal's mouth. As the animal grows older, the



enamel wears off the tooth, giving it a smooth, white grinding surface (the dark centre disappears). The teeth grow longer and begin to slant the entire mouth elongates.

Sex of cattle

Sex has a bearing on the power and temperament of draft animals. As a rule males tend to be bigger, more powerful, and more difficult to train, than females. Females have less endurance and, of course, cannot be used when they are carrying or nursing young.

Sex of Equines

Castrated horses or donkeys (geldings) are preferred over stallions because they are even tempered and manageable in the presence of females. Female horses, mules and donkeys are nearly as powerful as males and geldings, but are known for their stubbornness and unpredictable moods.

Conformation

Conformation refers to the form or shape of an animal. An animal with good conformation has a shape which shows the normal characteristics of its species and breed.

An animal used for draft must have a build well suited for pulling. It should be low to the ground, have powerful shoulders and legs, and have a broad frontal dimension that will accommodate the placement of a harness. It must be big enough to deliver, a lone, or in a pair, the power needed to pull equipment for an extended period of time. It must also be able to exert to concentrated or "instantaneous" effort needed to overcome temporary increases in the draft requirement caused by roots, rocks, hard soil, or inclines.

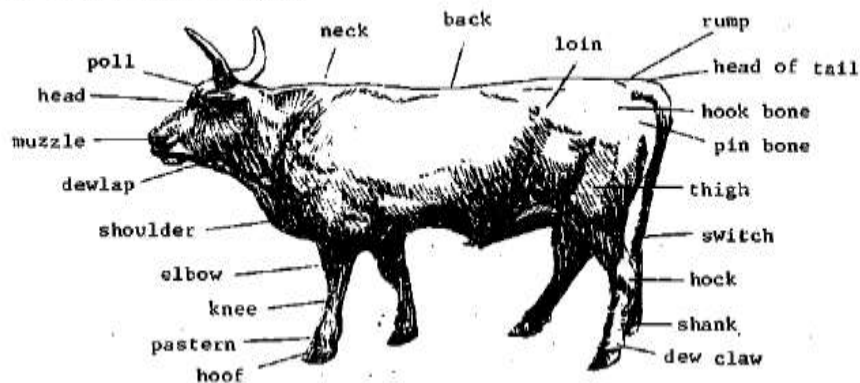
While some animals are bred to produce good draft abilities, within any breed individual animals vary greatly in these qualities, and care must be taken to choose those with the most potential. A thin but well-balanced animal can be strengthened with a good diet, health care, and work. However, an animal with a swayback, bad legs or impaired vision will be a constant source of trouble.



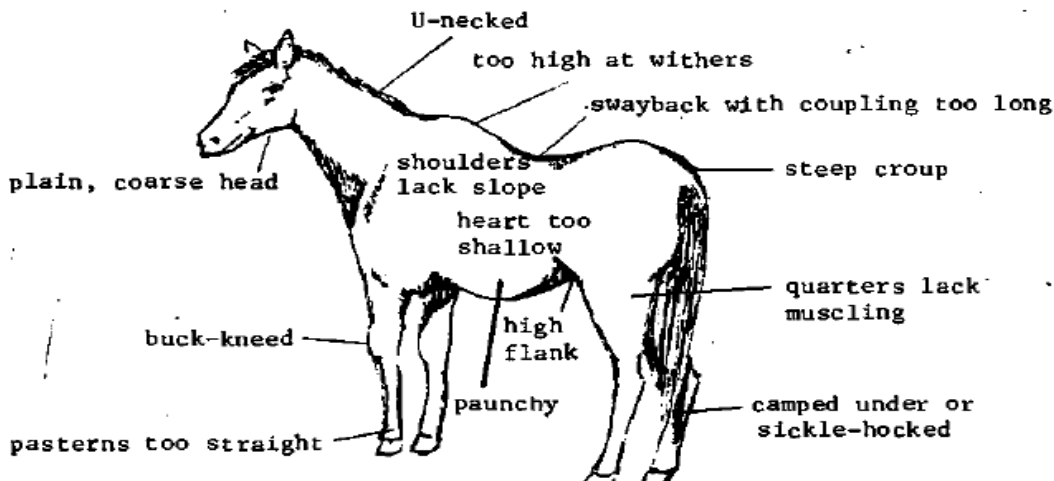
Selection is a process of matching ideal qualities against those seen or latent in a given animal. Good draft animals, regardless of species or breed, will have the following qualities:

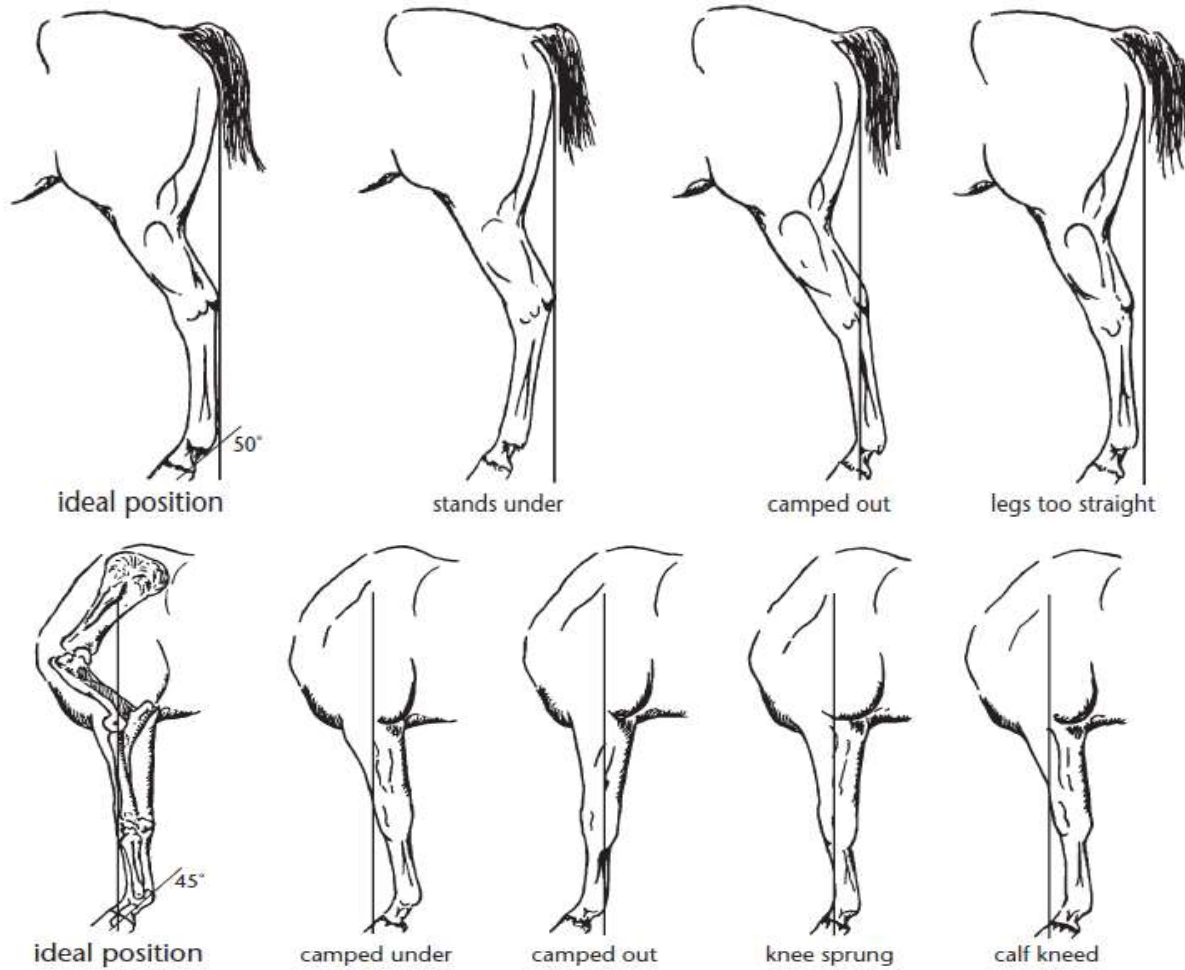
- Head well proportioned; squared, sculptured look balanced vision and hearing; head carriage high and straight.
- -normal mouth; good teeth and jaw structure body should have depth and width; short, full neck, full shoulders, broad chest, and straight, broad back wide, thick hindquarters, low-set and evenly-fleshed
- short legs, straight and square to the body; ample bone
- Clean, well-developed joints no swelling or unusual boniness; no turning in or out of knees or hoofs; free movement of limbs feet straight, hard normal angulations of hoof.

Ideal Conformation in Bulls



Conformation Faults of the Horse





Temperament

Temperament refers to the nature or disposition of animal. Part of its temperament is determined genetically, both by breed and parentage; some of it is learned a response to the treatment it receives from other animals or the people who raise and handle it. Temperament is reflected in an animal's behaviour, the way it moves and acts, and the way it reacts to the things around it.

A donkey that is mishandled and mismanaged might kick or butt at its owner, or at any adult, but be led away quite easily by a child. The buyer must be aware of such possibilities and at the same time draw some basic conclusions about the animal's/ temperament.

The following are signs of good temperament:



- Good overall conformation and health. e.g. An animal with bad vision or hearing, an un sound leg or joint, or with a chronic respiratory or muscular weakness, protects itself by balking, spooking, shying, refusing to be harnessed or lying down during work. Its temperament is affected or shaped by its physical condition.
- The animal accepts the hand ling of the owner. The owner can pick up the animal's foot, open its mouth, lead it with a rope without having to use force or harsh measures.



Self-check-1

Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the useful criteria for judging a draft animal's value? (3Pts)
2. Write the quality of good draft animals(4pts)

Note: Satisfactory rating - 7 points

Unsatisfactory - below 7 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions



2.1. Inspect hooves & legs for abnormalities

Inspect an animals (specially, equines) hooves daily and take care of them. Their hoofs should be short and upright with an oval bottom. If the toes become long and slanted, it should be trimmed. Excess hoof wall, as well as ragged loose pieces of frog, can be removed with a sharp, strong knife. Cracks and chips in the wall can spread, and eventually destroy the entire hoof. Metal horseshoes are used in some countries to protect the hooves of donkeys. If shoes are not available, the rough edges of the hooves can be smoothed with a wood file. Coating them daily with oil or grease may help hooves that are very dry or brittle, badly cracked or broken. This prevents them from further dehydration and assists healing. Animals will pick up their foot if the tendon is pinched at the back of the leg, just above the pastern. Pick up and handle the feet, clean out the bottom of the hooves with a hoof pick before each use of the donkey, to prevent lameness from stones or other materials penetrating the sole of the foot. Clean from the heel towards the toe, especially in the grooves between the frog and the bars of the hoof.



Fig. A. No! The foot must not be too straight! Fig. B. No! It must not be bent too much! Fig .C. Yes! It must be slightly bent!



A horse's hooves should be round and smooth with minimal chips and no cracks or sections missing. The hoof wall should grow approximately $\frac{1}{4}$ to $\frac{1}{2}$ an inch per month, and it should form a straight line with the front of the pastern when viewed from the side. The heels should be wide, and the frog should be supple and flexible. Horses that are shod must be re-shod and trimmed regularly to maintain this shape. Excessively long toes and toes curving upward in front are evidence of need for attention by a competent farrier.

**Self-check-2****Written test**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Which of the following is correct foot of draft animals? (2pts)
 - A. The foot must be too straight.
 - B. It must be bent too much
 - C. It must be slightly bent!
 - D. It must be bent too much
2. How you prevents the hooves of your draft animal from further dehydration?(3)

Note: Satisfactory rating - 3 points

Unsatisfactory - below 3 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions



Information Sheet-3

Catching of Selected draft animal and fitting working gear

They may be caught in stables, yards or paddocks

Guideline of Safe Animal Handling:

- Be aware of the special stressors for animals in the working setting
- Avoid direct eye contact
- Avoid high-pitched, excited talk
- Always protect yourself
- Safe and effective animal handling (understand normal behavior & responses of each species)

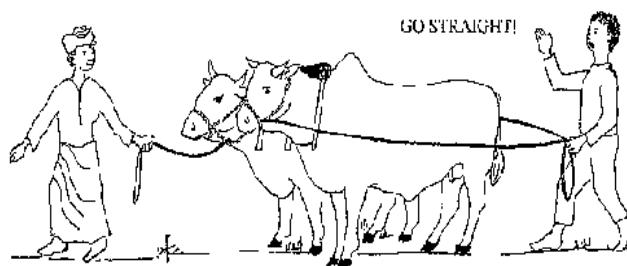
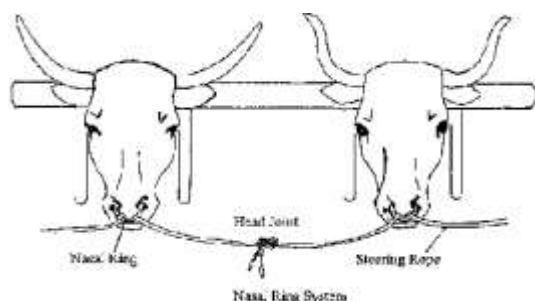
Working gears might include:

Saddles, ropes, reins, breastplates, martingales, bridles, cruppers, saddlebags, headstalls, saddlecloths, feeders, leads and rugs

Installation and safety of yoke:

Animals are tied by the horns to the horizontal rod to familiarize them with human activities. The yoke connects the two draft animals. All traction implements are attached to the yoke by the pulling chain (prow, harrow) or the beam (cart, roller cutter). The yoke consists of the yoke beam, the yoke pegs and the peg beam.

For weeding or Ridging use the maximum distance between the animals. Leave central holes of the yoke free (80 cm ridges). For plowing, reduce the distance between the animals by changing the pegs Weeding: of 60 cm ridges.





Often requires the presence of three persons (one in front of animal, two on the sides). It allows to the herdsman to give the voice command. Initially, the animals are kept closely (if necessary, by means of ropes), in the end, the animals walk alone without the presence of aid and obey the voice and guides. Allow short rests from time to time. Avoid shouting, give clear commands, go slowly and steadily, never beat the animals, be patient, show no anger.

How to Put on a Halter

- Make friends with the animal
 - ✓ Talk to it, touch it, feed and-water it, clean its Stall, occasionally give it a tidbit or hand-feed it salt.
- Stand next to the animal's left side, facing the side of its head. Hold the free end, or poll piece, in your right hand, and the noose-like nose-band in your left.
- Make a large loop 1m in diameter at the end of a rope 3 meters long. Use a fixed knot for Knot, do not use a slip knot
- Make a small fixed loop about one-third of the way down one side of the large loop.
- Pass the free end of the rope through the small loop made in the second step.
- Place the halter over the animal's head so that the non-slipping portion (the headband) fits behind its ears. The slipping section (noseband) fits over the muzzle.
- Pass the free end under the animal's jaw and up toward the right ear. At the same time, begin to slip the nose-band over the muzzle. If it tosses its head, try to move with it; speak to it in a low, soft tone.
- Flip the end of the poll piece so it passes behind the ears and drops down toward you. This is done with the right hand. The right hand remains against the right cheek, still holding the middle of the poll piece.
- If your right hand is high enough on the cheek, there will be enough tension On the nose band to keep it in place while you use your left hand- to grab the tip of the poll piece.



- Feed the end of the poll piece through the ring or buckle of the cheek piece. The more you lighten it, the higher the nose band rides on the muzzle. You want the noseband to circle the muzzle--not squeeze it. You should be able to slide your hand (flat) between the band and the muzzle.



Self-check-3

Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Write the Guideline of Safe Animal Handling (3pts)
2. Write the list of working gear?(3pts)

Note: Satisfactory rating - 5 points

Unsatisfactory - below 5 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions



Information Sheet-4	Riding and training Draft animal
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The dressage of draft animals is a set of successive learning, based on repeat orders and constraints imposed on animals to obtain a docile and voluntary behavior both for the execution of the work.

Qualities of a trainer

A good trainer must be patient, attentive to the signs of fatigue, calm and firm.

Duration of training

The duration of training is about a month. It also depends on the qualities of the trainer and character of animals. The training can start three or four years, even without rushing animals two years. The best time is the end of the dry season, which allows the perfect dressage at the first plowing. The animals trained for the traction become fully operational after two to three crop years.

Methods of dressings

Three training methods are used for cattle.

- The first is to develop two new young bulls under the same yoke. This is the most common, but the most difficult.
- The second method called "Parrain" is to educate a young animal with an experienced one. Those two young animals then are gathered under the same yoke.
- The third so-called "Sandwich" is done with a yoke of three places; the candidate dressage is in the middle of an experienced pair.

How to Train:

The user must perform hitch himself straightening his team or at least participate actively. So we have to:

- Talk to the animals;
- Give to the animal a very short name (two syllables, for example);



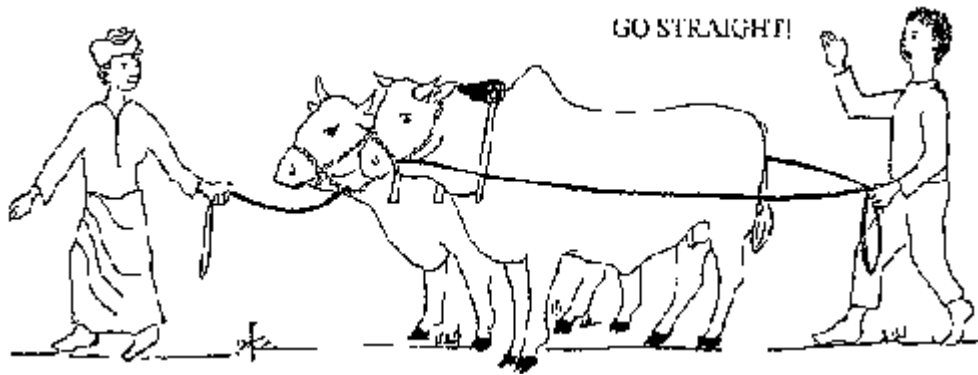
- Accustom the animal to respond to the following orders: advancer, stop, turn left, and right, back. Each order must be accompanied by an effective stress;
- Use immediately after stress means an unexecuted order, but gently (stop the stress means just after an executed order). A wooden stick thin, flexible and brutal voice can be used.

Animals kept for draught purposes can be easily trained if the correct procedures are followed. Animals to be trained should be properly selected and should not be younger than two years.

- If animals are treated with kindness and patience and are firmly disciplined they are easy to train and use. People training animals should really like animals. They should never be afraid of them, as their fear will be sensed immediately by the animal and satisfactory training might then be impossible.
- Young animals are more easily trained with older ones that have already been trained.
- Each animal should be given a simple, clear-sounding name and should be fed by hand so that it gets used to people, in particular its handler.
- Animals should be taught one thing at a time so that they do not get confused. They should be trained for short periods at a time but on a regular daily basis.
- In the first week of training the animal should get used to the harness by walking around with it for about one hour in the morning and one hour in the afternoon.
- When used to the harness it can be given commands. Soft but firm words and gentle whistles are the best commands. Beating animals should be avoided at all costs and one should never lose one's temper with an animal.
- Ploughing is the most difficult task, so once the animals can plough it is easy to train them for other tasks. Start with shallow ploughing and gradually go deeper. Teach the animals to walk in furrows so that the whole land is ploughed evenly.



- Always try to end each session on a good note and reward good performance with a small quantity of food.



**Self-check-4****Written test**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the quality of trainer? (3pts)
2. What is the duration of training (2pts)

Note: Satisfactory rating - 5 points

Unsatisfactory - below 5 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions



5.1. OHS hazard identification

By the very nature of their work, animal care takers are frequently exposed to potential safety hazards, including bite wounds and other animal-related injuries. Anyone who has worked with animals under stress or in pain will relate personal accounts of injuries from animals.

Common OHS hazard

I. Exposure to hazardous chemicals

You may not think about it, but many products that you use every day can be hazardous. Every chemical, even common ones like cleaning supplies have the potential to cause you harm. Some chemicals contribute to health problems while others may be flammable and pose a fire threat.

Common chemicals used in veterinary practice during animal care work are cleaning and disinfecting agents and insecticides and pesticides

II. Physical hazards (Animal related injuries/accidents)

The most important animal-related hazards in veterinary environment are as follows:

- Animal kicks, bite wounds, scratches, squeeze injuries, and other physical trauma
- Parasites and zoonotic diseases
- Allergy to animal dander or fleas
- Exposure to feces, urine, blood and tissues that contain pathogenic microorganisms.

III. Exposure to diseases/ biological hazards

Infectious diseases that can be passed from animals to humans are known as zoonotic disease. These diseases may or may not easily transmit from animals to human.

Route of disease transmission

- Inhalation
- Contact with broken skin
- Ingestion



- Inoculation by needle.

5.2. Factors (hazards) that affect the use of animal traction

The use of the draught animal power is conditioned by several factors. Among them, the main to be considered there are:

- Agronomic factors: soil texture and position of the land
- Zoo technical factors as race, size and aptitudes of the animals
- Veterinary factors: parasites and pathogens such as trypanosome
- Climate: dry, wet, monsoon, etc. and altitude
- The position of the land, its slope, and the situation of the road networks
- The type of vegetation: arid, savannah, etc
- Anthropological factors such as the presence of the culture of the use of livestock and the familiarity with the animals
- The fragmentation of the properties and the geometry of the fields
- Financial and economic factors related to the cost of buying and maintaining the working animals.

Besides lice and mites, ticks are very important external parasites in the tropics, attacking nearly all types of animals including poultry. They suck blood from animals causing discomfort and in extreme cases causing anemia thus affecting growth. They also can transmit diseases and damage animal skin.



Self-check-5

Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Identify the common OHS hazards in working draft animal

Note: Satisfactory rating - 7 points

Unsatisfactory - below 7 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions



6.1. Health Management of Draught Animals

6.1.1. Health Problems Associated with Work:

Like all other animals, draught animals suffer from common health problems of livestock. However, in addition to these problems, they also suffer from specific health constraints associated with work.

These include; yoke galls, back sores, horn injuries, loosening of patella, hoof injuries and cancer.

Factors that predispose draught animals to these specific health problems include first made to work for long periods in their life, the frictional force between the harness and animal will be exaggerated if inexperienced animal is used for work due to unsteady traction, excessive pressure exerted by the weight of the load for long periods on the hump or on the back, inadequate padding under the harness, excess and unbalanced load on the back of animals, working on hard and stony ground surfaces and beating by inexperienced operator and working with a single harness for different animals.

6.1.2. Management practices to prevent or reduce health

Problems associated with work include: short initial working periods until the animal develops resistance and avoid use of too young animals for work particularly bulls, keep the skin clean that makes contact with the harnesses, the harness should have broad and smooth bearing surfaces, the skin should be greased when animals are made to working during rain, draught animals should be shod if they are made to work on hard surfaces, proper wound management (Rest and prevent complication) and avoid use of same harness for different draught animals.

6.2. Caring or keeping welfare for draught animals

- ✓ Do not overwork your animals. Rest them frequently during work.
- ✓ The load on the carts should never be too heavy for the animal.
- ✓ Make sure that the brakes on carts and wagons work properly.



- ✓ Grass only may not be enough feed for the animals. Supplement the feed with other food that can be bought from a local feed store, if necessary.
- ✓ Do not feed the animals from the ground as they might get worms. Rather use a feed trough, bucket or empty drum.
- ✓ Always provide enough fresh drinking water.
- ✓ Get advice from a veterinary officer if your draught animal has worms or any other sickness.
- ✓ Never mend a harness with wire because it might hurt the animal.
- ✓ Remember to check the animals' feet for stones regularly.
- ✓ Check the teeth for food particles. If the teeth are too sharp, the mouth and tongue can be hurt. A horse's teeth can be filed. Ask a veterinary officer to check on this if in doubt



Self-check-6

Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the factors that put animals in health problems?(3 pts)
2. Write at least 4 techniques of keeping welfare of draft animals (4pts)

Note: Satisfactory rating – 5 points

Unsatisfactory - below 5 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions



Reference

- Starkey P. et al. **Improving Animal Traction Technology**. 1994. CTA/GTZ, Wageningen, The Netherlands. ISBN 92-9081-127-7
- Aeschlimann M. & D. Austbo. **Donkey harness with straight hames**. 2000. Draught Animal News, No.32, CTVM, University of Edinburgh, UK. ISSN 1354-6953.