



**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:

<b>S/No</b>	<b>Learning Outcomes</b>	<b>Duration (Hours)</b>
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
<b>Total</b>		<b>120</b>

### **Learning Outcomes, Content and Suggested Assessment Methods**

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

	<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><b>Practice</b></p> <p>1.7 Carry out collection of semen from a superior male using Artificial insemination</p>	
2 Feed non-ruminant animals	<p><b>Theory</b></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><b>Practice</b></p> <p><b>2.5</b> Formulate feed rations for non-ruminant animals.</p> <p><b>2.6</b> Feed non-ruminant animals.</p> <p><b>2.7</b> Prepare feeding records of non-ruminant animals.</p>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Reflection papers</li> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> <li>• Individual/group assignments</li> <li>• Practicals</li> </ul>

3 Manage non-ruminant parasites	<p><b>Theory</b></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><b>Practice</b></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"> <li>• Written tests</li> <li>• Reflection papers</li> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> <li>• Individual/group assignments</li> <li>• Practicals</li> </ul>
4 Manage non-ruminant diseases	<p><b>Theory</b></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"> <li>• Written tests</li> <li>• Reflection papers</li> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> </ul>

	<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><b>Practice</b></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"> <li>• Individual/group assignments</li> <li>• Practicals</li> </ul>
5 Carry out non-ruminant routine management practices	<p><b>Theory</b></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"> <li>• Written tests</li> <li>• Reflection papers</li> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> <li>• Individual/group assignments</li> <li>• Practical</li> </ul>

	<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><b>Practice</b></p> <p>5.2 Carry out routine management practices in non-ruminant animals</p>	
6 Market non-ruminant products	<p><b>Theory</b></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"> <li>• Written tests</li> <li>• Reflection papers</li> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> <li>• Individual/group assignments</li> <li>• Practicals</li> </ul>

	<p>6.3 Distribution of non-ruminant products</p> <p>6.4 Preparation of non-ruminant product records</p> <p><b>Practice</b></p> <p>6.5 Carry out processing of non-ruminant products using various methods</p> <p>6.6 Carry out preservation of non-ruminant products using various methods</p>	
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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)
<b>A</b>	<b>Learning Materials</b>			
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>B</b>	<b>Learning Facilities &amp; infrastructure</b>			
1.	Lecture/theory room		1	1:25
2.	Agriculture lab		1	1:25
<b>C</b>	<b>Consumable materials</b>			

1.	Vaccines		1	1:25
2.	Antihelminthes		1	1:25
<b>D</b>	<b>Tools and Equipment</b>			
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