

Animal Production

NTQF Level -II

Learning Guide -21

Unit of Competence: - Assist Basic Husbandry

Practices of Draft Animals

Module Title: -Assisting Basic Husbandry

Practices of Draft Animals

LG Code: AGR APR2 M07 LON-LG-21

TTLM Code: AGR APR2TTLM 0919 v1

LO 2: Perform daily work program



This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics –

- Carrying out Work programs for stable animal
- Selecting and preparing Draft animals for professional services
- Following organizational procedures and instructions
- Preparing Draft animals for specified daily work program
- Washing down Draft animals after finishing work

Recording Work routines and performances

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 –**

- Carry out Work program for each stable animal as instructed by the stable manager.
- select and prepare Draft animals for professional services
- Contact Supervisor as required by organizational procedures or supervisors instructions according selection criteria.
- Prepare Draft animals for specified daily work program
- Wash Draft animals after working, dried, rugged, returned to their stable and fed
- keep and maintain Work routines and performance records as an integral part of the stable business

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 1,3,9,10,12, and 14 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 2,7,9,11,13, and 17 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 “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #21.
7. Submit your accomplished Self-check. This will form part of your training portfolio.

Work program is the organizational standard operation and supervisor instruction for working with draft animals. It is setting the programs in the care, and cleaning equipment, maintaining all equipments and keeping hygiene of animal- farming premises according to the instruction of stable manager.

Regularly the following work program shall be carried out for stable animals:

- The shed should be open into paddock to allow the animal to exercise.
- The shed and the paddock should be free from sharp objectives like nails or broken rails.
- Mud and manure should not allow accumulating in the in building.
- Manure should be removed from the shed daily, unless it has a deep litter system where system whereby fresh bedding material is added daily. If this manure is piled in the draft animals outside it loses its quality rapidly; because sunlight accelerates loss of minerals, hence nitrogen is lost rapidly. In addition rain water leashes the nutrient in the manure.
- The healthy of animal program checks and work for stable animals
- Keep his welfare during and after work

To check the health and condition of draft animal the following signs are observed.

- ❖ The animal should have smooth shiny coat
- ❖ The muzzle should be cool and moist but not watery.
- ❖ The dung and urine should be normal, urine; a beer color, dung; not watery; but piles up.
- ❖ The animal should have alert ears, moving to fro.
- ❖ The eyes should be clear and bright.
- ❖ The appetite must be good.
- ❖ Breathe normally and chew the cud.

Draft animals are secured by using rearing bit, war bridle, blindfold, twitch, neck skin hold, leg strap, hobbles, and sidelines



Self-Check -1	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are work program carried out for stable animals

Note: Satisfactory rating - 3 points

Unsatisfactory - below 3 points

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions



Information Sheet-2	Selecting and preparing Draft animals for professional services
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2.1. Selecting draft animals for professional services

Animals should be selected according to the type of work to be performed, the local environment, socio-economic conditions and the availability of local animals. Indigenous breeds tend to be well adapted to the local climate, feed availability, and diseases and to traditional management systems. Those animals are:

2.1.1. Donkey

- ❖ Donkeys provide power for agriculture and transport at a low cost.
- ❖ Donkeys adapt well in dry areas.
- ❖ They eat less than cattle and for this reason do better than cattle under drought conditions and in heavily stocked areas.
- ❖ They are also lighter and smaller than cattle.
- ❖ Donkeys can live a long life and can be worked up to 25 years of age.
- ❖ They can carry goods and people on their backs in hilly as well as flat areas, pull carts, turn mills and waterwheels, cultivate fields and can even be used to guard sheep against predators such as jackal and lynx.
- ❖ Carts can be pulled faster than in the case of oxen, but donkeys are better suited to lighter field work and cannot work for long periods.
- ❖ Women and children can also handle donkeys.
- ❖ The animals are very patient, hard working and dependable.
- ❖ The common idea among the general public, commercial farmers and extension officers that donkeys are lazy or eat too much is quite unfounded.

2.1.2. Cattle

- ❖ Oxen are some of the most powerful draught animals but they are slow and labour intensive.
- ❖ They are generally used for heavy work where speed is not essential (ploughing and pulling heavy carts and wagons).
- ❖ Cows can be used where the work is light and infrequent (planting and cultivating).
- ❖ Bulls can also be used as part of a span



2.1.3. Horses

- ❖ Horses and ponies are mostly used for riding in highland areas.
- ❖ They provide strong, fast transport but do not generally have the hardiness of other draught animals.
- ❖ They may be used for ploughing, harrowing, planting, weeding and transport.
- ❖ These animals have not been used as widely as oxen as a result of horse sickness which occurs in low-altitude areas.
- ❖ Horses are used to pull carts in the rural areas.
- ❖ Sometimes “thoroughbreds” are bought cheaply from the racing industry.
- ❖ As they have not been bred as draught animals, they do not do well and generally do not live long.
- ❖ Heavy breeds such as Percherons, Clydesdales and Shires may be used as traction animals on farms. The Percheron appears to adapt best to South African conditions

2.1.4. Mules

- ❖ Mules are strong, intelligent, hardy and hard-working animals.
- ❖ Because they are large animals, they are more easily used by men than by women or children.
- ❖ They cost the same as oxen, but are considerably more expensive than donkeys.
- ❖ Mules can be used for ploughing, harrowing, planting and logging.
- ❖ They can also be used for packing and to pull carts and wagons.
- ❖ The animals can work on poor quality feed, under hard conditions up to an age of 35 years.

Farmers must be able to select the animal or animals most appropriate for their needs. The animals they choose must be culturally acceptable, trainable, maintainable, and profitable within the overall farm plan. It is also important that the animal be available locally, since these animals are already adapted to local feeds and climate and are likely to be resistant to diseases in the region. Of course, farmers should choose healthy animals from strong stock. In some areas, farmers must consider social or religious traditions which restrict the ownership or use of animals.

The primary criteria for the selection of draft animals employed are:

- Availability,



- Price,
- Adaptiveness to the region and conditions existing on the farm (climate, fodder Availability, husbandry),
- Suitability of the work to be carried out,
- Possibilities of multiple utilization

Once farmers decide what kind of draft animal will be used, they must be able to choose individual animals which are sound and trainable and have a considerable work expectancy and resale value. Selecting a good draft animal is a matter of evaluating both physical and behavioral attributes.

2.2. Preparing draft animals for professional services

Before introducing harnesses and starting draft animals to this professional work/services, both the animal and the farmer must be trained. Training animals for traction involves an understanding between the trainer & the animal. The animals need to trust you. For that we need to be patient and reward them for good behavior. Training may be carried out at training centers, but when undertaken on the farm or within the village community, this provides a more practical and “homely” environment. If possible, the farmer should train his or her own animal, because the sooner a good relationship is established between farmer and animal, the better. Training requirements can vary greatly and depend upon both the ability of the trainer and the temperament of the animal. An experienced trainer may be able to go through the exercises much faster. The program of training consists of four phases. During the first two phases, the animals are taught to obey voice commands individually. In the last two, the individuals are yoked as a team, re-drilled on all voice commands, and then made to pull log (packing).

The program is built up in four steps:

1. Roping and walking (2 to 3 days),
2. Harnessing and walking (7 to 14 days),
3. Pulling loads (7 to 10 days),
4. Working as a team (21 to 30 days),

Reasons for training animals:

- Trained animals can do more work in a shorter time.
- Trained animals hear & accept commands (voice commands).
- Trained animals pull better, like a team with well-coordinated movements.



- They are easier to control.
- They are able to pull heavy loads for longer periods.

Principles to be practiced during the training time

1. The approach must be simple, calm, patient, persistent, and the trainer needs to be firm (not to show fear to the animal).
2. There should always be a routine and repetition of the training steps, so that the animal adopts the new behavior.
3. Spoken commands and names should be few and simple such as: “Go”, “Turn left”, “Reverse”, or “Stop”. Remember to always use the same language during and after the training.
4. Train either early in the morning or late in the evening so as to avoid the heat of the day.
5. Reward the animal for any positive behavior, then correct bad behavior immediately and don't reward. Rewarding the animal includes: patting on back, calling the animal's name, grooming him or giving some food.
6. Complete every step in the training program before moving to the next one. Do not move to the next step, unless the animals have understood the one before.
7. To carry out the training you need the following items: a trained animal, a proper harness, a good pegged training field and tools (ropes, different types of yokes, ploughs, loads and sledges, saddles, breast straps).



Self-Check -2	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. One is **not** describes the character of draft animals selected professional purposes(2pts)
 - A. Culturally acceptable
 - B. Trainable
 - C. Maintainable
 - D. Profitable within the overall farm plan
 - E. None
2. Which one true about training animal for preparing to professional work(1pt)
 - A. Both the animal and the farmer must be trained
 - B. you need to be patient
 - C. Training requirements vary upon ability of the trainer and the temperament of the animal
 - D. All
3. Write the program of training steps(3pts)

Note: Satisfactory rating - 4 points

Unsatisfactory - below 4 points

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



Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

3. _____



Information Sheet-3	Following organizational procedures and instructions
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All employees should be given adequate information, training, instruction and supervision in respect of all matters affecting their health and safety at work. The worker will be able to follow Supervisors oral or written instructions, livestock production program, organization standard operating procedures, specifications, routine maintenance schedules, work notes; product labels and Material Safety Data Sheets; manufacturers service specifications and operators manuals, waste disposal, recycling and re-use guidelines, and OHS procedures in all draft animal activities.

Self-Check -3	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. write the organizational procedures and instructions (3)

Note: Satisfactory rating - 3 points

Unsatisfactory - below 3 points

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

**information sheet - 4****Preparing Draft animals for specified daily work program**

It is utilization of draft animal types for specific work operations. The draught animals are mainly kept for: ploughing the agriculture land hauling carts, pulling agricultural implements, running certain other devices such as Persian wheels [mechanical pumps], running sugar cane and seed crusher etc., use as pack animal (to carry load on their backs), handling, dragging and stacking timber logs in the forests, moving mobile grocery shops (selling goods on animal driven carts. Our draft animal specifically kept for one the above programs. According their program animal are trained and prepared. The program for the work is scheduled, and then the animal assigned for this specific work will be selected and prepared.

The most important factors for the potential draft pulling capacity of an animal are animal weight and passage power capability, the endurance and working speed, body structure, pulling angle (animal height) as well as the hitching point (type of harness). The pulling power capacity of an animal is directly proportional to its body weight; fodder supply plays a decisive role at this point

The animals work at a speed of 0.38 to 0.55 m/s and are used about 5.5 hours per day. An animal having a greater weight has more pulling power reserves to overcome short-time strain



Self-Check -3	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is the purpose of draft animal?

Note: Satisfactory rating - 5 points

Unsatisfactory - below 5 points

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

After use, the regardless of the species, the animal should be cleaned to remove sweat, dust and dirt. This should be done with a stiff brush followed by a cloth and water. To keep their hygiene and shininess of the hair of the animal shall be groomed.

Grooming is the means of taking care of the hair and skin of the draft animals. Daily grooming is important for the health of working draft animal. The animal enjoy being groomed and will become tamer by this daily routine. Grooming keeps the skin healthy and prevents dirt from causing harness sores. Give special attention to those parts of the skin that are in contact with the harness and/or back pad. Grooming is usually done first with:



- Stiff round comb,
- Made of plastic,
- Hard rubber or metal.

This is used to loosen the dirt. A body brush is then used to remove the dirt. Brush in the direction of the hair (i.e. head to tail) using firm pressure. If such items cannot be purchased locally, a scrubbing brush with stiff plastic or fiber bristles can be used. A piece of cloth or wad of clean straw rubbed in a circular motion also helps to clean the animal. Keep grooming equipment clean and periodically soak it in a disinfectant. This will help prevent the spread of disease, especially if the equipment is used on more than one animal. If animals get very dirty or sweaty, it may be helpful to wash it all over with clean or soapy water. Take a damp cloth and wipe out the nostrils and around the eyes. Any secretions that may have occurred during the night should not be left on the face during the day, as these will attract flies. Check the coat for external parasites such as ticks. Ticks do not only create wounds, but also spread many infectious diseases. Check especially under the tail and inside the legs where the donkey cannot easily reach when grooming itself. Remove by hand any ticks that are found. Pick up and handle the feet of the donkey early and often in its training, calling a clear command like leg, so that it will not object to this care later on during its working life.



Self-Check -5	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What grooming
2. What advantage of grooming?

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 -6

Keeping work routines and performance records

Keeping work routines and performance records

Keeping record is simply to collect relevant information that can help you to take good decisions and to keep track of activities, production and important events on a farm. Records can be about any performance of the animals, economic development, or any activity of the farmer or veterinarian.

The real value is to support the farmer and the advisors to keep track and take decisions. The records should be simple, easy and quick to interpret, and then they can be supplemented with remarks which can explain some unusual events or findings.

Records are important in draft animal farming because:

- To keep track of all animals (Identification records)
- Evaluation of livestock for selection (species records; financial records; production records)
- Aid in selecting animals with the right characteristics for draft
- To rationalize labor
- Aids in feed planning and management
- Aids in disease management; keeping track about treatment (disease records)
- Aids in finding the effective treatments
- To assess profitability/losses (financial records)
- Improves bargaining power on products, because you can see the investment and the price of the production (financial records)
- Credit/loan access (financial records)Aids in selection of animals
- Enables monitoring of farm implements and other accessories
- Enables the stockowner to monitor profit or loss and take remedial
- Provide use full information for planning, budgeting and securing of loans

Types of Records

The major types of records which are all described below:

1. Identification
2. Feeding
3. Disease and treatment records



4. Financial records

1. Identification Records

- An identification method should be cheap, not harming the animal, reliable to read at a distance of at least 2-3 meters and by preference be permanent.
- Identification of animals is usually through use of numbering, by marking of the animal.
- Intrusive methods of identification can be subdivided into 2 categories: permanent at the animal itself (which affect the animals most when doing it) and non-permanent.

2. Feeding Records

Feeding records give information about the amount, type and quality of the feed.

Feeding records can be used both for day to day management and adjustment of the feed ration.

The important feeding records are: Produced and available fodder on farm; quantity and if possible quality of the different feeds. Including content of energy, protein and minerals

3. Disease and treatment records

Disease and treatment records are necessary to keep track of the disease events in which each animal is involved during its lifetime. It provides information about the health status of each individual animal and the whole heard, and it can help ensuring important vaccinations given at the right time.

Disease and treatment records can for example involve:

- Disease occurrence and date
- All handlings to cure diseases (also non chemical treatment)
- Vaccination
- Dipping/spraying
- Treatment
- De-worming
- Post-mortems

6. Financial Records



The records of the costs and earnings related to the animal farming are kept for cash analysis and enterprise appraisal.

In most households, the most necessary records are simple overview over the family cash flow, that is, the total economy in the household: what comes in? And what do we buy?

In addition to this, keeping records of the animal enterprises is an important part, because it can show whether it gives an income to the family or not. If records are kept particularly for the animal herd as an income generating commodities, it will help the family to see what they invest in it, and what it costs to produce it. Also in relation to the animal farm, an investment is more than expenditure; an investment hopefully enables and improves the production in the future. It is also important to count approximately how many hours of work it has taken in the animal herd, because it can help price setting.

Economic records are of paramount interest in providing the farmer with information concerning the profitability of his farm. Moreover they are of great help in decision making at the right time. For example, is it profitable to feed concentrates, is it advisable to apply for a loan or credit to invest in a machinery or technology?

Answering these questions is only possible if adequate records are available. Moreover, for tax purposes and for the purpose of getting loans or credit, economic records are required.



Self-Check -6	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Write types of recording? (4pts)

Note: Satisfactory rating - 4 points

Unsatisfactory - below 4 points

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date _____

1. _____



List of Reference

Directorate Animal and Aquaculture Production (nd). Guideline on animal traction.
Republic of south Africa

R. Anne Pearson¹, Timothy E. Simalenga² and Rosina Krecek³; 2003. Harnessing and hitching donkeys, horses and mules for work. 1Centre for Tropical Veterinary Medicine. University of Edinburgh, UK; 2Department of Agriculture and Rural Engineering, University of Venda for Science and Technology, South Africa. 3P.O. Box 12832, Onderstepoort, 0110, South Africa, 2003

SIMALENGA, T.E. & JOUBERT, A.B.D. (Eds) 1997. Animal traction in South Africa: Today and tomorrow. Proceedings of SANAT workshop, March 1996:82.

Aeschlimann M. & D. Austbo. **Donkey harness with straight hames**. 2000. Draught Animal News, No.32, CTVM, University of Edinburgh, UK. ISSN 1354-6953.

Dibbits H.J. **Harnessing guidelines for donkeys pulling a single donkey cart**. 1995. IMAG-DLO, Wageningen, The Netherlands.