NQF Level: 2 **US No: 116074**

Assessment Guide

Primary Agriculture

Observe and inspect animal health

Assessor: . . . . . .

Workplace / Company: . . . . . .

Commodity: . . . . . Date: . . . . . .

The availability of this product is due to the financial support of the National Department of Agriculture and the AgriSETA.

agriculture
Department:
Agriculture
REPUBLIC OF SOUTH AFRICA

AgriSETA

Before we start...

This assessment guide contains all necessary activities and instructions that will enable the assessor and learner to gather evidence of the learner's competence as required by the unit standard. This guide was designed to be used by a trained and accredited assessor whom is registered to assess this specific unit standard as per the requirements of the AgriSETA ETQA.

Please Note:

This Unit Standard Assessment Guide must be read in conjunction with the generic Assessor Guide as prescribed and published by the AgriSETA.

Prior to the delivery of the program the facilitator and assessor must familiarise themselves with content of this guide, as well as the content of the relevant Learner Workbook.

The assessor, facilitator and learner must plan the assessment process together, in order to offer the learner the maximum support, and the opportunity to reflect competence.

The policies and procedures that are required during the application of this assessment are available on the website of the AgriSET and should be strictly adhered to. The assessor must familiarise him/herself with this document before proceeding.

This guide provides step-by-step instructions for the assessment process of:

Title:	Observe and inspect animal health				
US No:	**116074**	**NQF Level:**	2	**Credits:**	5

This unit standard is one of the building blocks in the qualification listed below. Please mark the qualification you are currently assessing, because that will be determined by the context of application:

Title	ID Number	NQF Level	Credits	Mark
National Certificate in Animal Production	48976	2	120	ρ
National Certificate in Mixed Farming Systems	48977	2	120	ρ

Please mark the learning program you are enrolled in:

Are you enrolled in a:	Y	N
Learnership?	ρ	ρ
Skills Program?	ρ	ρ
Short Course?	ρ	ρ

Note to Assessor:

If you are assessing this module as part of a full qualification or learnership, please ensure that you have familiarized yourself with the content of the qualification.

Activity Answers

1

SO 1 AC 1-4

Instructions to learner:

Write a report.

Learner Guide: Page 11 **Facilitator Guide: Page 10**

Write a report about the behaviour of animals on the farm that you are doing your practical. Include the procedures taken to identify and rectify abnormal behaviour.

Model Answer(s):

Answer will depend on the specific environment that the learner has access to but should include the following:
Access: The observer must have access to a good viewpoint to observe the animals in question. The layout of the confining area must enable the worker to reach the whole area where animals roam. Stock pens and feedlots must not be too overstocked, as this will prevent observation of individual animals.
Knowledge: If the person that is doing the observation don't have knowledge of the normal healthy behaviour of the specific animals in question it will be impossible to identify individual animals that express abnormal behaviour.

Activity Answers

2

SO 1 AC 1-4

Instructions to learner:

Write a report.

Learner Guide: Page 12 **Facilitator Guide: Page 10**

Why is it important to have the proper skill and knowledge to identify abnormal behaviour in farm animals?

Model Answer(s):

Animals don't have the ability to tell one about there needs therefore a good interpretation of their behaviour will help the stock farmer to provide all necessities to the animals and he will also be able to assess if there is any abnormalities that might result in losses etc.

Activity Answers

3

SO 2 AC 1-3

Instructions to learner:

Write a report.

Learner Guide: Page 19 Facilitator Guide: Page 11

Write down the important principles when handling or moving farm animals.

Model Answer(s):

Most farm animals find security and feel safe within a group. Therefore it is important not to move individual animals, as this will make them feel vulnerable. They might stress and become aggressive and defensive. Rather try to move a number of animals to the restraining area and after restraining the specific individual you allow the rest of the animals to return to the herd, or let them wait until a procedure on the individual is completed etc.

Most farm animals will flee (run away) as soon as they feel oppressed. Therefore live stock such as goats, sheep and cattle can be driven from one area to the next by man on foot, sheep & cattle dogs or on horseback. Always work in a relaxed manner when moving livestock because if animals are exposed to too much stress they will became unmanageable and this could result in losses.

When approaching animals one must take into consideration their level of tameness and their flight zone.

Activity Answers

4

SO 2 AC 1-3

Instructions to learner:

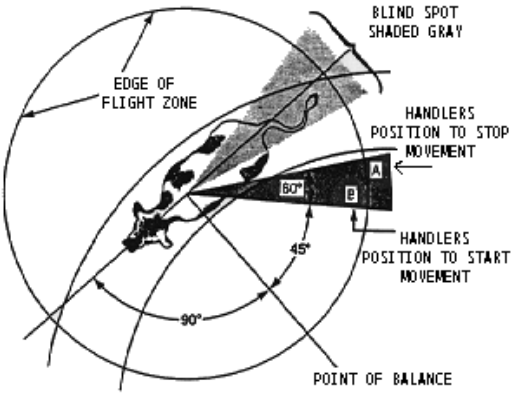
Group work, practical demonstration.

Learner Guide: Page 20 Facilitator Guide: Page 11

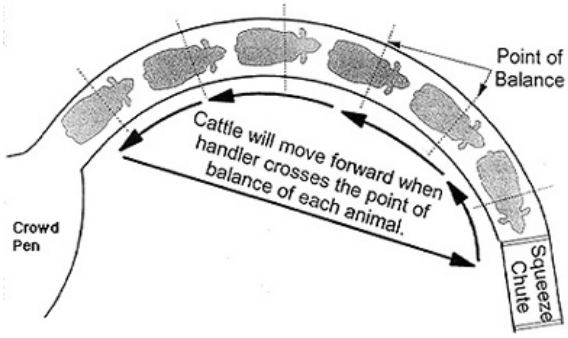
Learners will be divided into groups of five and under supervision of their facilitator demonstrate the correct method of moving animals within a kraal and crush.

Model Answer(s):

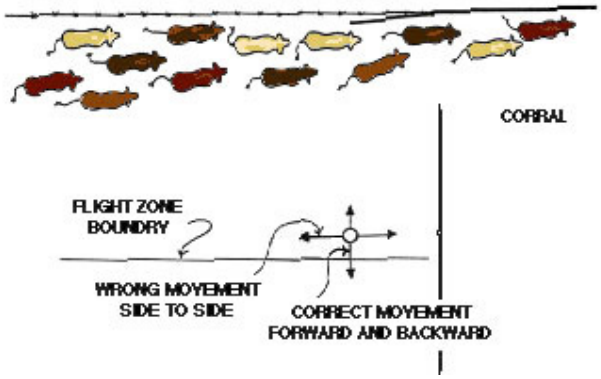
The following method must be used where applicable



This diagram illustrates the general flight zone of an animal. The actual flight zone of an individual animal will vary, depending on how "tame" or calm the animal is. The flight zone will enlarge as the animal becomes excited or when you approach it "head on". Calm cattle are easier to move. If cattle are excited, it will last about 20 to 30 minutes for them to calm down again.



A handler's *movement pattern to keep cattle moving in a crush towards the squeeze chute in a curved crush system.*



Using the principles of flight zone behaviour, a handler is able to move cattle into a pen in a calm and orderly way. Using the positions shown on this diagram will enable the handler to control the flow of cattle through the gate. Moving forward or backward can regulate the moving tempo of cattle in the crush.

Activity Answers

5

SO 2 AC 1-3

Instructions to learner:

Group work, practical demonstration.

Learner Guide: Page 21 Facilitator Guide: Page 11

Learners must demonstrate in their teams the casting of the specific species of farm animals that they are familiar with.

Model Answer(s):

The answer will differ and there is also a variety of different effective methods. Facilitators must decide on the prescribe method to be used.

My Notes ...

Activity Answers

6

SO 3 AC 1-6

Instructions to learner:

Learner Guide: Page 35 Facilitator Guide: Page 12

Describe any two of the following procedures and list the equipment to perform them: Castration, Dehorning, Docking of tails, and Administration of medication

Model Answer(s):

Docking of tails - Methods

Knife

The knife should be sterilized and dipped into a disinfectant after each lamb has been docked. Hold the lamb in an upright sitting position with the front and hind legs together, and the back of the lamb rests against the chest of the person holding it. The tail will hang down. Pull the skin back (towards the lamb's body) so that the stump of the tail will be covered by skin afterwards. Cut off the tail at the desirable length and disinfect the wound with a disinfectant.

Pincers

Similar to emasculator. The same technique is used as described above, but using pincers instead of a knife.

Elastrator

This method has the advantage that the tail can be amputated very close to the body, but it is more painful. The rubber ring is placed around the tail, close to the body, and left there until the tail falls off or alternatively, the necrotic end of the tail can be cut off two to three days after application of the rubber ring. Disinfect the wound to prevent infection of the wound. This technique eliminates Haemorrhage. It is therefore advisable to perform this procedure as soon as possible. (The younger the lamb, the better.)

Warm iron

A sharpened, red-hot iron (e.g. blades a motorcar) is used for this purpose. The lamb is held in a sitting position. All four legs are held with one hand and the tail is stretched out on a wooden board with the other hand. The operator of this procedure now presses the red-hot iron down and through the tail at the desired length. There is usually very little bleeding as the heat of the iron seals off the wound, thus diminishing the chances of infection.

CASTRATIONS

Male animals are castrated for various reasons. Castrations can be performed at any age, but preferably when the animal is still young (especially sheep, calves and pigs). Bloodless castration by means of a Burdizzo.

Ruminants

Large animals are cast on the side (cattle), while lambs are held in a sitting position with the four legs held together and the tail hanging downwards. The assistant handles the burdizzo, while the operator manipulates the spermatic cord. The jaws of the pincers are placed over the cord between the head of the epididymis and the abdomen. The operator holds it firmly, keeping his fingers around the cord continually until the assistant has closed the jaws of the pincers.

The same is repeated on the other side. Be careful, the pinch marks must not be next to each other in order to avoid necrosis on the bottom part of the scrotum. Care must also be taken not to injure the flexibility of the penis.

Removal of testes by means of a knife and / or (Sera) emasculator

When using this method, the knife and all other instruments should be sterilized and the skin and hands clean and disinfected. Make sure that there is no hernia.

Cattle, Sheep and Goats

Disinfect the animal's scrotum firstly. Hold the testis firmly with one hand and make a long incision through the front part of the skin, allowing the testicle to bulge out completely.

Castration should be done as young as possible. (When castrating young animals, the membrane around the testicle is not cut open, but the rest the procedure remains the same). As for older animals, cut through the membrane to reveal the testicle and tie up the cord with a ligature to prevent hemorrhage. (Use gut to tie up the cord.)

Pigs

Castrating pigs should also be done at a young age, in any case not later than 3 months. The procedure is the same as for cattle, except that the testicle's cords are not cut off but scraped off. A ligature will not be needed in this case.

If piglets are younger than a month, make an incision in the scrotum and pull the testicles out, as in the case of lambs and cats. This procedure is more complicated when it comes to large matured boars, and should therefore be castrated by a veterinarian.

Elastrator (rubber ring)

This procedure implies the application of a strong elastic ring around both testicle cords by means of a special instrument. This method is usually applied to young ruminants and has the disadvantage of increasing the risk of tetanus.

DEHORNING OF CATTLE

The dehorning of cattle is recommended for various reasons namely; (a) polled animals cannot injure each other, especially in kraals, at dipping-tanks, at drinking and feeding troughs and in railway trucks. (b) Losses due to wounds inflicted by sharp horns are avoided. (c) Bruised meat on a carcass is not suitable for human consumption and is condemned at the abattoir resulting to losses amounting to thousands of rand annually.

Methods

Various methods and apparatus can be used to dehorn of cattle. It is, however, preferable to dehorn cattle at a young age. The most suitable age is from 2- 4 weeks, or as soon as the horn bud is palpable. When the horn is well developed, the lurnen of the horn is connected to the frontal sinus, which makes the process of dehorning a painful operation, and the risk of complications is greatly enhanced. Because of this, the dehorning of mature cattle is not recommended, except in exceptional circumstances, and should be done by a veterinarian.

Dehorning iron

- *Firstly, cast the calf. Cut off the hair around the horn bud and make sure that the dehorning iron fits over the horn bud (the tip of the iron is concave). If necessary, the tip of the horn bud may be cut off with a sharp knife to ensure that the growth area around the horn bud is burnt. Heat the iron until it is red-hot and press it down on each bud for about 6 seconds. After treatment will not be necessary, but care must be taken to ensure that the skin around the bud is well burnt thus preventing the growth of a malformed horn.*
- *Dehorning paste (caustic potash)*

- *Shave off the hair around the horn bud and smear petroleum jelly around the base of the bud. The dehorning paste is then rubbed in well on the horn bud for 15 – 20 seconds. Ensure that the calf does not get wet or that the paste does not run down the calf's face, as the skin may be burn and the eyes or ears damaged.*
- *De-budding forceps*

  This instrument can be used for calves up to 4 months of age. Shave off the hair and paint the horn bud and the surrounding area with a germicidal agent e.g. tincture of iodine. Place the jaws of the forceps around the horn bud and close the forceps. It must be deeply recessed. Do not feel sorry for the calve as the operation may be unsuccessful. Paint the wound with tincture of iodine, healing oil, etc.
- *Hack-saw*

  A hack-saw is used when horns are fully-grown. This operation is very painful and should be done under local anesthesia. Mature cattle should be well controlled and the head must be securely held. It is often necessary to cast the animal for this operation. The horn can then be neatly sawn off together with a ± 1 cm ring of surrounding skin. An experienced person can do it in a short time. If the frontal sinus is exposed, the hole should be plugged with cotton wool and painted over with Stockholm tar.

There are other methods but should be done by a veterinarian.

ROUTES USED FOR INJECTIONS

Subcutaneous

In this case a drug is injected under the skin. The drug is absorbed slower and over longer period, as is not the case with the other routes. Irritant drugs should not be injected subcutaneous. A site is chosen where the skin is loose and thus easily pulled away from the carcass.

Intramuscular

In this case the drug is injected into the muscles. A sufficiently long needle should therefore be used to penetrate into the muscle. Small volumes should be injected in any one site (not more than 20 ml per site in the case of large animals). Pain and lameness may occur when large quantities are injected at one site. Absorption of the drug is rapid due to a good blood supply to the muscle. The choice of the injection-site depends upon the thickness of the muscles at the site.

- *Horses*

  Preferably in the muscles of the breast at the bottom of the neck, but the neck muscles may also be used.
- *Cattle, sheep, goats and pigs*

  The muscles of the neck, rump or buttocks are the most suitable. Piglets are injected in the neck-muscles behind the ear.

Intravenous

In this case the drug is introduced into a vein i.e. directly into the blood. Various advantages derive from this namely. (a) Direct availability of the drug to the body and (b) larger volumes and more irritant substances may be injected. Drugs are usually introduced slowly, while the animal is kept under control.

The technique of administration is as follows:

If the jugular vein is used, place a rope around the neck just in front of the shoulder and tighten the rope. This causes the blood to accumulate in the vein, rendering it clearly visible. The needle (not connected to the syringe) is pushed through the skin into the vein. If the needle is inside the vein, blood will flow freely through the needle. Fit the syringe to the needle and while the cord is released inject the drug slowly.

Horses, cattle	*Jugular vein.*
Sheep, goats	*Jugular vein and also the vein on the inside of the front leg, just above the knee.*
Pigs	*Vein in the ear. The technique is the same as for large animals except that the cord is placed at the base of the ear.*
Dog's	*Front leg.*
Poultry	*Into the vein of the wing.*

Intra-mammary

This method is used for the treatment of mastitis. Firstly, clean the teat with lukewarm water. The nozzle of the tube or plastic syringe (specially designed for this type of injection) is inserted into the teat canal. The content is then squeezed into the teat and by means of upward-massaging the medicine is introduced to the udder. Special teat canellas can also be used.

Intra-vaginal and intra-uterine

In this case a drug is introduced into the vagina or the uterus. Pessaries can be placed in the uterus by hand. Absolute hygiene is a necessary. Hands must be washed and disinfected, or sterilized gloves should be worn. If fluids are to be inserted it should be deposited by means of a sterile tube or catheter. (Using the same technique as for artificial insemination).

Rectal

This means the introduction of suppositories, tablets or liquid medicaments into the rectum, mainly for the treatment of constipation.

Activity Answers

7

SO 4 AC 1-5

Instructions to learner:

Learner Guide: Page 41 Facilitator Guide: Page 13

Give definitions for the following concepts in context with Bio Security:

Bio-security	*Is the prevention of a disease causing agents entering or leaving any place where farm animals are present (or have been present recently.) It involves a number of measures and protocols designed to prevent a disease causing agents from entering or leaving a property and being spread.*
Person	*Means anybody who enters or leaves premises with farm animals.*
Equipment	*Means any thing which has been in contact with livestock or has been visibly contaminated with manure or other livestock products and is to be removed from a premises with farm animals.*
Premises with farm animals	*Means any premises in which farm animals are present, either as for commercial concern or as pets. It also includes farms, livestock markets, shows, slaughterhouses and other premises where farm animals have been present in the recent past or are to be introduced.*
Direct contact	*Means handling or intention to handle farm animals or working near farm animals where clothing may become contaminated, for example by saliva, excreta or milk.*
An outbreak of an Exotic Notifiable Disease	*Is where the Chief Veterinary Officer of Defra has confirmed the presence of such a disease, for example Foot and Mouth Disease, Classical Swine Fever, Avian Influenza, Newcastle Disease, In the event of an outbreak a Press Release would be issued immediately and details posted on the Defra website.*
Common land	*Common grazing provides an opportunity for the spreading of diseases.*

Summative Test and Attitude & Attribute Evaluation

Before the knowledge test is undertaken, the learner must be reminded of what is expected from him / her in terms of summative and reflexive competence. Read and explain to the learner, the **Preparation for Your Final Assessment** section in the learner workbook. Learners and assessor should sign off this section to acknowledge that this step was completed.

Please set up a knowledge test from the questions given as a guideline to learners and supply each learner with a test sheet.

Supply each report with the following heading:

Unit Standard:	116074	**NQF Level:**	2
Learner Name:			

Questions	Model Answers
1. Name the four major causes of abnormal behaviour in animals.	Disease, Nutrition, Territory, Competition.
2. Describe the way an animal will react when you enter its flight zone from the front and then from the back.	From the front: It will move back. From the back: It will move forward.
3. Name equipment used to restrain animals.	Halters, ropes, cages, crushes, stock pens, kraals, clamps etc.
4. Why is it important to ensure basic hygiene when performing minor procedures on farm animals?	It is important to prevent infectious organisms to enter wounds after the animal received an operation. (Procedures where the skin is penetrated or damaged by instruments as in docking, branding, tattooing, ear marking and castration.) Although some of the wounds are small care must be taken to minimize contamination with germs.
5. Describe the 5-point procedure to be used when disinfecting the wounds of farm animals.	1) The surrounding skin area must firstly be shaved. 2) Clean thoroughly and disinfect. 3) The grossly infected and damaged material should be removed for the wound. 4) Carefully remove all foreign material such as hair and soil. 5) The topical application can be applied.

6. Why do farmers dock the tails of sheep?	The docking of sheep's tails is necessitated as filth and dung accumulate under the tail (especially when diarrhea occurs) thus aggravating the blowfly infestation. Tails should be docked at a young age, to lessen shock. Lambing percentages are also increase, as the ewes' tails do not interfere in the mating process. Sheep with docked tails, due to their stocky appearance, are also more acceptable to butchers.
7. What are the advantages of dehorning cattle?	The dehorning of cattle is recommended for various reasons namely; (a) Polled animals cannot injure each other, especially in kraals, at dipping-tanks, at drinking and feeding troughs and in railway trucks. (b) Losses due to wounds and bruises inflicted by sharp horns are avoided. (c) Bruised meat on a carcass is not good for human consumption and is therefore condemned at abattoirs daily, generating the loss of money amounting to thousands of rand annually.

8. Describe the different routs used for injection of animals.	***Subcutaneous*** The drug is injected under the skin. The drug is absorbed slower and over a longer period when compared with the other routes. Irritant drugs should not be injected subcutaneous. A site is chosen where the skin is loose and thus easily pulled away from the carcass. ***Intramuscular*** The drug is injected into the muscles. A sufficiently long needle should therefore be used to penetrate the muscle. Only small volumes should be injected in any one site (not more than 20 ml per site in the case of large animals). Pain and lameness may occur when large quantities are injected at one site. Absorption of the drug is rapid due to a good blood supply to the muscle. The choice of the injection-site depends upon the thickness of the muscles at the site. ***Intravenous*** The drug is introduced into a vein i.e. directly into the blood. Various advantages derive from this viz. direct availability of the drug to the body; larger volumes and irritant substances may be given. Drugs are usually introduced slowly, while the animal is kept under control.
9. Name 2 types of diseases that can cause bio security hazards.	Foot and Mouth Disease, Classic Swine Fever, Avian Influenza, Newcastle Disease
10. Give a detailed description of the essential concepts of Bio Security.	Implementing bio-security measures as standard practice ensures that every body working with farm animals or come into contact with them does not spread the disease when they enter or leave these premises. This is important, whether or not, the outbreak of a disease has been reported. Some diseases are zoonotic – they can be transmitted between humans and animals – therefore there are good public and occupational health reasons for having bio-security measures. Proper bio-security, which effectively reduces the incursion and spreading of a disease, also reduces the expenses to control these diseases. Bio-security can even prevent the spreading of plant diseases.

Assessment Feedback Form

Comments / Remarks	
Feedback to learner on assessment and / or overall recommendations and action plan for competence:	
Feedback from learner to assessor:	
Assessment Judgement You have been found: ❍ Competent ❍ Not yet competent in this unit standard	Actions to follow: ❍ Assessor report to ETQA ❍ Learner results and attendance certification issued
Learner's Signature:	**Date:**
Assessor's Signature:	**Date:**
Moderator's Signature:	**Date:**