

APPLY KNOWLEDGE OF ANIMAL NUTRITION IN ANIMAL FEEDING

UNIT CODE: 0811 541 11A

TVET CDACC UNIT CODE: HE/OS/AHP/CC/11/6/MA

UNIT DESCRIPTION:

This unit specifies the competencies required by an animal health technologist to apply knowledge of animal nutrition in animal feeding. It involves applying principles of nutrition, knowledge of types of digestive systems, animal feed requirements, and formulate animal feed.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes, which make up workplace function.	PERFORMANCE CRITERIA These assessable statements specify the required level of performance for each element. <i>Bold and italicized terms are elaborated in the range.</i>
1. Apply knowledge of principles of nutrition	1.1 Composition of feeds knowledge is applied as per work procedure 1.2 <i>Types of feed</i> knowledge are applied as per livestock production manual. 1.3 Functions of <i>feed components</i> knowledge are applied as per livestock production manual
2. Apply knowledge of types of digestive systems	2.1 Ruminant and non-ruminant digestive systems knowledge is applied as per work requirements 2.2 Factors that affect digestibility of feed are managed as per work requirement 2.3 Factors affecting bioavailability of feed are managed as per work requirement
3. Apply knowledge of animal feed requirements	3.1 Feed intake is evaluated as per work requirement 3.2 Factors affecting animal feed requirements are managed as per work requirement 3.3 Feed conversion efficiency is evaluated as per work requirement

4. Formulate animal feed	<p>4.1 Principles of ration formulation are applied as per livestock production manual</p> <p>4.2 Ration <i>formulation techniques</i> are applied as per livestock production manual</p> <p>4.3 Feed presentation knowledge is applied as per work requirement</p>
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RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. Types of feed includes but is not limited to	<ul style="list-style-type: none"> ● Pastures ● Forages ● Concentrates
2. Feed components include but are not limited to	<ul style="list-style-type: none"> ● Proteins ● Carbohydrates ● Vitamins ● Lipids ● Minerals ● Water
3. Ruminants includes but is not limited to:	<ul style="list-style-type: none"> ● Cattle ● Sheep ● Goats
4. Non-ruminants include but are not limited to:	<ul style="list-style-type: none"> ● Pigs ● Poultry ● Donkeys ● Camels
5. Formulation techniques include but are not limited to:	<ul style="list-style-type: none"> ● Pearson's square ● Trial and error ● Algebraic ● Linear

	programming <ul style="list-style-type: none"> • Least Cost formulation
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REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required skills

The individual needs to demonstrate the following skills:

- Numeracy skills
- Health & safety skills
- Weighing skills
- Animal handling skills
- Feed mixing skills
- Data handling skills
- Computer skills

Required knowledge

The individual needs to demonstrate knowledge of:

- Animal anatomy & physiology
- Animal production systems
- Biochemistry
- Hazard Analysis Critical Control Point (HACCP) process
- Toxicology

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> 1.1 Applied composition of feeds knowledge as per work procedure 1.2 Applied types of feed knowledge as per livestock production manual.
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	<p>1.3 Applied functions of feed components knowledge as per livestock production manual</p> <p>1.4 Applied ruminant and non-ruminant digestive systems knowledge as per work requirement</p> <p>1.5 Managed factors that affect digestibility of feed as per work requirement</p> <p>1.6 Managed factors affecting bioavailability of feed as per work requirement</p> <p>1.7 Evaluated feed intake as per work requirement</p> <p>1.8 Managed factors affecting animal feed requirements as per work requirement</p> <p>1.9 Evaluated feed conversion efficiency as per work requirement</p> <p>1.10 Applied principles of ration formulation as per livestock production manual</p> <p>1.11 Applied ration formulation techniques as per livestock production manual</p> <p>1.12 Applied feed presentation knowledge as per work requirement</p>
<p>2. Resource Implications</p>	<p>The following resources must be provided:</p> <p>2.1 Appropriately simulated environment where assessment can take place</p> <p>2.2 Access to relevant work environment</p> <p>2.3 Resources relevant to the proposed activities or tasks</p>
<p>3. Methods of Assessment</p>	<p>Competency may be assessed through:</p> <p>3.1. Observation</p> <p>3.2. Oral questioning</p> <p>3.3. Written test</p> <p>3.4. Portfolio of Evidence</p> <p>3.5. Interview</p> <p>3.6. Third party report</p>
<p>4. Context of Assessment</p>	<p>Competency may be assessed in a:</p> <p>Workplace or simulated workplace</p>

5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.
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