

## ANIMAL GROWTH AND DEVELOPMENT

**ISCED UNIT CODE:** 0841 541 30A

**TVET CDACC UNIT CODE:** HE/CU/AHP/CC/06/6/MA

### Relationship to Occupational Standards

This unit addresses the Unit of Competency: Apply knowledge of animal growth and development.

**Unit duration:** 50 hours

### Unit description

This unit covers the competencies required by an animal health and production technologist to apply knowledge of animal growth and development. It involves applying general concepts of growth and development, manipulation to growth and development, compensatory growth, maturity and body composition in animal production.

### Summary of Learning Outcomes

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

S/No	Learning Outcomes	Duration (Hours)
1.	Apply general concepts of growth and development	15
2.	Apply knowledge of manipulation to growth and development in animal production	15
3.	Apply knowledge of compensatory growth in animal production.	10
4.	Apply knowledge of maturity and body composition in animal production	10
<b>Total</b>		<b>50</b>

### Learning Outcomes, Content and Methods of assessment

Learning Outcome	Content	Methods of assessment
1. Apply general concepts of growth and development	1.1. Introduction to growth and development 1.2. Importance of growth and development in livestock 1.3. Developmental stages of growth and development 1.3.1. Pre-natal phase 1.3.2. Post-natal phase 1.4. Factors affecting postnatal growth and development	<ul style="list-style-type: none"> <li>● Practical</li> <li>● Project</li> <li>● Portfolio of evidence</li> <li>● Third party report</li> <li>● Written assessment</li> <li>● Oral questioning</li> </ul>
2. Apply knowledge of manipulation to growth and development in animal production	2.1. Genetic manipulation 2.1.1. Transgenic 2.1.2. Screening of embryo 2.1.3. Embryo splitting 2.1.4. Cloning 2.2. Growth promoters 2.3. Gut-active promoters 2.3.1. Use of hormones 2.3.2. Probiotics 2.4. Importance of manipulation of growth and development	<ul style="list-style-type: none"> <li>● Practical</li> <li>● Project</li> <li>● Portfolio of evidence</li> <li>● Third party report</li> <li>● Written assessment</li> <li>● Oral questioning</li> </ul>
3. Apply knowledge of compensatory growth in animal production.	3.1. Define compensatory growth 3.2. Comparison of compensatory growth with normal growth 3.3. Economic value of compensatory growth 3.4. Factors that influence compensatory growth.	<ul style="list-style-type: none"> <li>● Practical</li> <li>● Project</li> <li>● Portfolio of evidence</li> <li>● Third party report</li> <li>● Written assessment</li> <li>● Oral questioning</li> </ul>

4. Apply knowledge of maturity and body composition in animal production	4.1. Define maturity	<ul style="list-style-type: none"> <li>● Practical</li> <li>● Project</li> <li>● Portfolio of evidence</li> <li>● Third party report</li> <li>● Written assessment</li> <li>● Oral questioning</li> </ul>
	4.2. Types of maturity	
	4.2.1. Reproductive maturity	
	4.2.2. Physical maturity	
	4.3. Effects of age on fat, bone, and muscle development	
4.4. Effects of age on meat quality		

### Suggested Methods of delivery

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

### Recommended Resources for 25 trainees

S/No.	Category/Item	Description/Specification	Quantity	Recommended Ratio (Item: Trainee)
	<b>Learning materials</b>			
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.	Animal farm	As guided by KVB	1	1:25
6.	Library		1	1:25
7.	E-Library		1	1:25