

ANIMAL NUTRITION IN FEEDING

ISCED UNIT CODE: 0811 541 11A

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

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Apply knowledge of animal nutrition in animal feeding.

UNIT DURATION: 50 Hours

Unit Description

This unit specifies the competencies required by an animal health and production 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.

Summary of Learning Outcomes

By the end of this unit, the learner should be able to:

S/No	Learning Outcomes	Duration (Hours)
1.	Apply knowledge of principles of nutrition	10
2.	Apply knowledge of types of digestive system	20
3.	Apply knowledge of animal feed requirements	10
4.	Formulate animal feed	10
Total		50

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Assessment Methods
1. Apply knowledge of principles of nutrition	1.1. Composition of animal feeds 1.1.1. Carbohydrates 1.1.2. Lipids 1.1.3. Proteins	<ul style="list-style-type: none">• Written tests• Third party report• Projects

	<p>1.1.4. Vitamins</p> <p>1.1.5. Minerals</p> <p>1.1.6. Water</p> <p>1.2.Types of animal feed</p> <p>1.2.1. Pastures</p> <p>1.2.2. Forages</p> <p>1.2.3. Concentrates</p> <p>1.3.Functions of feed components</p>	<ul style="list-style-type: none"> • Interviews/ Oral questions • Case Studies • Practical
<p>2. Apply knowledge of types of digestive systems</p>	<p>2.1.Ruminant digestive systems</p> <p>2.1.1. Cattle</p> <p>2.1.2. Sheep</p> <p>2.1.3. Goats</p> <p>2.2.Non-ruminant digestive systems</p> <p>2.2.1. Pigs</p> <p>2.2.2. Poultry</p> <p>2.2.3. Donkeys</p> <p>2.2.4. Camels.</p> <p>2.3.Factors that affect digestibility of feed</p> <p>2.4.Factors affecting bioavailability of feed</p>	<ul style="list-style-type: none"> • Written tests • Third party report • Reflection papers • Projects • Interviews/ Oral questions • Case Studies • Practical
<p>3. Apply knowledge of animal feed requirements</p>	<p>3.1.Feed intake is evaluation</p> <p>3.2.Factors affecting animal feed requirements</p> <p>3.3.Feed conversion efficiency</p>	<ul style="list-style-type: none"> • Written tests • Third party report • Projects • Interviews/ Oral questions • Case Studies • Practical
<p>4. Formulate animal feed</p>	<p>4.1.Principles of ration formulation</p> <p>4.2.Ration formulation techniques</p> <p>4.2.1. Pearson's square</p> <p>4.2.2. Trial and error</p> <p>4.2.3. Algebraic</p>	<ul style="list-style-type: none"> • Written tests • Third party report • Projects • Interviews/ Oral questions

	4.2.4. Linear programming 4.2.5. Least Cost formulation 4.2.6. Computerized feed formulation 4.3.Feed presentation	<ul style="list-style-type: none"> • Case Studies • Practical
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Suggested Methods of delivery

- Practical
- Projects
- Demonstrations
- Group discussion
- Direct instructions

Training resources for 25 trainees

S/No.	Category/Item	Description/ Specification	Quantity	Recommended Ratio (Item: Trainee)
	Learning materials			
1.	Projector		1	1:25
2.	Whiteboard/Smart board		1	1:25
3.	Desktop/computer		1	1:25
4.	Lecture/Theory room		1	1:25
5.	Laboratory	As guided by Kenya bureau of standard.	1	1:25
6.	Animal farm		1	1:25
7.	Library		1	1:25
8.	E-Library		1	1:25
9.	Pasture and fodder land		1	1:25