



NQF Level: 2 US No: 116225

Assessment Guide

Primary Agriculture

Explain elementary animal nutrition



Assessor:

Workplace / Company:

Commodity: Date:

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.

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 AgriSETA 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: Explain elementary animal nutrition
US No: 116225 NQF Level: 3 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	<input type="checkbox"/>

Please mark the learning program you are enrolled in:

Are you enrolled in a:	Y	N
Learnership?	<input type="checkbox"/>	<input type="checkbox"/>
Skills Program?	<input type="checkbox"/>	<input type="checkbox"/>
Short Course?	<input type="checkbox"/>	<input type="checkbox"/>

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.

1a

SO 1 & 3

Instructions to learner:

Individual exercise

Learner Guide: Page 18

Facilitator Guide: Page 12

Discuss the functions of the following nutrient compounds:

- ◆ Carbohydrates
- ◆ Lipids
- ◆ Proteins

Model Answer(s):

Carbohydrates are only present in small amount in an animal's body because they are a source of energy, which after digestion the animal uses immediately as a source of heat and energy.

Fats are used as reserved source of energy during starvation or draught period while oils are metabolised to supply energy to the animal.

Proteins are very important as most of the structure of the animal's body as well as the products produced by most animals consist mainly of protein. The dry matter of wool, mohair, meat, milk and eggs consist mostly of very specific proteins.

1b

SO 1 & 3

Instructions to learner:

Individual exercise

Learner Guide: Page 18

Facilitator Guide: Page 12

Draw up a list of sources that will give a feedlot manager balanced diet that incorporates all the above compounds.

Model Answer(s):

- *Carbohydrates: maize and other grains etc.*
- *Lipids: animal fats and plant oils.*
- *Protein: animal origin: Blood meal and carcass meal.*
- *Plant origin: Plant oils e.g. sunflower oils, groundnut oils etc*

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SO 2

Instructions to learner:

Field trip, research and discussion

Learner Guide: Page 21

Facilitator Guide: Page 13

Go to the feed store of your local co operative and identify the different concentrates found. Obtain nutritional information on each concentrate and discuss it with the rest of the group

Model Answer(s):

Facilitator must determine answer but at least 7 different types of concentrates must be listed and 3-4 types of roughages.

3

SO 4 & 5

Instructions to learner:

Report writing

Learner Guide: Page 26

Facilitator Guide: Page 15

Pellets are a very popular way to feed most farm animals today. Please write a report on its suitability for this purpose and incorporate the following in your answer: Storage, spoilage, waste, contamination, stock control and preservation.

Model Answer(s):

Answers may vary but should include the following.

Pellets are very palatable and prevent selective feeding. Little spoilage occurs due to its texture and form. Because most pellets are weighed and bagged in weights of 50 kg bags, stock control and spoilage are optimized. The bagging and physical form is a very effective preservation technique.

4**SO 6****Instructions to learner:**

Practical observation and report writing

Learner Guide: Page 29**Facilitator Guide: Page 16**

Go to the storage facility on your farm and demonstrate the quality assessment of the various feedstuffs. Write a report on your findings

Model Answer(s):

The use of senses must be demonstrated and also the identification of the following:

- *Physical contamination*
- *Chemical contamination*
- *Micro biological contamination*

Records must be consulted to determine the first in first out procedure

5

SO 7

Instructions to learner:

Field trip and practical observation

Learner Guide: Page 33 **Facilitator Guide: Page 17**

Visit a feedlot and during feeding time and observe the animal behaviour. Incorporate the following concepts.

- Competition
- Feeding space
- Drinking of water
- Feeding duration

Find the correlation between these concepts and write a report to describe in detail what happened at feeding time.

Why do some animals feed more than others?

Model Answer(s):

The facilitator must draw up the final answer for this exercise but the following concept must be included:

- *The strongest animals will always have the privilege of getting the best feeding space.*
- *The longest time for feeding before being pushed away.*

My Notes ...

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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:	116225	NQF Level:	3
Learner Name:			

1. Describe the process by which plants produce food.

Plants are able to synthesize complex materials from substances such as carbon dioxide from the air, water, radiant energy from the sun and minerals from the soil through the process of photosynthesis where by radiant energy are converted to chemical energy. Chemical energy is used by animals for maintenance of life and synthesis of its own body tissues.

2. What are the four basic functions of nutrients in the body?

- ◆ As a structural material for building and maintaining the body structure.
- ◆ As a source of energy for heat production, work and / or fat deposition.
- ◆ For regulating body processes or in the formation of body produced regulators.
- ◆ The accessory function – e.g. milk production.

3. What is the difference between nutrition for maintenance and nutrition for production?

A maintenance ration is the food required by an animal to keep the body healthy, without gain or loss in weight and maintain its body temperature.

A production ration is the food required by an animal to maintain the body and to supply the nutrients needed for some form of production

4. Name the main functions of water as a nutrient.

- ◆ It acts as a solvent
- ◆ It acts as a medium in which chemical reaction can take place
- ◆ It removes surplus heat by evaporation from the surface of the body
- ◆ It helps to maintain a steady body temperature

- ◆ It gives the body shape e.g. if the body cells lost their water, they would give way like a balloon losing its air the tissues would then lose their resilience.

5. Name 3 types of homo-polysaccharides.

- ◆ **Starch** (Maltose + Maltose)
- ◆ **Glycogen** (animal starch)
- ◆ **Cellulose** (Cellobiose + Cellobiose)

6. What are the main differences between fats and oils?

- ◆ Fats – High boiling point and are solid at room temperature, consist of saturated fatty acids.
- ◆ Oils – Low boiling point and liquids at room temperature, consist of unsaturated fatty acids.

7. What is the function of protein in the body?

The function of the protein in food is to supply the animal with a selection of amino acids from which it can build up its own body protein. Proteins are characteristics of animals. Proteins have both **structural** and **functional** functions.

- ◆ **Structural** - protects different body parts - hair, nails and skin will fall under structural proteins.
- ◆ **Functional** - involved in different chemical reactions in order to maintain life-enzymes, some hormones, receptors etc.

8. What is the function of vitamins in the body?

Vitamins are organic substances required by animals in very small amounts for regulating various body processes towards normal health, production and reproduction. They are classed as micronutrients

9. Name the macro- and micro elements.

Macro (Major) Elements	Micro (Trace) Elements
Silica (Si)	Iron (Fe)
Potassium (K)	Manganese (Mn)
Calcium (Ca)	Copper (Co)
Sodium (Na)	Zinc (Zn)
Sulphur (S)	Iodine (I)
Magnesium (Mg)	Selenium (Se)
Chloride (Cl)	Others
Phosphorous (P)	

10. Name 3 types of contamination.

Physical, Chemical, Micro biological

Assessment Feedback Form

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