



REPUBLIC OF KENYA

COMPETENCY-BASED MODULAR CURRICULUM

FOR

**AGRICULTURE AND EXTENSION LEVEL 6
(CYCLE 3)**

ISCED PROGRAMME CODE: 0811 554 A



**TVET CDACC
P.O. BOX 15745-00100 NAIROBI**

NON -RUMINANT ANIMALS

UNIT CODE: 0811 551 09A

TVET CDACC UNIT CODE: AGR/CU/EXT/CR/06/4/MA

UNIT DURATION: 120 HOURS

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Produce non ruminant animals

Unit Description

This unit specifies competencies required to produce non-ruminant animals. It entails breeding non-ruminant animals, feeding non-ruminant animals, managing non-ruminant animal parasites and diseases, carrying out non-ruminant animals' routine management practices and marketing non-ruminant products.

Summary of Learning Outcomes

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

S/No	Learning Outcomes	Duration (Hours)
1.	Breed non-ruminant animals	10
2.	Feed non-ruminant animals	30
3.	Manage non-ruminant parasites	20
4.	Manage non ruminant diseases	20
5.	Carry out non ruminant routine management practices	30
6.	Market non ruminant products	10
Total		120

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Assessment Methods
1. Breed non-Ruminant animals	Theory 1.1 Breeding of non-ruminant animals <ul style="list-style-type: none"> 1.1.1 Definition of terms 1.1.2 Importance of breeding non-Ruminant animals 1.1.3 Types of non-ruminant animals <ul style="list-style-type: none"> 1.1.3.1 Rabbits 1.1.3.2 pigs 1.1.3.3 Poultry 1.1.3.4 Donkeys and Horses 1.2 Breeding methods <ul style="list-style-type: none"> 1.2.1 Cross breeding 1.2.2 Close breeding 1.2.3 Line breeding 1.2.4 Inbreeding 1.2.5 Upgrading 1.3 Breeding tools and equipment's <ul style="list-style-type: none"> 1.3.1 Animal pregnancy testing kit 1.3.2 Hormone testing kit 1.3.3 Semen collection kit 1.3.4 Ovulation prediction monitors 1.3.5 Artificial insemination kit 1.3.6 Uses of breeding tools and equipment 1.3.7 Maintenance of breeding tools and equipment's 1.4 Selection of breeding stock in non-Ruminant animals <ul style="list-style-type: none"> 1.4.1 Definition of terms 1.4.2 Importance of selecting breeding stock in non-Ruminant animals 	<ul style="list-style-type: none"> • Practicals assessment • Written assessment • Reflection papers • Projects • Interviews/ Oral questions • Workshop reports • Individual/group assignments

	<p>1.4.3 Factors to consider when selecting breeding stock</p> <p>1.5 Methods of mating</p> <p>1.5.1 Definition of terms</p> <p>1.5.2 Types of mating</p> <p>1.5.2.1 Natural mating</p> <p>1.5.2.2 Artificial insemination</p> <p>1.5.3 Advantages and disadvantages of mating</p> <p>1.6 Preparing breeding records</p> <p>Practice</p> <p>1.7 Carry out collection of semen from a superior male using Artificial insemination</p>	
2 Feed non-ruminant animals	<p>Theory</p> <p>2.1 Non-ruminant feeds</p> <p>2.1.1 Definition of terms</p> <p>2.1.2 Importance of non-ruminant feeds</p> <p>2.1.3 Types of non-ruminant feeds</p> <p>2.1.3.1 Concentrates</p> <p>2.1.3.2 Forage</p> <p>2.1.3.3 Pastures</p> <p>2.2 Feed formulation</p> <p>2.2.1 Pearson's square method</p> <p>2.2.2 Trial and error method</p> <p>2.3 Factors determining animal nutritional requirement.</p> <p>2.4 Preparing feeding records</p> <p>Practice</p> <p>2.5 Formulate feed rations for non-ruminant animals.</p> <p>2.6 Feed non-ruminant animals.</p> <p>2.7 Prepare feeding records of non-ruminant animals.</p>	<ul style="list-style-type: none"> • Written tests • Reflection papers • Projects • Interviews/ Oral questions • Workshop reports • Individual/group assignments • Practicals

3	Manage non-ruminant parasites	<p>Theory</p> <p>3.1 Non-ruminant parasites</p> <p>3.1.1 Definition of terms</p> <p>3.1.2 Types of non-ruminant parasites</p> <p>3.1.2.1 Internal parasites</p> <p>3.1.2.2 External parasites</p> <p>3.2 Sign and symptoms of non-ruminant parasites</p> <p>3.2.1 Loss of appetite</p> <p>3.2.2 Emaciation</p> <p>3.2.3 Staring coat</p> <p>3.2.4 Dullness</p> <p>3.3 Parasite control measures</p> <p>3.3.1 Deworming</p> <p>3.3.2 Spraying</p> <p>3.3.3 Dipping</p> <p>3.3.4 Dusting</p> <p>3.3.5 Vaccination</p> <p>3.3.6 Fumigation</p> <p>3.4 Preparing parasite control records</p> <p>3.5 Managing parasite control waste</p> <p>Practice</p> <p>3.6 Carry out identification of external parasites in non-ruminant animals.</p> <p>3.7 Carry out parasite control measures using different methods.</p> <p>3.8 Carry out parasite control waste management.</p>	<ul style="list-style-type: none"> • Written tests • Reflection papers • Projects • Interviews/ Oral questions • Workshop reports • Individual/group assignments • Practicals
4	Manage non-ruminant diseases	<p>Theory</p> <p>4.1 Non-ruminant diseases</p> <p>4.1.1 Definition of terms</p> <p>4.1.2 Types of non-ruminant diseases</p> <p>4.1.2.1 Bacterial diseases</p>	<ul style="list-style-type: none"> • Written tests • Reflection papers • Projects • Interviews/ Oral questions • Workshop reports

	<p>4.1.2.2 Fungal diseases</p> <p>4.1.2.3 Protozoan diseases</p> <p>4.1.2.4 Rickettsial diseases</p> <p>4.1.2.5 Nutritional diseases</p> <p>4.2 Sign and symptoms of non-ruminant diseases</p> <p>4.2.1 Loss of appetite</p> <p>4.2.2 Emaciation</p> <p>4.2.3 Staring coat</p> <p>4.2.4 Dullness</p> <p>4.3 Diseases control measures</p> <p>4.3.1 Deworming</p> <p>4.3.2 Spraying</p> <p>4.3.3 Dipping</p> <p>4.3.4 Quarantine</p> <p>4.3.5 Vector control</p> <p>4.3.6 Vaccination</p> <p>4.4 Preparing diseases control records</p> <p>4.5 Managing diseases control waste</p> <p>Practice</p> <p>4.6 Carry out identification of diseases in non-ruminant's animals.</p> <p>4.7 Carry out diseases control measures using different methods.</p> <p>4.8 Carry out diseases control waste management.</p>	<ul style="list-style-type: none"> • Individual/group assignments • Practicals
5 Carry out non-ruminant routine management practices	<p>Theory</p> <p>5.1 Routine management practices of non-ruminant animals</p> <p>5.1.1 Definition of terms</p> <p>5.1.2 Importance of routine management practices of non-ruminant animals</p>	<ul style="list-style-type: none"> • Written tests • Reflection papers • Projects • Interviews/ Oral questions • Workshop reports • Individual/group assignments • Practical

	<p>5.1.3 Types of management practices in non-ruminant animals</p> <p>5.1.3.1 Feeding</p> <p>5.1.3.2 Vaccination</p> <p>5.1.3.3 Deworming</p> <p>5.1.3.4 Housing</p> <p>5.1.3.5 Identification</p> <p>5.1.3.6 Tailing</p> <p>5.1.3.7 Castration</p> <p>5.1.3.8 Teeth clipping</p> <p>5.1.3.9 Debeaking</p> <p>5.1.3.10 Sexing</p> <p>5.1.3.11 Iron injection</p> <p>Practice</p> <p>5.2 Carry out routine management practices in non-ruminant animals</p>	
6 Market non-ruminant products	<p>Theory</p> <p>6.1 Non-ruminant products</p> <p>6.1.1 Definition of terms</p> <p>6.1.2 Importance of non-ruminant products</p> <p>6.1.3 Types of non-ruminant products</p> <p>6.1.3.1 Meat</p> <p>6.1.3.2 Bacon and pork</p> <p>6.1.3.3 Hides</p> <p>6.1.3.4 Eggs</p> <p>6.2 Preservation of non-ruminant products</p> <p>6.2.1 Cooling</p> <p>6.2.2 Refrigeration</p> <p>6.2.3 Freezing</p> <p>6.2.4 Smoking</p> <p>6.2.5 Drying</p> <p>6.2.6 Fermentation</p>	<ul style="list-style-type: none"> • Written tests • Reflection papers • Projects • Interviews/ Oral questions • Workshop reports • Individual/group assignments • Practicals

	6.3 Distribution of non-ruminant products 6.4 Preparation of non-ruminant product records Practice 6.5 Carry out processing of non-ruminant products using various methods 6.6 Carry out preservation of non-ruminant products using various methods	
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Suggested Methods of Instruction

- Role playing
- Group discussion
- Direct instruction

Recommended Resources for 25 Trainees

S/No.	Category/Item	Description/Specifications	Quantity	Recommended Ratio (Item: Trainee)
A	Learning Materials			
1.	Animal Production manual		5 pcs	1:5
2.	writing materials		50	2:1
3.	Charts		1	1:25
4.	PowerPoint presentations	For trainer's use	1	1:25
5.	Whiteboard		1	1:25
6.	Assorted color of whiteboard markers	For trainer's use		
7.	Printers		1	1:25
8.	Projector		1	1:25
B	Learning Facilities & infrastructure			
1.	Lecture/theory room		1	1:25
2.	Agriculture lab		1	1:25
C	Consumable materials			

1.	Vaccines		1	1:25
2.	Antihelminthes		1	1:25
D	Tools and Equipment			
1.	Hoof trimmer		5	1:5
2.	Dewormer		5	1:5
3.	Iron rod		5	1:5
4.	Crush		1	1:25
5.	Refrigerator		1	1:25
6.	Knapsack sprayer		5	1:5
7.	Artificial insemination kit		5	1:5