

REARING RUMINANT ANIMALS

UNIT CODE: 0811 551 05 A

TVET CDACC UNIT CODE: AGR/CU/EXT/CR/05/4/MA

UNIT DURATION: 120 HOURS

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Rear ruminant animals

Unit Description

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

Summary of Learning Outcomes

| SNO | Learning Outcome | Duration (Hours) |
|-----|---|------------------|
| 1. | Breed Ruminant animals | 20 |
| 2. | Feed Ruminant animals | 20 |
| 3. | Manage Ruminant parasites | 15 |
| 4. | Manage ruminant diseases | 20 |
| 5. | Carry out ruminant routine management practices | 30 |
| 6. | Market ruminant products | 15 |

Learning Outcomes, Content and Suggested Assessment Methods

| Learning Outcomes | Content | Suggested Assessment Methods |
|---------------------------|--|--|
| 1. Breed Ruminant animals | Theory 1.1 Breeding of ruminant animals 1.1.1 Definition of terms 1.1.2 Importance of breeding Ruminant animals 1.1.3 Types of ruminant animals 1.1.1.1 Sheep 1.1.1.2 Goats 1.1.1.3 Cattle 1.1.1.4 Camels | <ul style="list-style-type: none">• Written tests• Reflection papers• Projects• Interviews/ Oral questions• Workshop reports• Individual/group assignments• Practicals |

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| | <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 Ruminant animals</p> <p>1.4.1 Definition of terms</p> <p>1.4.2 Importance of selecting breeding stock in Ruminant animals</p> <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>1.5.1.1 Natural mating</p> <p>1.5.1.2 Artificial insemination</p> <p>1.5.1.3 Advantages and disadvantages of mating</p> <p>1.6 Preparing breeding records</p> <p>Practice</p> <p>Collect semen from a superior bull using Artificial insemination</p> | |
| 2. Feed Ruminant animals | <p>Theory</p> <p>2.1 Ruminant feeds</p> <p>2.1.1 Definition of terms</p> <p>2.1.2 Importance of Ruminant feeds</p> <p>2.1.3 Types of Ruminant feeds</p> | <ul style="list-style-type: none"> • Written tests • Reflection papers • Projects • Interviews/ Oral questions |

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| | <p>2.1.1.1 Concentrates</p> <p>2.1.1.2 Forage</p> <p>2.1.1.3 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 ration of Ruminant animals.</p> <p>2.6 Feed Ruminant animals.</p> <p>2.7 Prepare feeding records of Ruminant animals.</p> | <ul style="list-style-type: none"> • Workshop reports • Individual/group assignments • Practicals |
| 3. Manage Ruminant parasites | <p>Theory</p> <p>3.1 Ruminant parasites</p> <p>3.1.1 Definition of terms</p> <p>3.1.2 Types of ruminant parasites</p> <p>3.1.1.1 Internal parasites</p> <p>3.1.1.2 External parasites</p> <p>3.2 Sign and symptoms of 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>3.4 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 Ruminant's 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 ruminant | <p>Theory</p> <p>4.1 Ruminant diseases</p> <p>4.1.1 Definition of terms</p> <p>4.1.2 Types of ruminant diseases</p> | <ul style="list-style-type: none"> • Written tests • Reflection papers • Projects |

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| diseases | <p>4.1.1.1 Bacterial disease 4.1.1.2 Fungal diseases 4.1.1.3 Protozoan diseases 4.1.1.4 Rickettsial diseases 4.1.1.5 Nutritional diseases</p> <p>4.2 Sign and symptoms of Ruminant diseases 4.2.1 Loss of appetite 4.2.2 Emaciation 4.2.3 Staring coat 4.2.4 Dullness</p> <p>4.3 Diseases control measures 4.3.1 Deworming 4.3.2 Spraying 4.3.3 Dipping</p> <p>4.4 Preparing diseases control records 4.5 Managing diseases control waste</p> <p>Practice</p> <p>4.6 Carry out identification of diseases in Ruminant's animals. 4.7 Carry out diseases control measures using different methods. 4.8 Carry out diseases control waste management.</p> | <ul style="list-style-type: none"> Interviews/ Oral questions Workshop reports Individual/group assignments Practicals |
| 5. Carry out ruminant routine management practices | <p>Theory</p> <p>5.1 Routine management practices of Ruminant animals</p> <p>5.1.1 Definition of terms 5.1.2 Importance of routine management practices of Ruminant animals 5.1.3 Types of management practices in Ruminant animals</p> <p>5.1.1.1 Feeding 5.1.1.2 Vaccination 5.1.1.3 Deworming 5.1.1.4 Housing 5.1.1.5 Identification 5.1.1.6 Docking 5.1.1.7 Shearing</p> <p>Practice</p> <p>5.2 Carry out routine management practices in ruminant animals</p> | <ul style="list-style-type: none"> Written tests Reflection papers Projects Interviews/ Oral questions Workshop reports Individual/group assignments Practicals |
| 6. Market ruminant | <p>Theory</p> <p>6.1 Ruminant products</p> | <ul style="list-style-type: none"> Written tests |

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| products | <p>6.1.1 Definition of terms 6.1.2 Importance of ruminant products 6.1.3 Types of Ruminant products</p> <ul style="list-style-type: none"> 6.1.1.1 Milk 6.1.1.2 Meat 6.1.1.3 Mutton 6.1.1.4 Wool 6.1.1.5 Skin 6.1.1.6 Hides <p>6.2 Preservation of Ruminant products</p> <ul style="list-style-type: none"> 6.2.1 Cooling 6.2.2 Refrigeration 6.2.3 Freezing 6.2.4 Smoking 6.2.5 Drying 6.2.6 Fermentation <p>6.3 Distribution of ruminant products 6.4 Preparation of ruminant product records</p> <p>Practice</p> <p>6.5 Carry out processing of ruminant products using various methods 6.6 Carry out preservation of ruminant products using various methods</p> | <ul style="list-style-type: none"> • Reflection papers • Projects • Interviews/ Oral questions • Workshop reports • Individual/group assignments • Practicals |
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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. | Business Journals | | 5 pcs | 1:5 |
| 2. | writing materials | | 50 | 2:1 |
| 3. | Charts | | 1 | 1:25 |
| 4. | PowerPoint presentations | For trainer's use | | |

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| 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 | Tools and Equipment | | | |
| 1. | Animal pregnancy testing kit | | 5 | 1:5 |
| 2. | Hormone testing kit | | 5 | 1:5 |
| 3. | Semen collection kit | | 5 | 1:5 |
| 4. | Ovulation prediction monitors | <i>easyvet.com</i> | 5 | 1:5 |
| 5. | Artificial insemination kit | | 5 | 1:5 |
| 6. | breeding tools and equipment | set | 5 | 1:5 |