

## **HANDLING HATCHED CHICKS**

**ISCED UNIT CODE:** 0811 351 03 A

**TVETCDACC UNIT CODE:** POL/CU/HT/CR/03/4/MA

### **Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Handle Hatched Chicks

**Duration of Unit:** **170** hours

### **Unit Description**

This unit specifies the competencies required to handle hatched chicks. It involves performing chick sexing, trimming chick beaks, monitoring chick health, packaging poultry chicks and managing unwanted chicks. It also entails managing hatchery biosecurity measures and maintaining hatchery 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.	Perform chick sexing	30
2.	Trim chick beaks	20
3.	Monitor chick health	30
4.	Package poultry chicks	30
5.	Manage unwanted chicks	20
6.	Mange hatchery biosecurity measures	30
7.	Maintain hatchery records	10
<b>Total</b>		<b>170</b>

## Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Perform chick sexing	1.1. Sexing of poultry <ul style="list-style-type: none"> <li>1.1.1. Vent sexing</li> <li>1.1.2. Initial relative feather length</li> <li>1.1.3. Plumage colour sexing</li> <li>1.1.4. Combs and wattles sexing</li> </ul> 1.2. Factors considered in separation of poultry into different sexes	<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>
2. Trim chick beaks	2.1. Beak trimming equipment 2.2. Beak trimming procedure	<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. Monitor chick health	3.1. Factors considered when developing chick vaccination schedule <ul style="list-style-type: none"> <li>3.1.1. Disease prevalence</li> <li>3.1.2. Duration of immunity (lifetime or partial)</li> <li>3.1.3. Disease severity</li> <li>3.1.4. Economic importance</li> </ul> 3.2. Types of vaccines (live attenuated, inactivated, vectored/recombinant) 3.3. Vaccine handling 3.4. Refrigeration methods 3.5. Record keeping	<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>

	<p>3.6. Vaccination sites and routes</p> <p>3.7. Vaccine intake</p> <p>3.8. Animal welfare regulations</p> <p>3.9. Chick handling</p> <p>3.10. Recording vaccination details</p> <ul style="list-style-type: none"> <li>3.10.1. Type of vaccine</li> <li>3.10.2. Type of disease vaccinated against</li> <li>3.10.3. Age of poultry</li> </ul> <p>3.11. Date and time of vaccination</p> <p>3.12. Date of manufacture and expiry of vaccine</p> <p>3.13. Vaccine source and batch number</p> <p>3.14. Route of chick vaccine administration (IM, sub-cutaneous, intra nasal, intra ocular or spray, follicular swabbing, drinking water application, scarification)</p> <p>3.15. Number of birds vaccinated</p> <p>3.16. Identification of birds (flock, type, breed)</p> <p>3.17. Signs of disease in chicks</p> <p>3.18. Isolation of sick chicks</p>	
4. Package poultry chicks	<p>4.1. Chick packaging materials</p> <ul style="list-style-type: none"> <li>4.1.1. Types (cartons, carton liners etc)</li> <li>4.1.2. Labelling</li> <li>4.1.3. Loading capacities</li> </ul> <p>4.2. Chick transportation</p> <ul style="list-style-type: none"> <li>4.2.1. Transportation conditions (Temperature, humidity, air speed)</li> </ul>	<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>

	<p>4.2.2. Transportation duration</p> <p>4.3. Poultry welfare</p> <p>4.4. Dispatch methods and procedures</p> <p>    4.4.1. Order processing</p> <p>    4.4.2. Distribution channels</p>	
5. Manage unwanted chicks	<p>5.1. Categories of unwanted chicks</p> <p>    5.1.1. Culled chicks</p> <p>    5.1.2. Unhealthy chicks</p> <p>    5.1.3. Deformed chicks</p> <p>    5.1.4. Males in commercial layers</p> <p>5.2. Chick sorting</p> <p>5.3. Modes of disposal</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>
6. Maintain hatchery biosecurity measures	<p>6.1. Biosecurity in a poultry hatchery firm</p> <p>    6.1.1. Measures</p> <p>    6.1.2. Standard operational procedures (SOPs)</p> <p>    6.1.3. Regulatory bodies</p> <p>6.2. Designing biosecurity structures and equipment installation</p> <p>6.3. Occupational safety and health procedures in poultry hatchery firm</p> <p>6.4. Hatchery firm waste management</p> <p>    6.4.1. Eggs unsuitable for hatching</p> <p>    6.4.2. Hatchery debris (fluff, egg shells, unhatched eggs)</p> <p>    6.4.3. Dead chicks</p> <p>    6.4.4. Litter (droppings, feathers, spilt feed)</p> <p>6.5. Other wastes (plastics, glass, paper,</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>

	metals and fluids) 6.6. Environment protection regulations 6.7. Hatchery operations licensing	
7. Maintain hatchery records	7.1. Poultry hatchery chick records 7.2. Number of chicks hatched, vaccinated, sexed (males and females), dead, deformed, weaklings, 7.3. Health records – vaccination 7.4. Dispatch records – orders, dates, numbers (chicks) 7.5. Data entry, analysis and interpretation 7.6. Frequency of recording 7.7. Record maintenance (updating and storage)	<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>

### Suggested Methods of Instruction

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

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### Recommended Resources for 25 Trainees

#### Functional hatchery farm with the following:

- |                 |                          |                     |
|-----------------|--------------------------|---------------------|
| • Hatchery unit | • Hatchery equipment and | • Hatchery pest and |
|-----------------|--------------------------|---------------------|

<ul style="list-style-type: none"> <li>Biosecurity structures and materials (gate barriers, foot baths, spray races / showers, disinfectants, sanitizers, detergents, fumigants, water and vaccination kits)</li> <li>Labels or labelling materials for egg trays, trolleys, chick baskets and packaging material</li> <li>Stationery</li> <li>Calculators and / or computers</li> </ul>	<ul style="list-style-type: none"> <li>tools (fumigators, foggers/sprayers, refrigerators, hatching machines, setters / incubators, candling machines, egg crates and trays, egg trolleys, hatching baskets, chick boxes, chick labels, identification kits, macerators and renderers, gas cylinders, vacuum cleaners)</li> </ul>	<ul style="list-style-type: none"> <li>predator control equipment and materials</li> <li>Hatchery operations manuals</li> <li>Livestock production manuals</li> <li>Journal of poultry science</li> <li>Chick feed</li> <li>Feed stores</li> </ul>
<ul style="list-style-type: none"> <li>25 Desktop computers/laptops</li> </ul>	<p>25 mobile phones</p>	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