

## **MANAGEMENT OF LAYER HEALTH AND WELFARE**

**ISCED UNIT CODE:** 0811 341 06 A

**TVETCDACC UNIT CODE:** POL/CU/LY/CR/04/4/MA

### **Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Manage Poultry Health and Welfare

**Duration of Unit:** 120 hours

### **Unit Description**

This unit specifies the competencies required to manage poultry health and welfare. It involves maintaining poultry biosecurity, acquiring poultry health equipment and materials, managing poultry vaccination and controlling poultry parasites. It also entails managing poultry diseases and vices and maintaining poultry health records.

### **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.	Maintain poultry biosecurity	20
2.	Acquire poultry health equipment and materials	20
3.	Manage poultry vaccination	20
4.	Control poultry parasites	25
5.	Manage poultry diseases and vices	25
6.	Maintain poultry health records	10
<b>Total</b>		<b>120</b>

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

<b>Learning Outcome</b>	<b>Content</b>	<b>Suggested Assessment Methods</b>

1. Maintain poultry biosecurity	<p>1.1. Biosecurity in a poultry farm</p> <p>    1.1.1. Measures</p> <p>    1.1.2. Regulatory bodies</p> <p>1.2. Designing biosecurity structures and equipment installation</p> <p>    1.2.1. Boundary fence (electric or stone wall)</p> <p>    1.2.2. Gate</p> <p>    1.2.3. Entry showers, both at the gate and at the house sites</p> <p>    1.2.4. Foot bathes and vehicle sprayers</p> <p>    1.2.5. Hand washing gadgets</p> <p>    1.2.6. Post mortem rooms</p> <p>    1.2.7. Mortality disposal pits</p> <p>    1.2.8. Rodent and pest control traps</p> <p>1.3. Occupational safety and health procedures in poultry farm</p> <p>1.4. Poultry waste management</p> <p>    1.4.1. Litter (droppings, feathers, spilt feed, dead birds)</p> <p>    1.4.2. Other wastes (plastics, glass, paper, metals and fluids)</p>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Observation</li> <li>• Oral questions</li> <li>• Third party report</li> <li>• Interviewing</li> <li>• Case study reports</li> </ul>
2. Acquire poultry health equipment and materials	<p>2.1. Flock health management tools, equipment, materials and supplies</p> <p>    2.1.1. Sprayers</p> <p>    2.1.2. De-beakers</p> <p>    2.1.3. Chicken catching rods</p> <p>2.2. Maintenance: cleaning, trouble shooting, servicing and repairs</p>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Observation</li> <li>• Oral questions</li> <li>• Third party report</li> <li>• Interviewing</li> </ul>
3. Manage poultry vaccination	<p>3.1. Factors considered when developing poultry vaccination schedule</p> <p>    3.1.1. Disease prevalence</p>	<ul style="list-style-type: none"> <li>• Observation</li> <li>• Written tests</li> <li>• Oral questions</li> </ul>

	<p>3.1.2. Disease severity</p> <p>3.1.3. Economic importance</p> <p>3.2. Poultry Immunology</p> <p>3.3. Types of vaccines (live attenuated, inactivated, vectored/recombinant)</p> <p>3.4. Reconstitution of poultry vaccines</p> <p>3.5. Vaccine handling</p> <p>3.6. Refrigeration methods</p> <p>3.7. Vaccination sites and routes</p> <p>3.8. Vaccine intake</p> <p>3.9. Animal welfare regulations</p> <p>3.10. Poultry handling</p> <p>3.11. Recording vaccination details</p> <ul style="list-style-type: none"> <li>3.11.1. Type of vaccine</li> <li>3.11.2. Type of disease vaccinated against</li> <li>3.11.3. Age of poultry</li> <li>3.11.4. Date and time of vaccination</li> <li>3.11.5. Date of manufacture and expiry of vaccine</li> <li>3.11.6. Vaccine source and batch number</li> <li>3.11.7. Route of vaccine administration (IM, wing stab, sub cutaneous, intra nasal, intra ocular or spray, follicular swabbing, drinking water application, scarification)</li> <li>3.11.8. Number of birds vaccinated</li> <li>3.11.9. Identification of birds (flock, type, breed)</li> </ul>	<ul style="list-style-type: none"> <li>• Interviewing</li> <li>• Third party report</li> </ul>
4. Control poultry parasites, pests and	<p>4.1. External and internal poultry parasites</p> <p>4.1.1. Types - Internal (round worms,</p>	<ul style="list-style-type: none"> <li>• Observation</li> <li>• Written tests</li> </ul>

predators	<p>tape worms); External (mites, soft ticks, fleas)</p> <p>4.1.2. Life cycle</p> <p>4.1.3. Symptoms of infestation</p> <p>4.1.4. Prevention and control measures</p> <p>4.2. Poultry pests and predators</p> <p>4.2.1. Types</p> <p>4.2.2. Control measures</p>	<ul style="list-style-type: none"> <li>• Oral questions</li> <li>• Interviewing</li> <li>• Third party report</li> </ul>
5. Manage poultry diseases and vices	<p>5.1. Poultry gross anatomy and basic physiology</p> <p>5.2. Normal poultry behaviour</p> <p>5.3. General signs of ill health in poultry</p> <p>5.3.1. Ante mortem observation</p> <p>5.3.2. Post-mortem observation</p> <p>5.4. Common poultry diseases</p> <p>5.4.1. Types</p> <p>5.4.1.1. Viral: Newcastle, Fowl pox, Gumboro / Infectious Bursal Disease, Mareks Disease, Infectious Bronchitis</p> <p>5.4.1.2. Bacterial: Fowl typhoid, Chronic Respiratory Disease complex, Infectious Coryza and Collibacilosis (omphalitis and yolk sac infection)</p> <p>5.4.1.3. Protozoal: Coccidiosis</p> <p>5.4.1.4. Metabolic / nutritional disorders: Ascites/ water belly, gout and toxic fat syndrome</p> <p>5.4.1.5. Poisoning: fungal or chemical</p> <p>5.4.2. Causes</p> <p>5.4.3. Symptoms</p> <p>5.4.4. Prevention and control measures</p>	<ul style="list-style-type: none"> <li>• Observation</li> <li>• Written tests</li> <li>• Oral questions</li> <li>• Interviewing</li> <li>• Third party report</li> </ul>

	<p>5.5. Zoonotic poultry diseases: (Salmonellosis, Listeriosis, Campylobacter)</p> <p>5.6. Poultry vices</p> <p>    5.6.1. Types of vices</p> <p>    5.6.2. Prevention and control measures</p> <p>5.7. Collection of monitoring and diagnostic samples</p> <p>5.8. Animal welfare</p> <p>    5.8.1. Poultry handling and care</p> <p>    5.8.2. Transportation</p> <p>    5.8.3. Regulations</p>	
6. Maintain poultry health records	<p>6.1. Importance of records</p> <p>6.2. Types of health records</p> <p>    6.2.1. Vaccination</p> <p>    6.2.2. Deworming</p> <p>    6.2.3. Treatment</p> <p>    6.2.4. Routine health management practices (de-beaking, culling)</p> <p>6.3. Record keeping procedures</p>	<ul style="list-style-type: none"> <li>• Observation</li> <li>• Written tests</li> <li>• Oral questions</li> <li>• Interviewing</li> </ul>

### Suggested Methods of Instruction

- Project
- Demonstration by trainer
- Practice by the trainee
- Field trips
- Discussions
- Direct instruction
- Electronic audio-visual presentations
- Simulations

### Recommended Resources

**Functional poultry farm with the following:**

General Resources	Tools and Equipment	Materials and Supplies
<ul style="list-style-type: none"> <li>• Stationery (pen and sketching books)</li> <li>• Poultry shackles</li> <li>• Scalpels</li> <li>• Cleaning materials and equipment</li> <li>• Disinfectants</li> <li>• Sanitizers</li> <li>• Disposal pits</li> <li>• Weighing scales</li> <li>• Debeaking machine</li> <li>• Wing stab needles</li> <li>• Strategic poultry drugs – preventative and emergency</li> </ul>	<ul style="list-style-type: none"> <li>• Automatic vaccination syringes</li> <li>• Syringes and needles</li> <li>• Vaccines</li> <li>• Poultry dewormers</li> <li>• Coccidials</li> <li>• Poultry acaricides</li> <li>• Poultry dusts</li> <li>• Footbaths</li> <li>• Spayers</li> <li>• Waste management equipment and material</li> <li>• Litter rakes</li> <li>• Litter bins</li> <li>• Rodenticides</li> <li>• Rodent control traps</li> </ul>	<ul style="list-style-type: none"> <li>• Flock health records</li> <li>• Water</li> <li>• PPEs</li> <li>• Standard work place procedures</li> <li>• Animal diseases act Cap 365, legal notice 47 of 1985</li> <li>• NEMA regulations and audits</li> <li>• Livestock Production Manual</li> </ul>
<ul style="list-style-type: none"> <li>• 25 Desktop computers/laptops</li> </ul>	25 mobile phones	Flashcards
<ul style="list-style-type: none"> <li>• Internet connection</li> </ul>	Telephone	Flip charts
<ul style="list-style-type: none"> <li>• 1 Projector</li> <li>• 1 Printer</li> </ul>		2 packets of assorted colors of whiteboard marker pens
<ul style="list-style-type: none"> <li>• 1 Whiteboard</li> </ul>		Printing papers
<ul style="list-style-type: none"> <li>• 5 Business plan templates</li> <li>• 1 Overhead projectors</li> <li>• Internet</li> <li>• Video clips</li> <li>• 5 Newspapers and Handouts</li> </ul>		<ul style="list-style-type: none"> <li>• 25 sets of Writing materials Stationery</li> <li>• Charts</li> </ul>

- 5 Business Journals