

BASIC EPIDEMIOLOGY

UNIT CODE: 0841 441 13A

TVET CDACC UNIT CODE: HE/CU/AHP/CC/11/5/MA

Relationship to Occupational Standards

This unit addresses the Unit of Competency: To apply knowledge of basic epidemiology.

Unit Duration: 50 hours

Unit Description

This unit specifies the competencies required by animal health and production technician in order to apply knowledge of basic principles of epidemiology. It involves applying principles of epidemiology, knowledge of disease occurrence, carrying out disease surveillance, developing and applying disease prevention programme.

Summary of Learning Outcomes

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

S/No	Learning Outcomes	Duration (Hours)
1.	Apply principles of epidemiology	5
2.	Apply knowledge of disease occurrence	5
3.	Apply knowledge of disease surveillance	20
4.	Apply develop and disease prevention programme	20
Total		50

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Methods of assessment
1. Apply principles of epidemiology	1.1 Introduction to principles of epidemiology 1.2 The distribution and determinants of disease. 1.3 The scope of epidemiology 1.4 Importance of epidemiology 1.5 Epidemiological study designs 1.5.1 Descriptive 1.5.2 Analytic 1.5.3 Clinical epidemiology 1.6 Measures of association	● Practical ● Project ● Written tests ● Third party report ● Portfolio of evidence ● Oral questions
2. Apply knowledge of disease occurrence	2.1 Determinants of diseases 2.1.1 Primary determinants 2.1.2 Secondary 2.1.3 Intrinsic 2.1.4 Extrinsic 2.2 Measures of disease occurrence 2.3 Disease transmission and agent's factors 2.4 Factors of maintenance of infections 2.5 Factors influencing disease patterns	● Practical ● Project ● Written tests ● Third party report ● Portfolio of evidence ● Oral questions

3. Apply disease surveillance	3.1 Introduction to disease surveillance 3.2 Study designs 3.2.1 Incidence studies 3.2.2 Incidence cases 3.2.3 Prevalence studies 3.2.4 Prevalence cases 3.3 Disease monitoring and surveillance 3.4 Sources of surveillance data 3.4.1 Department of veterinary services. 3.4.2 Veterinary Laboratories 3.4.3 Private veterinary practitioners 3.4.4 Non-governmental organizations involved in livestock activities 3.4.5 Livestock research organizations such as the International Livestock Research Institute (ILRI)	● Practical ● Project ● Written tests ● Third party report ● Portfolio of evidence ● Oral questions
4. Apply develop and disease prevention programme	4.1 Disease prevention programs 4.1.1 Vaccinations 4.1.2 Quarantine 4.1.3 Vector control 4.1.4 Adequate nutrition 4.1.5 Good husbandry management practices 4.2 Notifiable diseases	● Practical ● Project ● Written tests ● Third party report ● Portfolio of evidence ● Oral questions

4.2.1	East coast fever
4.2.2	Rabies
4.2.3	Rift valley fever
4.2.4	Rinderpest
4.2.5	Newcastle
4.2.6	Trypanosomiasis
4.2.7	Anthrax
4.2.8	Cattle plague (rinderpest)
4.2.9	Contagious bovine pleuro-pneumonia
4.2.10	Tuberculosis
4.2.11	Epizootic or ulcerative lymphangitis
4.2.12	Foot-and-mouth disease
4.2.13	Sheep-pox
4.2.14	Scab
4.2.15	Swine-fever
4.2.16	Swine erysipelas
4.2.17	Glanders
4.2.18	Farcy
4.2.19	Surra
4.2.20	Heartwater
4.2.21	Mange (scabies) in horses and mules,
4.2.22	Bacillary white diarrhoea and pullorum disease
4.2.23	Fowl pest
4.2.24	Lumpy skin disease
4.2.25	paratuberculosis

	(Johnes disease)	
	4.2.26 Atrophic rhinitis	
	4.2.27 Scrapie	
	4.3 Notifiable disease reporting	

Suggested Methods of Delivery

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

Recommended Resources for 25 trainees

S/NO	Category/Item	Description/specification	Qty	Recommended ratio (item: trainee)
1.	Projector	EPSOM	1	1:25
2.	Whiteboard/smartboard	2.5 By 1.5.M	1	1:25
3.	Desktop/computer		1	1:25
4.	Classroom	Well-lit with 25 seats	1	1:25
5.	Library	Equipped with epidemiology books and E- section	1	1:25
6.	Animal farm	As per KVB guidelines	-	-