



Ethiopian TVET System



Animal Production Level-II

Training Module –Learning Guide 24-26

Based on Version 3 March 2018 Occupational Standard (OS)

Unit of Competence: Assist Basic Husbandry Practice
of Camel

Module Title: Assisting Basic Husbandry Practice of
Camel

TTLM Code: AGR APR 2 TTLM08 0919v1

October 2019



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This module includes the following Learning Guides

LG1: Prepare for raising Camel

(LG Code: AGR APR2 M08 L01 LG24)

LG2: Undertake camel raising work

(LG Code: AGR APR2 M08 L02 LG25)

LG3: Handle and clean materials and equipment.

(LG Code: AGR APR2 M08 L03 LG26)



Instruction Sheet	Learning Guide 24
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Identifying required materials, tools and equipment
- Checking materials, tools and equipment and report faulty items
- Using correct manual handling techniques when loading and unloading
- Selecting and checking Suitable Personal Protective Equipment (PPE)
- Following the OHS requirements and work place information

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 required materials, tools and equipment
- Check materials, tools and equipment and report faulty items
- Use correct manual handling techniques when loading and unloading
- Select and check Suitable Personal Protective Equipment (PPE)
- Follow the OHS requirements and work place information

Learning Instructions:

1. Read the specific objectives of this Learning Guide 24.
2. Follow the instructions described in number 1 to 6.
3. Read the information written in the “Information Sheet (1, 2,3,4 and 5) in page **2,5,7,9 and 11** respectively
4. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
5. Accomplish the “**Self-check 1, Self-check 2, Self-check 3” Self-check 4 and Self-check 5**” in page **4, 6, 8 ,10 and 13** respectively.
6. If you earned a satisfactory evaluation proceed to “the next topic”. However, if your rating is unsatisfactory, see your teacher for further instructions or read back the Learning guide information sheets **1-5**. Submit your accomplished Self-check. This will form part of your training portfolio.



Information Sheet 1	Identifying required materials, tools and equipment
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Camel is an even-toed ungulate having unique physiological characteristics. It has distinctive fatty deposits known as “humps” on its back. There are two species of camels:

1. Dromedary or Arabian camel which has single hump
2. Bactrian which has two humps.

The animal has spreading toes on feet that help to keep it on top of sand. Fatty hump stores energy for the camel during times of water scarcity. It can close its nostrils during sand storms. Camel is a versatile animal it sustains its life in hot and harsh environments and performs very well.

Camel is a potential animal which is serving millions of people especially in arid, semi arid, mountainous and desert areas of the world. It provides milk, meat, hides, hairs, wool and transportation. Camel is called as “Ship of the Desert”. It can perform very well in those areas where other animals merely sustain their life. It has no comparison regarding feed and performance with any other animal.

Unique characteristics

- Have anatomical, physiological and behavior adaptation
- It can with stand scarcity of water
- It can eat which can not eaten by other animals
- With stand excessive heat loss
- With stand shortage of feed
- With stand salinity problem of feed and water
- Less compete with crop and livestock production and also urbanization
- Utilize friendly the arid and semi arid environment due to its spongy feet, feeding habits



Materials, tools and equipments

The following materials, tools and equipments are used for raising camels. Some of them are listed below.

- **Draught equipments:** are materials required for ploughing such as a nose-peg, nose-ring, Bridle or halter saddle, rope (i.e. Site hobble, sisal, plastic or leather ropes are required).
- **Saddle:** - Pack and ridding saddles are required.
- **Weighting scale:-**For measurement of weight of camel, feed and quantity of milk
- **Milk collection pails and store cans:-**these are materials used for collecting the milk after milking and also used to store and transport the milk.
- **Identification materials:-**for identification purposes of camels Ear tags, branding iron, tattoo pliers or other identification materials are used.
- **Restraining materials:** - for castrating, treating and other handling purposes, we need to have restraining rope (i.e . Halters and Calf muzzle rope).
- **Thermometer:** - To check the temperature of the camel by inserting it into the anus for a minute.
- **Milk pasteurizer:-**for processing milk of camel
- **Veterinary equipments:-**like Syringes (5 to 20ml cap.) for vaccination, injection of chemicals
- **Mineral boxes:-**for placement of minerals lick such as salt inside it.
- **Open castration equipments:** - Useful for the removal of testicles (male sex glands in which sperms are produced) of a male animal.
- **Elastrator :** materials used for castration
- **Milk bucket, milk pail, storing cans, etc** are some of the materials used in milking and milk handling processes



Self-Check 1	Written Test
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Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers

1. Mention the two species of camel (2pts)
2. Write four unique behavior of came.(4pts)
3. List down materials, tools and equipments used for raising camel (6 pts)

Note: Satisfactory rating -12 points Unsatisfactory - below 12points

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

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

1.
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2.
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3.
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Information sheet 2	Checking materials, tools and equipment and report faulty items
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2.1. Check all materials, tools and equipments

Finding the right materials, tools and equipments among different items is the most critical aspect in camel raising activity. All the items should be checked before utilization for their

- safety; right material,
- no damage and
- Appropriate amount for a specific activity.

2.2. Report insufficient or faulty items

Damaged, broken, and material which are not fit for camel raising activity should be identified and reported to the responsible person in time.



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. What type of materials and equipment should be reported to the responsible body? (6 points)

Note: Satisfactory rating – 6 points Unsatisfactory - below 6 points

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

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

Name: _____

Date _____

1

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**information sheet 3****Using correct manual handling techniques when loading and unloading**

It is always important to use correct manual handling procedures when moving or lifting heavy loads. Manual handling injuries can result from three main areas:

- Gradual injury from handling goods for long periods of time or frequent handling
- Sudden damage caused by heavy lifting.
- Sudden damage due to unexpected movement, such as slipping or twisting

There are a few things that may increase the risk of injuring when handling objects. These factors include:

- Size of the load
- Shape of the load
- Weight of the load
- Sudden movements
- Age
- Physical strength/fitness
- How often you lift or move

Handling during transport

- Camels will normally sit down when being transported.
- Sufficient space must be available for all camels to sit.
- Failure to do so will result in camels sitting on one another and falling over which causes entwining and
- Failure to do so will injure the pedestal and the pads on the legs.



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. Mention the three areas from which Manual handling injuries can result? (6 points)

Note: Satisfactory rating – 6 points Unsatisfactory - below 6 points

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

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

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Information sheet 4	Selecting and checking Suitable Personal Protective Equipment(PPE)
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Protective clothing should be selected to prevent skin contact with virus-contaminated materials or environments. Consideration should be given to the type of work being performed by the worker when selecting personal protective clay include, but not limited to:

- Overalls
- Gloves
- Ear protection
- Face masks
- Safety goggles
- Plastic boots/shoes
- Sunhats



Self-Check -4	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. List down PPE used in camel raisin activity (6pts)
2. Write the advantages of using suitable PPE (4pts)

Note: Satisfactory rating – 10 points Unsatisfactory - below 10 points

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

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date _____

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Information sheet-5	Following OHS requirements and work place information
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5.1. OHS Hazards in camel raising activity

Personnel working in the camel raising activity are permanently exposed to hazards. These have either a physical, chemical or biological nature. Proper management is needed to avoid accidents and to keep the staff motivated..

According to the International Labor Organization (ILO), health hazards in camel raising activity working environments are categorized as accidental, physical, chemical, and biological. Here are just a few examples for each category mentioned by this organization

5.1.1. Physical

- Exposure to high wind.
- Long-time exposure to heat and cold.
- Injuries resulting from lifting and moving of silk worms, feed plants (bags), egg and larvae collection.

5.1.2. Chemical

- Respiratory problems resulting from exposure to dust, which is composed of feathers, dander, micro-organisms, etc.
- Respiratory, skin, and eye diseases due to exposure to gaseous chemicals.(e.g. NH₃, H₂S, CO₂, CO, and CH₄).
- Exposure to disinfectants, detergents, formaldehyde and pesticides.

5.1.3. Biological

- Zoonotic infections. These diseases are transmitted between camel and humans & they also are transmitted from humans to animals and include bacterial, viral, fungal, and parasitic diseases.

5.2. OHS requirements

Work task is provided according to Occupational Health and Safety (OHS) requirements. This may include:



- Using of relevant protective clothing and equipment,
- Use of tooling and equipment,
- Creating conducive working environment and safety handling of material,
- Using First aid kit to provide aid services
- Hazard control and hazardous materials and substances.etc,
- Following Occupational health and safety procedure designated for the task
- Checking and fulfilling required safety devices before starting operation

5.3. Follow work place information

The mentioned below is some of the work place information:

- Variable written and graphical instructions, work bulletins, data sheet, diagrams
- OHS manual
- Industry/workplace codes of practice
- Safety work procedures/manual and material safety data sheets
- Workplace guidelines/ workshop manuals
- Design specification manual
- Repair request documentation ,job cards,
- Records and reports virtual library(electronic media)



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. List down the three types of hazards (3pts)
2. Write the Occupational Health and Safety (OHS) requirements in work place.(7pts)

Note: Satisfactory rating – 10 points Unsatisfactory - below 10 points

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

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date _____

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2

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References

Chaudhary, Z.I. and S.J. Akbar. 2000. The Camel and its Diseases. Al Bayan Press, Printing and Publishing Est., Dubai, United Arab Emirates.

Gahlot, T.K. and B.P. Chadha. 2000. Training and sport of dromedary camel. In: S.T.O.C. (T.K. Gahlot, Editor).



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

- Following supervisor instructions and directions and seeking clarification.
- Undertaking camel raising activities

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 –

- Follow supervisor instructions and directions and seeking clarification.
- Undertake camel raising activities

Learning Instructions:

7. Read the specific objectives of this Learning Guide.
8. Follow the instructions described in number 1 to 8.
9. Read the information written in the “Information Sheet (1 and 2) in page 2 and 4 respectively
10. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
11. Accomplish the “**Self-check 1 and Self-check 2**” in page 3 and 12 respectively.
12. If you earned a satisfactory evaluation proceed to “the next topic”. However, if your rating is unsatisfactory, see your teacher for further instructions or read back the Learning guide information sheets 1-2. Submit your accomplished Self-check. This will form part of your training portfolio.
13. Read the “Operation Sheet 1-2” in page 13 and try to understand the procedures discussed.
14. Do the “LAP test” in page 14 (if you are ready). Request your teacher to evaluate your performance and outputs. Your teacher will give you feedback and the evaluation will be either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advice you on additional work.



Information sheet 1	Following supervisor instructions and directions and seeking clarification
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Following Instructions and directions provided by supervisor

Instructions and directions provided by supervisor are followed and clarification is sought when necessary. Any employee who works in camel raising industry or any farmer who develops his own stock must follow the following instruction and direction:-

Manufacturer instructions

Material safety data sheets (MSDS)

The MSDS is a detailed informational document prepared by the manufacturer or importer of a hazardous chemical. It describes the physical and chemical properties of the product.

MSDS's contain useful information such as:

- Flash point,
- Toxicity,
- Procedures for spills and leaks and
- Storage guidelines.

Information included in a Material Safety Data Sheet aids in the selection of safe products, helps you understand the potential health and physical hazards of a chemical and describes how to respond effectively to exposure situations

Standard Operating Procedures (SOP)

It is a set of step-by-step instructions compiled by an organization to help workers carry out complex routine operations. SOPs aim to achieve efficiency, quality output and uniformity of performance, while reducing miscommunication and failure to comply with industry regulations

Verbal directions from manager or supervisor

Work instructions and standards



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. List down 5 instructions and directions provided by supervisor to be followed by an expert in camel raising activity (5pts)
2. Write the useful information contained in material safety data sheet. (5pts)

Note: Satisfactory rating – 10 points Unsatisfactory - below 10 points

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

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date _____

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Information sheet 2	Undertaking camel raising activities in safe and environmentally appropriate manner
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2.1. Production system of camel

Camel production systems could be categorized in to extensive, semi- intensive & intensive production systems.

2.1.1. Extensive production system:

Extensive system is the traditional way of keeping camels in pastoralist communities throughout the country. Pastoralists used to move with their camel in search of feed & water. Natural vegetation and natural water bodies are the sole sources of feed and water for these camels. Thus, this system has not been improved at any rate for many centuries.

The output or the products produced in this system (like milk) are totally consumed by the family.

Extensive camel production systems are generally characterised by:-

1. The traditional pastoralist way of camel production, where the camel owners (pastoralists) move from place to place in search of feed & water for their camels.
2. No external input is utilised.
3. The products are used for home consumption (subsistence production)

2.1.2 Semi-intensive production system

This system is being developed especially in peri-urban areas, the semi sedentary or the agro pastoralist form of living that has recently evolved in some .In this system, pastoralists are developing new types of camel management practices including the construction of night shelters, provision of supplementary feeds and the use veterinary services. The butchering of camel meat around these towns has also become a common practice adding up to the transformation of the production system.

The system is generally characterised by:

1. The system is mostly observed around peri-urban areas, where the demographic and various economic conditions support the transition.
2. Some external input is utilised in the form of supplementary feeding (especially hay) during feed shortage periods and provision of vet service to sick animals.



3. Extra milk is sold to the nearby market.
4. Complementary with crop production

2.1.3. The Intensive (New) System of Production

The intensive way of camel management for camels kept for research or racing purposes has recently been seen in different parts of the world. This new system has been given recognition as a separate form of camel production. But this practice is limited to very few instances observed only in few countries around the world.

2.2. Feeding and watering of camel

2.2.1. Source of feed for camel

Camels subsist both by browsing on bushes, shrubs and trees and by grazing in extensive production system. As a general rule, when feed is fairly easily obtainable, 6 hours is the minimum time that should be allowed for foraging. At least a further 6 hours are needed for rumination. Camels do not usually forage during the heat of the day. The major feed resources for camels are browsing trees, bushes and shrubs, but grasses may be consumed when shrubs or trees are not available. The camel also has access to feed not available to other domestic species, even the goats because of its height. Camel can therefore make better use of areas where there are large shrubs or trees.

Some examples of natural vegetations (browsers) highly preferred by camels.

- | | |
|---------------------------------------|------------------------------|
| - <i>Acacia Spp.</i> (أشجار) | - <i>Grass spp.</i> (عشب) |
| - <i>Balanites aegyptiaca</i> (أشجار) | - <i>Susbana susbane.</i> |
| - <i>Ficus spp.</i> (شجر) | - <i>Lucenea lecocephala</i> |
| - <i>Morus alba.</i> (شجر) | - <i>Prosopis spp.</i> etc |
| - <i>Cactus spp.</i> (إمسم) | |

In semi-intensive and intensive production system camel is Supplemented with the following Feeds

- Concentrate mixture
- Straw/hay
- Mineral supplements (salts & lime stone)



Supplementary feeding may be required when they Producer large quantity of milk do extra work.

2.2.2. Source of water for camel

Wells, ponds and rivers are the main sources of water for camels in extensive production system. Pond and river water sources are shared by wild animals. Such a state of affairs creates a perfect condition for disease spillover, transmission and spread among animals and to humans. During the rainy season, camels stay for long period of time without drinking water (for one to two months and depend only on the moisture content of the plants browsed.)

2.3. Milking procedure

Camels produce more milk and for longer period of time than any other milk animal held under the same harsh conditions. Milk extraction for human consumption begins three days after calving. Following stimulation of milk let-down by a suckling calf for few seconds, milk is extracted by hand into a milking vessel, commonly a wooden container. Camels are milked in a standing position.

It is also common for two men standing on opposite sides of the camel performing milking simultaneously, each working on the right and left quarters of the udder. Milking frequency ranges from twice to five times a day.

Precautions

Washing of the udder and teats of the camels before milking is not practiced by many pastoralists, and they do not wash their hands and the milking vessels prior to milking. The milking area is generally full of dust and dung and without shade, causing a negative impact on the quality and safety of the milk produced. So any breeder of camel has to know the problems related to the above and take care of it and keep the quality of milk.

2.4. Fattening and condition scoring of camel

2.4.1. Fattening camel

Fattening camel is being common in village and margins of desert areas

Camel fattening because of

- No need to have expensive stables and modern facilities,
- Low work power demand,



- Low especial care and relatively cheap feedstuffs is a beneficial job for breeders.

Male Camel selected for meat have a large hump; wide posterior parts, firm body, short neck, large and heavy muscular head.

2.4.2. Body condition scoring of camel.

The condition of a camel is estimated by looking at the store of body fat i.e., the hump. This reflects the internal fat reserves and provides a good correlation with total body fat. The camel deposits excess energy as fat into the hump sac and into some internal linings. This contrasts to the energy reserves of other species where fat is deposited into the subcutaneous tissues, internal linings and within the muscles. During processing at the abattoir the internal body fat and hump fat is removed. Excessive fat limits the exercise tolerance of the camel and makes long distance transport stressful. Camels destined for the abattoir should be hump score 3 or 4.

HUMP

SCORE

Range is 1 - 5 based on the amount of fat in the hump

SCORE 1 Little or no fat in the hump sac, hump hairy and may be leaning to one side.



SCORE 2 Hump with moderate development rising 5% higher than chest depth, but may also be leaning to one side.

SCORE 3 Hump with good development and rising to 10% higher than chest depth. Hump is still sculptured inwards on both sides and still fits over the chest and abdominal area.



SCORE 4 Hump fully developed and rising to 15% higher than chest depth. Hump rounded outwards on both sides and runs from the shoulder to the rump.

SCORE 5 Hump over-extended and rising more than 15% higher than chest or the hump is so full that it is rounded on the sides like a semi circle.



2.5. Training camel for different purposes

Camel trained for work like riding, baggage, sport, and ploughing. The usual form of restraining techniques is to seize the upper lip by hand; the camel is then crouched and fitted with a neck rope and a lighter rope with a loop that is placed over the lower jaw. (There will be a practical class on restraining techniques of camel.) The camel is then tied to a tree. After being tied for some time he is released and led out to follow his companions. He may be hobbled (the front leg is flexed at the carpal joint and fixed with a rope) this makes the camel still to move around but only in a limited range and with limited speed. This leading exercise continues and it is taught to crouch (sit) and rise on command. Finally, a pad, and then saddle equipment are put on him and after becoming accustomed to the feel of it, he is loaded tightly.

The whole operation takes about a week. Saddle use training is done by mounting of the rider on to the crouched camel, rising with the mounted rider, crouching with the



rider mounted all are practiced with the words of command. The walk and the run at various paces are taught and practiced. Training of camel for ploughing follows the above procedure, but they are trained with harnesses and implements, which are, adapted that developed for donkeys, mules and horses. The preferred pack camel is the castrated male at the age 4-5 years this is because the females are used for the production of milk and the males have better working potential and continues to work until they are 20years old.

2.6. Assisting breeding operation of camel

Camel is capable to reproduce only after they attain puberty stage.

Puberty: period (stage) of animals when they become sexually active. It is the age at which animals, including camel, are sexually mature. Animals are capable of reproducing themselves only after they reach this stage.

Male camels sexually mature at about 4-5 years of age, while female camels reach puberty at about 3 to 4 years of age. But the fertility of camels is uniquely observed to be stronger in older animals, especially male camels. This means they become more fertile as they get older.

Rutting period and oestrus cycle

Rutting period: - the time when male camel show strong sexual desire. It is the time when different physical and physiological signs of sexual activity are observed in the male camel. Male camels' show a strong rut when they are ready for breeding at various times of the year. The rutting period marks the onset of the mating seasons /the breeding seasons/.

Signs of the rutting camel include:

- Secretions of the poll gland: The fluid has a strong smell and it is useful for attracting females.
- Extrusion of dulaa from the side of the mouth
- Camels become aggressive during rutting
- Frequent urination & splashing of urine on the back.
- Restlessness and Loss of appetite.



- Grinding its teeth
- Waving /shaking its tail & neck
- Repeated loud vocalization and froths at the mouth/gargling

Oestrus cycle / follicular wave /

Oestrus is the regular and recurring sequence of hormonally controlled events, which ends with the release of the ova. Female camels get ready to accept the male whenever there is a mature follicle in their ovaries. This period can last up to 3-10 days depending up on environmental conditions. Ovulation normally occurs approximately 36-48 hrs after copulation.

Long cycles of follicular waves are believed to be associated with environmental conditions including lower environmental temperatures and better nutrition. Remember that rutting is also associated with good nutrition and better environmental conditions. Thus, the breeding season favours both males and females to come in to the reproductive ability simultaneously. This conditions will ensure, especially, longer follicular waves and longer heat periods in females as well as strong rut in males.

The mating in camel is of unique in that it takes place with the sitting position. After Successful pregnancies can be achieved gestation period in camels is about 387 days on the average (13 months).

2.7. Assist parturition and Taking caring of calves

Parturition in camel is completed in relatively short periods and dystocia and mal-presentation of the calves during parturition is not common. In the case of difficulty birth assisting important for calve and dam. Camels do not lick their calves and eating their placenta is not observed at all licking their young and eating their placenta (afterbirth) is a common activity in almost all other domestic animals.

Taking care of calves

Feeding colostrums at early age (first few hours of its life) develop immunity of calves. It gives energy to newly born calf and has antibodies that help the calf to fight infections. When the calf reaches 1 month of age provide fresh grass and some supplementary feeding for stimulating their digestive system (stomach).Weaning is the time when



young animals stop drinking milk and start to feed other feeds. Camel calves are usually weaned at an age of 6 to 12 months.

Castration

Castration in camel is done for the following purposes:

- To make the animal less aggressive & stop them fighting each other (easier to handle)
- To stop poor quality animals from breeding.
- Castrated animals grow faster and produce higher value meat.

The recommended age in which male camels are castrated is at about 2 years.

The appropriate castration method in camels is the open or surgical method by removing the testes because of shape & thickness of the of the scrotum (scrotum is thin and testes are not in separated compartment like that of cattle to used Burdizoo)

- Castrated animals should be kept in clean surrounding and pasture also supplementary feed until the wound has healed .It needs to be inspired
- to ensure that the wound does not became infested
- It there is any sign of trouble appropriate remedial action including cleaning the affected sea apian and injection of a systemic antibiotic may be needed

2.8. Inspecting health status and identifying main camel diseases

Assessment may be by direct observation of general health and soundness, checks of performance, and inspection of camel records. Checks of performance can be done by assessing types of performance loss due to ill health. These are

- Reproductive loss – failure to conceive, delayed conception, abortion, stillbirth (in females), poor libido and low viability of sperm (in males).
- Reduced growth rate – reduced appetite/ loss of weight
- Reduced output of animal products – milk, meat, work
- Loss of value and exclusion from market – reduce the market value of the product through lowering the quality

Some of common camel diseases

- Trypanosomiasis, Parasitic Diseases and Anthrax
- Camel pox, Rabies
- Tuberculosis etc



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. Write three characteristics of extensive camel production system (3pts)
2. Write the signs of rutting in male camel. (5pts)
3. List down 4 common natural vegetation or browse plants preferred by camels. (4pts)
4. List down the common diseases in camel production (5pts)

Note: Satisfactory rating – 17 points Unsatisfactory - below 17 points

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

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date _____

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Operation sheet-1.	Hand milking
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Steps of hand milking

- The owners prepare a milking vessel/container
- Bring lactating camel to a separate open milking area where the calf is kept.
- Restrain camel properly
- Then, the calf is allowed to suckle its dam for a few seconds to around a minute to stimulate milk ejection.
- After this, separate the calf from the dam
- Start milking at a standing position with one knee raised to support the milking vessel on his lap.
- Complete milk with recommended time.

Operation sheet-2	Castration of camel
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The procedure in castration of camel

1. Castration equipment & surrounding area should be cleaned
2. Make the camel lie down and roll him on to his right (secure all his legs with rope)
3. Clean the scrotum with alcohol and disinfectant
4. Inject 20 ml of local anesthetic in to the cord and testicles on each side of the scrotum
5. Squeeze the front of the scrotum to force the testicles to the back.
6. Make a small cut with knife or blade on the back of the scrotum to expose the testicles.
7. Pullout the testicles and tie with stitching material (to avoid bleeding) and then cut the testicles out.

After castration: apply antiseptic and antibiotic powder sprinkled on it to avoid infection.

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LAP Test	Practical Demonstration
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Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks within 3 hours.

Task 1. Hand milking

Task 2. Castrate of camel

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Reference

- HARTLEY, B. J. (1979): <The dromedary of the Horn of Africa., in Cockrill, R.W. (ed.) The Camelid an all-purpose animal. Vol. I. Uppsala (Scandinavian Institute of African Studies), pp. 77-97.
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Instruction Sheet	Learning Guide 26
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Handling waste materials.
- Transporting and handling Materials, tools and equipment's
- Cleaning and maintaining work site.
- Storing and disposing of materials.
- Cleaning, maintaining and storing tools and equipment's
- Reporting work outcomes to supervisor and receiving feedbacks

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 –

- Handle waste materials.
- Transport and handle Materials, tools and equipment's
- Clean and maintain work site.
- Store and dispose of materials.
- Clean, maintain and store tools and equipment's
- Report work outcomes to supervisor and receive feedbacks

Learning Instructions:

15. Read the specific objectives of this Learning Guide 26.
16. Follow the instructions described in number 1 to 6.
17. Read the information written in the “Information Sheet (1, 2,3,4,5 and 6) in page **2,4,6,8,10 and 12** respectively
18. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
19. Accomplish the “**Self-check 1, Self-check 2, Self-check 3” Self-check 4, Self-check 5” and Self-check 6”** in page **3, 5, 7 ,9, 11 and 13** respectively.
20. If you earned a satisfactory evaluation proceed to “the next topic”. However, if your rating is unsatisfactory, see your teacher for further instructions or read back the

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Learning guide information sheets 1-6. Submit your accomplished Self-check. This will form part of your training portfolio.

Information sheet-1	Handling Waste materials produced during work
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Handling Waste materials produced during work

There are different waste material or product which will be produced in work place but the main waste material which will produced at the camel raising farm are the following

- litter and broken components
- plant debris
- plastic,
- metal and paper-based
- broken saddles
- dead camels,

These waste materials which are produced in camel raising site have to be removed from the site on regular manure properly;

Disposable materials properly buried in deep enough trench and should be covered with quicklime and then with soil or use Burning. But Burning is the most difficult because the Fumes and smoke may be a problem to the surrounding environment. Mud holes should be frequently filled or exclude the animals away from it quickly. Generally use the guide lines :

- Recycle the waste which can be recycling
- Re-use materials which can be maintained and returned to store
- Reduce those which can't be recycle or reuse.
- ❖ **N.B. Never dispose waste materials everywhere.**



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. List down 5 waste materials produced camel raising activity (5pts)
2. Write the 3 guide lines used in waste material disposals.(3pts)

Note: Satisfactory rating – 8 points Unsatisfactory - below 8 points

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

Answer Sheet

Score = _____
Rating: _____

Name: _____ Date _____

1

- _____
- _____
- _____
- _____
- _____

2

- _____
- _____
- _____



Information sheet-2	Handling and transporting Materials, tools and equipment
----------------------------	---

Materials used for raising camel raising activity have to be handled and transported safely. Any camel breeder has to do this task safely because any damage will create inconvenience on the next use of the equipment, and also it will cause injury to our camel.

All the materials and equipment used in camel production should be handled and transported accordingly.

Good handling measurements are:-

- Provide sanitation services to the working devices after and before work
- Maintaining identification and selection of functional equipment from non-functional ones.
- Apply the kaizen principle according to the camel production disciplines
- Use safe and well organized storage for tools, equipment and materials.
- Use recommended transportation system as the transported materials nature.
- Make of care during loading and unloading of materials, equipment and tools



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. What are Good handling and transporting measurements of materials and equipment used in camel production farm (5pts)

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 _____

1

- _____
- _____
- _____
- _____
- _____
- _____



Information sheet : 3	Cleaning and maintaining work site
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Work site have to be clean and safe for efficient work of employee. So any camel breeder or employee in camel production site has to keep sanitation of his/her work site which mean that he/she has to clean the work area after completing his/her task by doing these he/she can keep the health of himself/herself and staff members.

The work site should be clean and safe to conduct effective camel production activity.

The work area:

- Should be free from contaminants/chemicals
- Should be free from any obstacles causing lameness, injuries, death and etc
- Should be well ventilated/ not suffocated
- Free from dirty or disposals wastes
- Far from noisy and disturbance
- Free from predators like lion



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. To conduct effective camel production activity, what are the camel production area /work site should look like (5pts)

Note: Satisfactory rating – 5 points Unsatisfactory - below 5 points

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

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date _____

1. _____
2. _____
3. _____
4. _____
5. _____



Information sheet-4	Storing and disposing of materials
----------------------------	---

The materials that are used in camel production areas should be returned to store after properly cleaned, disinfected and completion of work if the nature the materials is long-lasting. Or dispose if the materials are disposable in nature or any other chemicals, reagents etc.

There are different ways of avoiding those waste materials from our farm area.

- The first way is recycling/decompose that waste material in a usable form.
For example the manure and left over of leaves can be used as fertilizer.
- The second way is that of returning waste material such as old iron, thin, metal and plastic to manufacturers.
- The third way is that of re using waste material.



Self-Check -4	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 different ways of avoiding those waste materials from s camel production area (6pts)

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 _____

1. _____

2. _____

3. _____



Information sheet-5	Cleaning, maintaining and storing tools and equipment's
----------------------------	--

2.1. Cleaning materials, tools and equipment

After completion of any work in camel rearing activity including milking, the materials should be thoroughly washed and cleaned. If not thoroughly washed they become a source of microbial contamination and shorten the life span of the materials and the products.

Materials used in camel rearing activity have to be handled and transported safely. Any camel breeder has to do this task safely because any damage will create inconvenience on the next use of the equipment, and also it will cause damage on the products.

The routine cleaning process of all this equipment is as follows: -

- The plough equipment should be clean
- Proper handling of riding saddle
- Wash and brush in hot water the milking buckets, pails
- Allow to dry upside down in a dust-free surrounding;
- This eases cleaning and minimizes the risk of contamination.



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. Write the advantages of cleaning and maintaining materials, tools and equipment.(4pts)

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 _____

1. _____

2. _____

3. _____



Information sheet : 6	Reporting work outcomes to supervisor and receiving feedbacks
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After completing any work directed by supervisor any work outcome and work problem have to be reported to supervisor

Camel production activity should be reported daily, weekly, monthly and yearly to the concerned body as well as for documentation. It is important source of information and advice from someone who has collected and studied the farm profitability, in order to make decisions and take actions. Reports should be clear, understandable, and meaningful. The outcome measurement process have gone well, poorly reported information will discourage use or provide misleading information.

Some of the report in camel rearing farm includes

- Health analysis/out breaks
- Profitability of the farm
- Production record report
- Reproduction record report
- Feeds and feeding report
- Material and tools record and etc.



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. List down some of the reports kept in camel rearing farm.(5pts)

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 _____

1. _____
2. _____
3. _____
4. _____
5. _____



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