



Republic of Rwanda
Ministry of Education



RTB | RWANDA
TVET BOARD

PREVENTION OF ANIMAL DISEASES

ANHPD302

Prevent animal diseases

Competence

RQF Level: 3

Learning Hours



60

Credits: 6

Sector: Agriculture and Food processing

Trade: : Animal health

Module Type: Specific

Curriculum: AFPANH302 TVET Certificate 3 in Animal health

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Issue Date: May 2022

Purpose statement	This module covers the knowledge, skills and attitudes required to prevent diseases for the following species: cow, sheep, goat, pig, poultry, rabbit, dog and cat. The workplace in which this competence may be applied range from veterinary clinics, animal housings/shelters, farms, customs services to slaughterhouses. This competence includes especially the application of appropriate handling and restraining techniques of animals, their general examination, the administration of antiparasitics drugs and other chemoprevention drugs as well as animals’ vaccinations. It’s a prerequisite for all the specific modules of the qualification involving the manipulation and treatment of the different species mentioned above. It is intended for leaners who have successfully completed nine year based education, level II in animal health or it is equivalent and pursuing TVET level III in animal health or other related qualification. Upon completion of this module, the trainee will be able to: Monitor physical conditions of animal housing; Restrain animals for veterinary intervention; Perform animals’ general examination; Use antiparasitic drugs for disease prevention;						
Learning assumed to be in place	Applied chemistry, Applied biology						
Delivery modality	Training delivery			100%	Assessment		Total 100%
	Theoretical content			30%	Formative assessment	30%	50%
	Practical work:			70%		70%	
	• Group project and presentation	20%					
	• Individual project /Work	50%					
				Summative Assessment		50%	

Elements of Competency and Performance Criteria

Elements of competency	Performance criteria
1. Monitor physical conditions of animal housing	1.1. Materials, tools and equipment to monitor animal house physical conditions are properly selected according to their uses.
	1.2. Animal houses bio-physical parameters are appropriately

	monitored according to animal species
	1.3. Corrective measures to bio-physical conditions are properly applied according to their types
	1.4. Stocking density are adequately calculated according to animal species
2. Restrain animals for veterinary intervention	2.1. Animal behavior signals are properly assessed according to the species
	2.2. Restraining materials, tools and equipment are properly selected according the type of intervention and animal species
	2.3 Animal restraining techniques are properly applied according to the animal species
3. Perform animals general examinations	3.1. Anamnesis is properly conducted according to the clinical case
	3.2. General examination is properly conducted according to the clinical case
	3.3 Decisions making is suitably done according to the clinical case
4. Use antiparasitic drugs for disease prevention	4.1. Insecticides and acaricides are properly selected according to parasite species
	4.2 Anthelmintics and anti-protozoans are properly selected according to the type of parasites
	4.3. Antiparasitic drugs are suitably used for prevention as indicated to manufacturer's instructions
5. Vaccinate animals and apply sanitary prophylaxis	5.1. Common notifiable diseases are properly identified as listed by OIE.
	5.2. Vaccines are properly selected according their uses
	5.3. Vaccines are properly stored and transported as indicated by manufacturer
	5.4. Vaccines are properly prepared and dosed according to the manufacturer's instructions
	5.5. Vaccines are properly administrated according to the manufacturer's instructions
	5.6. Prophylactic measures are properly applied according to sanitary policies

Course content

Learning outcomes	At the end of the module the learner will be able to: 1. Monitor physical conditions of animal housing 2. Restrain animals for veterinary intervention 3. Perform animals' general examinations 4. Use antiparasitic drugs for disease prevention 5. Vaccinate animals and apply sanitary prophylaxis
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Learning outcome 1: Monitor physical conditions of animal housing	Learning hours: 15
Indicative content	
• Selection of materials tools and equipment to monitor animal housing physical conditions ✓ materials, tools and equipments to monitor animal houses physical conditions ✚ Thermometer, hygrometer, anemometer, pluviometer, Rain gauge, barometer - Digital Oxygen Analyzer, digital Ammonia meter, digital CO₂ Analyzer • Monitor bio-physical parameters ✓ Animal houses, bio-physical parameters and standards ✚ Temperature, humidity, ventilation, ammonia level, carbon dioxide level • Application of corrective measures to bio-physical conditions ✓ Corrective measures techniques and methods ✚ Heating, cooling, drying, vaporization, forced Ventilation, opening, closing, cleaning, changing of bedings, respect animal stocking density standards • Calculate the stocking density ✓ Domestic animals stoking density.	
Resources required for the learning outcome	
Equipment	Computer, scale, fan, aerator, heater, cooler, vaporizer, wheelbarrow Audio-visual equipment, scale

Materials	Livestock data register, different animal species Spade, Flip chart, marker pen, blackboard, chalk Internet connection, workshop, hoe, Livestock farms, ruminants, swine, poultry, Rabbit
Tools	Body weight tape measure, decameter, Calculator, hygrometer, Thermometer, ammonia detector, gas detector, anemometer, measuring tape, Pitchfork,
Facilitation techniques	Demonstration, group work, Practical works, Group discussion, Brainstorming
Formative assessment methods	Written assessment, performance assessment

Learning outcome 2: Restrain animals for veterinary intervention	Learning hours: 15
Indicative content	
animal's behavior signals ✓ General animal behaviors according to species - Cow, sheep, goat, pig, poultry, rabbit, dog, cat ✓ Indicators of stress ✓ Defensive gestures ✓ Submissive gestures restraining techniques - Physical, chemical, psychological Use of restraining techniques ✓ Techniques of physical restraint to different species - Cattle, sheep, goats, pigs, poultry rabbit ✓ Techniques of chemical restraint - Use of tranquilizers, Use of anaesthetics ✓ Techniques of psychological restraint - Verbal communication, nonverbal communication	
Resources required for the indicative content	

Equipment	Audio-visual equipment, Crush
Materials	Flip chart, marker pen black board, Chalk, workshop, Dirt gun, muzzle, Lasso, ropes, hobbles, Nets, towels, sticks, poles, tranquilizers, anaesthetics, syringes needles, cottonwool, antiseptics, Cattle, Sheep, Goats, pigs, poultry, rabbit, Dog, cat
Tools	Drenching guns, nose lead
Facilitation techniques	Demonstration, Individual and group work, practical exercise, Group discussion
Formative assessment methods	Written assessment, performance assessment, product based assessment

Learning outcome 3: Perform animals general examinations		Learning hours: 15
Indicative content		
• Anamnesis process ✓ Identification of animal owner ✓ Identification of sick animal ✓ History of the patient and farm • General examination of the patient ✓ Process of physical examination of an animal + Observation of the animal at distance, close examination ✓ Environmental examination + Bedding area, building design, feeding system, stocking density, types of forage in the farm, waste disposal • Make decision ✓ First aid ✓ Reporting the case to supervisor + Clinical signs, prognosis, administered drugs, suggestions		
Resources required for the indicative content		
Equipment	PPE	
Materials	Animals with different clinical cases Permanent markers, register, pen, physical examination record card, anamnesis record card Restraining materials instrument and equipment, live animals, Lubricant	

	Soap, antiseptics gloves, water, soap, Identification forms/cards Register, vaccination certificates, origin certificate, Farm record, black board Pen, notes book
Tools	Thermometer, stethoscope, Watch
Facilitation techniques	Demonstration and simulation, Individual and group work, practical exercise, group discussion ,Audiovisual presentation,research, Brainstorming,tutorial
Formative assessment methods	Written assessment, performance assessment

Learning outcome 4: Use antiparasitic drugs for disease prevention		Learning hours: 10
Indicative content		
• Insecticides and acaricides ✓ Types of insecticides and acaricides • Anthelmintics and anti-protozoans ✓ Types of Anthelmintics ✓ Types of anti-protozoans • Using of antiparasitic drugs for prevention. ✓ Techniques of applying insecticides and acaricides ✚ Spraying, bathing, pouring, dusting, fumigation, injection, traps impregnated with insecticides ✓ Administration routes for chemoprevention drugs		
Resources required for the indicative content		
Equipment	Veterinary clinics,Veterinary pharmacies Audio-visual equipment, Crush, Sprayers	
Materials	insecticides drugs, acaricidesdrugs,drug administration materials Drug administration equipment, parasitic diagnostic materials parasitic diagnostic equipment, livestock farm, syringes, needles, buckets, jerry cans, water	
Tools	Drenching guns, nose lead drug administration tools	

Facilitation techniques	• Demonstration and simulation, group work, Audio-visual, practical exercise, group discussion
Formative assessment methods	• Written assessment • Performance assessment

Learning outcome 5 Vaccinate animals and apply sanitary prophylaxis	Learning hours: 5
Indicative content	
• Notifiable diseases • Selection of vaccines • Storage and transportation of vaccines • Preparation and dosage of vaccines • Administration of vaccines ✓ Types of vaccines and use ✓ Vaccination methods • prophylactic measures ✓ Quarantine and isolation ✓ Animal culling and isolation of sick and unfit stocks ✓ ✓ Rest period and all in/all out principle ✓ Slaughtering of animals ✓ Disposal of dead animals ✓ Foot baths/vats ✓ Fencing ✓ Cleaning and disinfection of animal shelters ✓ Implementation of vaccination and health programs	
Resources required for the indicative content	
Equipment	Audio-visual equipment, Crush, PPE, Cool box, projector

Materials	Wheelbarrow, quick lime, Legal text ,antiseptics ,Fence ,Cleaning product, cleaning equipment ,Legal texts, Fridge, Legal vaccination certificates,Dogs and cats vaccines: Posters,veterinary Pharmacies shops,school drugstore,Livestock farms ,Avian vaccines,Cattle vaccines, gloves, over all, boots, nose masks, face masks.
Tools	spade,Syringes, needles,muzzles,
Facilitation techniques	- Brainstorming, demonstration and simulation, Individual and group work - Practical exercise, audiovisual, group discussion
Formative assessment methods	Written assessment, Performance assessment, product based assessment

Integrated/Summative assessment (For specific module)

Integrated situation

In case to improve the animal genetic, ORORANEZA Company LTD localized in MUHANGA district has imported exotic animal breeds of 20 cows from UK,15 goats from South Africa and 30 sheep from Israel. In this District there is high frequency of tick borne diseases. After two weeks one of imported cows shows the signs of sickness, (lack of appetite, diarrhea, lameness, dehydration, fever). As animal care technician you are called to help the company to control ectoparasites and endoparasites in order to achieve their purpose.

Resources

Tools	Thermometer, stethoscope, syringes and needles, buckets, jerry cans, watch, digital Oxygen analyzer, digital Ammonia meter Digital CO ₂ Analyzer
Equipment	Crush, Sprayers

Materials/ Consumables	Animals, Syringes and needles, Insecticides and/or acaricides buckets, jerry cans, water Restraining materials instrument and equipment Lubricant, Soap, Antiseptics,glove, Water				
Assessable outcomes	Assessment criteria (Based on performance criteria)	Indicator	Observation		Marks allocation
			Yes	No	
Learning outcome 1: Monitor physical conditions of animal housing (20%)	1.1.Materials, tools and equipment to monitor animal house physical conditions are properly selected according to their uses.	Ind.1 Materials,tools and equipments to monitor animal house physical conditions are identified			2
		Ind.2 Materials,tools and equipments to monitor animal house physical conditions are I selected			2
	1.2.Animal houses bio- physical parameters are appropriately monitored according to animal species	Ind.1 Animal houses bio-physical parameters are identified			3
		Ind.2 Animal houses bio-physical parameters are monitored			3
	1.3 Corrective measures to bio-physical conditions are properly applied according to their types	Ind.1 Corrective measures techniques and methods are identified			2
		Ind.2. Corrective measures for animal house bio-physical parameters are applied			3
	1.4.Stocking density are	Ind.1: Stocking density of domestic			3

	adequately calculated according to animal species	animals is calculated			
		Ind.2: Stocking density of domestic animals is well respected			2
Learning outcome 2: Restrain animals for veterinary intervention (14%)	2.1Animal behavior signals are properly assessed according to the species	Ind.1. animal behaviors are identified			2
		Ind.2Indicators of stress are identified			2
	2.2Restraining materials, tools and equipment are properly selected according to the type of intervention and animal species Animal behavior signals are properly assessed according to the species	Ind.1.Restricting materials, tools and equipment are identified			2
		Ind.2.Restricting materials, tools and equipment are selected			2
	2.3 Animal restraining techniques are properly applied according to the animal species	Ind.1 Physical restraining technique is applied			2
		Ind.2. Chemical restraining Techniques are applied			2
		Ind.3.Psychological restraining is applied			2
Learning outcome 3: Perform animals general examinations (20%)	3.1.Anamnesis is properly conducted according to the clinical case	Ind.1 Anamnesis process is respected			2
		Ind.2History of the patient and farm Are are identified			2
		Ind.3. Anamnesis is conducted			2
	3.2. General examination is properly conducted according to the clinical case	Ind.1. Process of physical examination of an animal applied			2
		Ind.2. Environmental examination is			2

		checked			
		Ind.3.General examination is conducted			3
		Recording of general exam results is applied			2
	3.3 Decisions making is suitably done according to the clinical case	Ind.1 First aid is applied			3
		Ind.2. Reporting the case to supervisor is done			2
Learning outcome 4: Use antiparasitic drugs for disease prevention (20%)	4.1. Insecticides and acaricides are properly selected according to parasite species	Ind.1 Insecticides and acaricides are identified			2
		Ind.2. Insecticides are selected			2
		Ind.3.acaricides are selected			2
		Ind.4.Spraying of acaricide and acaricide are done			2
	4.2 Antihelminthics and anti-protozoans are properly selected according to the type of parasites	Ind.1.anthelminthics and anti-protozoans are identified			3
		Ind.2. Antihelminthics are selected			3
		Ind.3. anti-protozoans are selected			2
	4.3.Antiparasitic drugs are suitably used for prevention as indicated to manufacturer's instructions	Ind.1 Techniques of applying insecticides and acaricides are identified			2
		Ind.2.Techniques of			2

		applying insecticides and acaricides are applied			
Learning outcome 5: Vaccinate animals and apply sanitary prophylaxis (26%)	5.1. Common notifiable diseases are properly identified as listed by OIE.	Ind.1. Common notifiable diseases are identified			2
		Ind.2. Common notifiable diseases are briefly described.			2
	5.2.Vaccines are properly selected according their uses	Ind.1 Types of vaccines are identified			2
		Ind.2.Vaccination methods are applied			2
		Ind.3 Vaccination certificate are filled			2
	5.3.Vaccines are properly stored and transported as indicated by manufacturer	Ind.1 Vaccines are stored			2
		Ind.2 Vaccines are transported			2
	5.4.Vaccines are properly prepared and dosed according to manufacturer's instructions	Ind.1.vaccines are prepared			2
		Ind.2.vaccines are dosed			2
	5.5.Vaccines are properly administrated according to the manufacturer's instructions	Ind.1.vaccines are identified			2
		Ind.2.vaccines are administered			2
	5.6.Prophylactic measures are properly applied according to sanitary policies	Ind.1Prophylactic measures are identified			2
		Ind.2 Prophylactic measures are applied			2
Total marks		100			
Percentage Weightage		100%			
Minimum Passing line % (Aggregate): 70%					

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