****

**THE REPUBLIC OF KENYA**

**NATIONAL** **OCCUPATIONAL STANDARDS**

**FOR**

**BROILER PRODUCTION OPERATOR**

**LEVEL 4**



TVET CDACC

P.O. BOX 15745-00100

NAIROBI

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# FOREWORD

Agriculture plays an important role in Kenya’s economy. This importance is reflected in the positive correlation between growth in the agricultural sector and that of the national economy. Kenya’s economy registered a growth of 3.3% between 2013 and 2014, agriculture was the leading sector which contributed 27.3% to the Gross Domestic Product (GDP) in 2014. In this regard, crops, animal production, and fishing and aquaculture contributed 19.7%, 4.9% and 0.8% respectively (25.4%), while the balance of 1.9% came from forestry and other support activities. Like most countries in Africa, majority (61%) of Kenya’s population rely on agriculture for employment despite the challenges of climate change, soil degradation and increasing population pressure. In order to enhance the productivity of the work force and ensure a productive and innovative agricultural sector, as well as food security, meaningful education and training of all people involved is of utmost importance.

In the past Agricultural Technical and Vocational Education and Training (ATVET) did not always receive adequate attention from policy-makers. The education system emphasized on acquiring knowledge rather than skills development. This resulted to most farmers and the stakeholders in agriculture lacking the requisite skills. Current reforms in the education system aim at addressing this challenge by reforming the curriculum, its delivery and its assessment. These reforms can only be achieved through Competency Based Education and Training (CBET) approach. The reforms demand for a competency-based curriculum which is a tool that will aid in the development of skills, knowledge and attitudes of the farmers. Such training will improve crop and animal husbandry skills which will in turn contribute to increased productivity and improvement of agriculture in the country. Ideally, this education and training will not only include farmers, but all professions involved in agriculture

These Occupational Standards as such presents us with a base for developing curricula for training in the poultry subsector and presents the basis for content development for the curriculum in Broiler Production Operations Level 4. It will lead to a situation where the trainees will gain skills required in their occupation/jobs. The curriculum to be developed based on these OS will revolutionize the Agriculture sector in Kenya.

**PRINCIPAL SECRETARY,
STATE DEPARTMENT OF LIVESTOCK**

**MINISTRY OF AGRICULTURE, LIVESTOCK, FISHERIES AND IRRIGATION**

# PREFACE

Poultry farming has been on the increase in the last ten years due to diminishing land size, high population density and the escalating un-employment levels in formal sector. It contributes to the lives of 21 million Kenyans and 6.1% of the agricultural GDP. There are approximately 32 million birds in Kenya out of which 76% are free ranging indigenous chicken, 8% are broilers and 14% commercial layers. The indigenous poultry production involves 75% of rural households. As of 2011, it was reported that approximately 71% of eggs and poultry meat in Kenya are derived from indigenous poultry. In 2006, it was reported that commercial poultry production constitutes 23.8% of the total poultry population, with broilers representing 16.2% and layers another 7.8%. Other poultry species such as ducks, guinea fowl, Quails and turkeys comprise about 2.2% of the total poultry population. The industry is therefore is supposed to play a strategic role in the ongoing socio economic pillar under the vision 2030.

However, the industry has seen slow growth over the past years due to lack of skills and increasing costs of production. This is despite the fact that the sub-sector contributes positively to wealth creation, poverty alleviation, and gender equity especially in the rural areas. The industry contributes to the macro economy by generating incomes for the value chain actors, creation of employment opportunities for rural people and provision of source of protein for poor families and manure for their gardens.

To address the challenge of lack of skilled labour, a Competency Based curriculum development process was initiated. Using the DACUM methodology Job or Occupational Analysis Chart and later these Occupation standards were developed in collaboration with the industry players and guided by Curriculum Development Assessment and Certification Council (CDACC). 11 Jobs/Occupations were identified. The information generated from the task analysis was also used to develop the Units of competences for each job. This was done by experts drawn from Technical training institutions, Universities and industry representatives. The result of the analysis was to the realization of Occupational Standards for 11 jobs along the poultry value chain.

The OS were presented to the Poultry Sector Skills Advisory Committee (PSSAC) who made recommendations for improvement and later submitted to the next stages of approval by the CDACC. The OS development process was a rigorous exercise that involved wide consultations with various stakeholders like expert workers with the aim of enriching it and promoting its acceptance. The end product is a rich and well thought tool that will be used to develop Broiler Production Operation Level 4 curriculum that shall deliver Competence Based Training and produce competent graduates that can employed, entrepreneurs or self-employed in the poultry industry.

**CHAIRMAN, TVET CDACC.**

# ACKNOWLEDGEMENTS

These occupational standards were developed through the combined efforts of different stakeholders in the poultry subsector namely private practitioners, Dairy Training Institute (DTI), Animal Health Training institutes (AHITI), regulators and key state departments. We wish to acknowledge the invaluable contribution received from the private sector industry players who provided inputs towards the development of these occupational standards against which the curriculum was developed.

With the Occupational /Job Analysis charts in hand, the stakeholders provided technical inputs towards the development and completion of this OS. They sat through many hours putting together all the knowledge, skills and attitudes that a Poultry industry worker would require in effectively performing his/ her duties and tasks as per the occupational standards developed.

We are most sincerely thankful to the heads of these institutions who released their staff to join in this important course. Our gratitude goes to the various facilitators that moderated several workshops and ensured that all deliberations and outputs were captured and compiled. These persons did not only demonstrate patience, but also provided leadership by motivating and guiding the groups towards the finalization of this curriculum. We cannot forget to thank the government agencies that regulate the Technical and Vocational Education and Training (TVET) system namely TVET Authority and CDACC through whom guidance and support was provided on this curriculum development.

We are greatly indebted to the Food Security and Drought Resilience Programme (FSDRP) with support of the German Development Cooperation (GIZ), which enabled the implementation of this curriculum development process through the Food Security Project (FSP). In the same breath, we are indebted to the National Coordinator of the GIZ Comprehensive Africa Agricultural Development Programme (CAADP) ATVET project who was instrumental in enabling the smooth and close cooperation between the project and the key government ministries namely Ministry of Agriculture, Livestock, Fisheries and Irrigation (MoALF&I) and Ministry of Education (MoE).

Finally, we are grateful to any other person, institution, organization or company who played any role in making this process successful but has not been mentioned. We dearly acknowledge your contribution and support.

**CHAIRPERSON**

**POULTRY SECTOR SKILLS ADVISORY COMMITTEE (PSSAC)**

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# ABBREVIATIONS AND ACRONYMS

|  |  |
| --- | --- |
| 2D | 2 Dimensional |
| 3D | 3 Dimensional |
| AHITI | Animal Health and Industry Training Institute |
| ATVET | Agricultural Technical and Vocational Education and Training |
| AU IBAR | African Union – InterAfrican Bureau for Animal Resources |
| CAADP | Comprehensive Africa Agricultural Development Programme |
| CAD | Computer Assisted Drawing |
| CBET | Competency Based Education and Training |
| CDACC  | Curriculum Development Assessment and Certification Council |
| CEO | Chief Executive Officer |
| DACUM | Develop a Curriculum |
| DTI | Dairy Training Institute |
| DVS | Director of Veterinary Services |
| EMCA | Environmental Management and Conservation Act |
| EMS | Environmental Management Systems |
| FSDRP | Food Security and Drought Resilience Programme |
| FSP | Food Security Project |
| GDP | Gross Domestic Product |
| GMP | Good Manufacturing Practices |
| HACCP | Hazard Analysis Critical Control Point |
| ICT | Information Communication Technology  |
| IM | Intra Muscular |
| KCSE | Kenya Certificate of Secondary Education |
| KNQA  | Kenya National Qualifications Authority |
| KNQF | Kenya National Qualifications Framework |
| KSPCA | Kenya Society for the Care and Protection of Animals |
| LCD | Liquid Crystal Display |
| MAP | Modified Atmosphere Packaging |
| MoALF&I | Ministry of Agriculture, Livestock, Fisheries and Irrigation |
| MoE | Ministry of Education  |
| NCA | National Construction Authority |
| NEMA | National Environmental Management Authority |
| NEPAD | New Partnerships for African Development |
| NGO | Non-Governmental Organization |
| NPCA | NEPAD Planning and Coordinating Agency |
| OIE | World Organization for Animal Health |
| OS | Occupational Standard |
| OSH | Occupational Safety and Health |
| PPE | Personal Protective Equipment |
| PSSAC | Poultry Sector Skills Advisory Committee |
| SOP | Standard Operation Procedures |

#

# **KEY TO UNIT CODE**

 **POL /OS/ BR /BC /01/4/ A**

Industry or sector

Occupational Standards

Occupational area

Type of competency

Competency number

Competency level

Version control

# OVERVIEW

Broiler Production Operator Level 4 qualification consists of units of competency that a person must achieve to construct poultry structures, manage broiler chick brooding, manage broiler finishers, produce broiler feeds and manage poultry health and welfare.

The units of competency comprising Broiler Production Operator Level 4 qualification include the following:

**BASIC UNITS OF COMPETENCY**

|  |  |
| --- | --- |
| **Unit Code** | **Unit Title** |
| POL/OS/BR/BC/01/4/A | Demonstrate Communication Skills |
| POL/OS/BR/BC/02/4/A | Demonstrate Numeracy Skills |
| POL/OS/BR/BC/03/4/A | Demonstrate Digital Literacy |
| POL/OS/BR/BC/04/4/A | Demonstrate Entrepreneurial Skills |
| POL/OS/BR/BC/05/4/A | Demonstrate Employability Skills |
| POL/OS/BR/BC/06/4/A | Demonstrate Environmental Literacy |
| POL/OS/BR/BC/07/4/A | Demonstrate Occupational Safety and Health Practices |

**CORE UNITS OF COMPETENCY**

|  |  |
| --- | --- |
| **Unit Code** | **Unit Title** |
| POL/OS/BR/CR/01/4/A | Construct Poultry Structures |
| POL/OS/BR/CR/02/4/A | Manage Broiler Brooding |
| POL/OS/BR/CR/03/4/A | Manage Broiler Finishers |
| POL/OS/BR/CR/04/4/A | Produce Broiler Feeds |
| POL/OS/BR/CR/05/4/A | Manage Broiler Health and Welfare |

# BASIC UNITS OF LEARNING

# DEMONSTRATE COMMUNICATION SKILLS

**UNIT CODE:** POL/OS/BR/BC/01/4/A

**UNIT DESCRIPTION**

This unit covers the competencies required demonstrate communication skills. It involvesobtaining and conveying workplace information, completing relevant work-related documents, communicating information about workplace processes, leading workplace discussion and communicating workplace issues.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT** These describe the key outcomes which make up workplace function | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms*** ***are elaborated in the Range*** |
| 1. Obtain and convey workplace information
 | 1. Specific and relevant information is accessed from ***appropriate sources*** based on standard procedures
2. Effective questioning, active listening and speaking skills are used to gather and convey information based on communication needs
3. Appropriate ***medium*** is used to transfer information and ideas in accordance with workplace guidelines
4. Appropriate non- verbal communication is used as per the communication needs
5. Appropriate lines of communicationwith supervisors and colleagues are identified and followed based on workplace requirements
6. Location and storage of information is undertaken according to workplace procedures
	1. Personal interaction is carried out clearly and concisely according to workplace requirements
 |
| 1. Complete relevant work-related documents
 | * 1. Range of forms relating to conditions of employment are completed according to workplace procedures
	2. Workplace data is recorded based on workplace requirements
	3. Errors in recording information are identified and acted upon in accordance with workplace policies
	4. Reporting requirements are completed according to organizational guidelines
 |
| 1. Communicate information about workplace processes
 | 1. Information sources are identified according to workplace procedures
2. ***Methods of communication*** are selected based on workplace guidelines
3. Multiple operations are communicated according to workplace structure
4. Work-related questions are asked and responded based on set protocols
5. Information is selected and organized according to workplace requirements
6. Verbal and written reporting is undertaken as per workplace requirements
7. Communication is maintained according to workplace standards
 |
| 1. Lead workplace discussions
 | 1. Response to workplace issues are sought and provided as per workplace protocol
2. Constructive contributions are made based on ***workplace discussions***
3. Workplace objectives and action plan are communicated according to workplace requirements
 |
| 1. Identify and communicate issues arising in the workplace
 | 1. Issues and problems are identified as per workplace guidelines
2. Problems and issues in the workplace are organized according to workplace operations
3. Dialogue is initiated with appropriate personnel as per workplace structure
4. Problems and issues raised are communicated as per the workplace reporting procedures
 |

**RANGE**

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Methods of communication mayinclude but not limited to:
 | * Non-verbal gestures
* Verbal
* Face to face
* Two-way radio
* Speaking to groups
* Using telephone
* Written
* Internet
 |
| 1. Workplace discussion may include but not limited to:
 | * Coordination meetings
* Toolbox discussion
* Peer-to-peer discussion
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Communication
* Active listening
* Interpretation
* Negotiation
* Writing

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Organization requirements for written and electronic communication methods
* Effective verbal communication methods
* Report writing
* Effective questioning techniques (clarifying and probing)
* Workplace etiquette

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical aspects of Competency
 | Assessment requires evidence that the candidate: 1. Dealt with a range of communication/information at one time
2. Made constructive contributions in workplace issues
3. Sought workplace issues effectively
4. Responded to workplace issues promptly
5. Presented information clearly and effectively in written form
6. Used appropriate sources of information
7. Asked appropriate questions
8. Provided accurate information
 |
| 1. Resource Implications
 | 1. Access to relevant workplace where assessment can take place
2. Appropriately simulated environment where assessment can take place
3. Materials relevant to the proposed activity or tasks
 |
| 1. Methods of Assessment
 | 1. Third-party reports
2. Portfolio
3. Interview
4. Written tests
5. Observation
6. Oral questioning
 |
| 1. Context of Assessment
 | Competency may be assessed 1. On the job
2. Off the job
3. During industrial attachment
 |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE NUMERACY SKILLS

**UNIT CODE:** POL/OS/BR/BC/02/4/A

**UNIT DESCRIPTION**

This unit covers the competencies required to demonstrate numeracy skills. It involves identifying and using whole numbers and simple fractions, decimals and percentages for work, identifying, measuring and estimating familiar quantities for work, reading and using familiar maps, plans and diagrams for work, identifying and describing common 2D and some 3D shapes for work, constructing simple tables and graphs for work using familiar data and identifying and interpreting information in familiar tables, graphs and charts for work

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT** These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms*** ***are elaborated in the Range.*** |
| 1. Identify and use whole numbers and simple fractions, decimals and percentages for work
 | 1. Simple fractions, decimals and percentages identified and interpreted as per standard operating procedures.
2. Understanding of place value by organising numbers from smallest to largest demonstrated as SOPs
3. Required numerical information located and decision made on appropriate method to solve a problem as per SOPs
4. Limited range of calculations performed using the four operations using SOPs
5. Links between operations described as per SOPs
6. Estimations made to check reasonableness of results of problem-solving process as SOPs
7. Numerical information recorded, and the result of the task communicated using informal and some formal language and symbolism as per workplace procedures
 |
| 1. Identify, measure and estimate familiar quantities for work
 | 1. Measurement information in workplace tasks and texts identified and interpreted as per workplace procedures.
2. Familiar units of measurement needed for tasks is identified as per measurements manuals/charts
3. Familiar and simple amounts estimated as per workplace procedures.
4. Appropriate measuring equipment selected as per SOPs
5. ***Simple measuring equipment*** graduated in familiar units to measure relevant quantities is used as per graduation manuals.
6. Calculation done using familiar units of measurement as per SOPs
7. Measurements and results checked against estimates as per job specifications.
8. Results are recorded or reported as per workplace procedures
9. Results relevant to the workplace task are communicated using informal and some formal mathematical and general language as per workplace procedures.
 |
| 1. Read and use familiar maps, plans and diagrams for work
 | 1. Items and places are in familiar maps, plans and diagrams as per SOPs
2. Common symbols and keys recognised in familiar maps, plans and diagrams as per SOPs
3. Understanding of direction and location demonstrated by describing the location of objects, or route to familiar places as per SOPs
4. Instructions to locate familiar objects or places are given and followed as per SOPs
5. Informal and some formal oral mathematical language and symbols are used as per SOPs
 |
| 1. Identify and describe common 2D and some 3D shapes for work
 | 1. ***Common 2D shapes and some common 3D shapes*** in familiar situations are identified and named as per job requirements
2. Common 2D shapes and designs are compared and classified as per SOPs
3. Informal and some formal language used to describe common two-dimensional shapes and some common three-dimensional shapes in accordance with workplace procedures.
4. Simple items used to draw or construct common 2D shapes as per workplace procedures.
5. Common 3D shapes matched to their 2D sketches or nets as per SOPs
 |
| 1. Construct simple tables and graphs for work using familiar data
 | 1. Common types of graphs are identified and named as per SOPs
2. Familiar data to be collected is determined in accordance with job specifications.
3. A method to collect data is selected in accordance with workplace procedures.
4. A small amount of simple familiar data is collected as per workplace procedures
5. One or two variables determined from the data collected as per SOPs.
6. Data ordered and collated as per standard operating procedures.
7. A table is constructed and data entered as per SOPs
8. Graphs are constructed using data from table as per job specifications
9. Results are promptly checked as per workplace procedures
10. Graph information related to work is reported or discussed using informal and some formal mathematical and general language as per workplace procedures
 |
| 1. Identify and interpret information in familiar tables, graphs and charts for work
 | 1. Simple tables are identified in familiar texts and contexts in accordance with workplace procedures
2. Title, headings, rows and columns located in familiar tables as per SOPs
3. Information and data in simple tables identified and interpreted as per workplace procedures.
4. Information is related in accordance with workplace tasks
5. Familiar graphs and charts are identified in familiar texts and contexts as per SOPs
6. Title, labels, axes, scale and key from familiar graphs and charts are located as per SOPs
7. Information and data in familiar graphs and charts are identified and interpreted as per job requirements
8. Information is related to relevant workplace tasks as per job requirements.
 |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Simple measuring equipment may include but not limited to:
 | * Rulers
* Watches/clocks
* Scales
* Thermometers
* AVO meter
 |
| 1. Common 2D shapes and common 3D shapes may include but not limited to:
 | * Round
* Square
* Rectangular
* Triangle
* Sphere
* Cylinder
* Cube
* Polygons
* Cuboids
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Measuring
* Logical thinking
* Computing
* Drawing of graphs
* Applying mathematical formulas
* Analytical

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Types of common shapes
* Differentiation between two dimensional shapes / objects
* Formulae for calculating area and volume
* Types and purpose of measuring instruments
* Units of measurement and abbreviations
* Fundamental operations (addition, subtraction, division, multiplication)
* Rounding techniques
* Types of fractions
* Different types of tables and graphs
* Meaning of graphs, such as increasing, decreasing, and constant value
* Preparation of basic data, tables & graphs

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical aspects of Competency
 | Assessment requires evidence that the candidate:* 1. Simple fractions, decimals and percentages are correctly identified and interpreted
	2. Performed a limited range of calculations using the 4 operations
	3. Performed calculations using familiar units of measurement
	4. Recognised common symbols and keys in familiar maps, plans and diagrams
	5. Constructed simple tables and graphs using familiar data
	6. Identified and interpret information in familiar tables, graphs and charts
 |
| 1. Resource Implications
 | 1. Access to relevant workplace where assessment can take place
2. Appropriately simulated environment where assessment can take place
3. Materials relevant to the proposed activity or tasks
 |
| 1. Methods of Assessment
 | Competency may be assessed through:1. Written Test
2. Interview
3. Oral Questioning
 |
| 1. Context of Assessment
 | Competency may be assessed 1. On the job
2. Off the job
3. During industrial attachment
 |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE DIGITAL LITERACY

**UNIT CODE:** POL/OS/BR/BC/03/4/A

**UNIT DESCRIPTION**

This unit covers the competencies required to demonstrate digital literacy in a working environment. It entails identifying computer software and hardware, applying security measures to data, hardware, software, applying computer software in solving task sand applying internet and email in communication at workplace.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT** These describe the key outcomes which make up workplace function | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms*** ***are elaborated in the Range*** |
| 1. Identify computer software and hardware
 | * 1. ***Appropriate computer software*** is identified according to manufacturer’s specification
	2. ***Appropriate computer hardware*** is identified according to manufacturer’s specification
 |
| 1. Apply security measures to data, hardware, software
 | * 1. ***Data security and privacy are classified*** in accordance with the technological situation
	2. ***Security and control measures*** are applied in accordance with laws governing protection of ICT
	3. Computer threats and crimes are detected as per information security management guidelines.
	4. Protection against computer crimes is undertaken in accordance with laws governing protection of ICT
 |
| 1. Apply computer software in solving tasks
 | * 1. Basic word processing concepts are applied in resolving workplace tasks
	2. Word processing utilities are applied in accordance with workplace procedures
	3. Data is manipulated on worksheet in accordance with office procedures
 |
| 1. Apply internet and email in communication at workplace
 | * 1. Electronic mail is applied in workplace communication in accordance with office procedures
	2. Office internet functions are defined and executed in accordance with office procedures
	3. Network configuration and uses are determined in accordance with office operations procedures
 |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| **Range** | **Variable** |
| 1. Appropriate computer software may include but not limited to:
 | * Operating system
* MS office
* Web browser
* Media players
 |
| 1. Appropriate computer hardware may include but not limited to:
 | * Computer Case
* Monitor
* Keyboard
* Mouse
* Hard Disk Drive
* Motherboard
* Video Card
 |
| 1. Data security and privacy may include but not limited to:
 | * Confidentiality
* Cloud computing
* Confidentiality
* Cyber terrorism
* Integrity -but-curious data serving
 |
| 1. Security and control measures may include but not limited to:
 | * Countermeasures and risk reduction
* Cyber threat issues
* Risk management
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Analytical
* Interpretation
* Typing
* Communication
* Computing

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Input and output devices
* Central processing Unit (CPU)
* Peripherals
* Storage Media
* Software concept
* Types of concept
* Function of computer software
* Data security and privacy
* Security threats and control measures
* Computer crimes
* Detection and protection of computer crimes
* Laws governing protection of ICT
* Word processing;
* Functions and concepts of word processing.
* Documents and tables creation and manipulations
* Mail merging
* Word processing utilities
* Spread sheet;
* Meaning, formulae, function and charts, uses, layout, data manipulation and application to cell
* Networking and Internet;
* Meaning, functions and uses of networking and internet.
* Electronic mail and world wide web
* Emerging trends and issues in ICT;
* Identify and apply emerging trends and issues in ICT
* Challenges posed by emerging trends and issues

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency
 | Assessment requires evidence that the candidate:* 1. Identified input, output, CPU and storage media devices of computers in accordance to computer specification
	2. Identified concepts, types and functions of computer software according to operation manual
	3. Identified and controlled security threats
	4. Detected and protected computer crimes
	5. Applied word processing in office tasks
	6. Prepared work sheet and applied data to the cells in accordance to workplace procedures
	7. Used Electronic Mail for office communication as per workplace procedure
	8. Applied internet and World Wide Web for office tasks in accordance with office procedures
	9. Applied laws governing protection of ICT
 |
| 1. Resource Implications
 | * 1. Access to relevant workplace where assessment can take place
	2. Appropriately simulated environment where assessment can take place
	3. Materials relevant to the proposed activity or tasks
 |
| 1. Methods of Assessment
 | Competency may be assessed through:* 1. Written tests
	2. Practical assignment
	3. Interview
	4. Oral Questioning
	5. Observation
 |
| 1. Context of Assessment
 | Competency may be assessed 1. On the job
2. Off the job
3. During industrial attachment
 |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE ENTREPRENEURIAL SKILLS

**UNIT CODE:** POL/OS/BR/BC/04/4/A

**UNIT DESCRIPTION**

This unit covers the competencies required demonstrate entrepreneurial skills. It involvescreating and maintaining small scale business, establishing small scale business customer base, managing small scale business and growing/ expanding small scale business.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**These describe the **key outcomes** which make up workplace function. | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms are elaborated in the Range*** |
| 1. Create and maintain small scale business
 | 1. Generation and evaluation of business ideas is undertaken in accordance with the existing procedure
2. Competencies are matched with business opportunities in accordance with business practices.
3. Procedure for starting a small business is identified as per the legal requirements
4. SWOT/ PESTEL analysis and or industrial survey is carried out according to office procedures
5. ***Business operations*** are monitored and controlled following established procedures.
6. Quality assurance measures are implemented in accordance with the business practices.
7. Good relations are maintained with staff/workers as per the workplace policies.
8. Policies and procedures on occupational safety and health and environmental concerns are constantly observed as per the workplace policies
 |
| 1. Establish small scale business customer base
 | 1. Good customer relations are maintained in accordance with office procedures
2. New customers and markets are identified, explored and reached out to according to the marketing plan
3. Promotions/Incentives are offered to loyal customers in accordance with office procedures
4. Additional products and services are evaluated and tried in accordance with marketing strategy
5. Customer record is maintained in accordance with office procedures
 |
| 1. Manage small scale business
 | 1. Enterprise is built up and sustained in line with judicious control of cash flows.
2. Profitability of enterprise is ensured as per the internal controls.
3. Unnecessary or lower-priority expenses and purchases are avoided as per the marketing strategy
4. Basic cost-benefit analysis are undertaken in accordance with office procedures
5. Basic financial management are undertaken in accordance with office procedures
6. Basic financial accounting in undertaken in accordance with office procedures
7. Business ***internal controls*** are implemented in accordance with office procedure
8. Setting business priorities and strategies is carried out according to office procedures
9. Preparation and interpretation of basic financial statements is undertaken in accordance with set procedures
10. Preparation of business plansfor small business is undertaken in accordance with ***business strategy***
11. Business Social Responsibility is maintained in accordance with Standard Operations Procedures (SOP)
 |
| 1. Grow/ expand small scale business
 | 1. Prepared business growth strategy for small sale business in accordance with office procedures
2. Incorporated technology in small scale business growth in accordance with technological trends
3. Emerging issues and trends are considered in accordance with business growth strategy
4. Built audience interest in product/service according to growth strategy
5. Boosted cooperate communication according to business ***communication strategy***
 |

**RANGE**

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range**  |
| 1. Business operations may include but not limited to:
 | * Purchasing
* Accounting/administrative
* Work production/operations/sales
* Marketing
 |
| 1. Internal control may include but not limited to:
 | * Accounting systems
* Financial statements/reports
* Cash management
* Human resource management
 |
| 1. Business Strategy may include but not limited to:
 | * Management of wastages
* Environmental Conservation
 |
| 1. Communication strategy may include but not limited to:
 | * Blue print of exchange of information
* Technology and exchange of information
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Marketing
* Advertising
* Basic bookkeeping
* Accounting
* Communication

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Generation and evaluation of business ideas
* Legal requirements for starting a small business
* SWOT/ PESTEL analysis
* Occupational Safety and Health
* Public relations concepts
* Business plan
* Business financing
* Marketing strategies
* Business management and control
* Production/ operation process
* Product promotion strategies
* Market and feasibility studies
* Business ethics
* Building customer relations
* Business models and strategies
* Types and categories of businesses
* Business internal controls
* Relevant national and local legislation and regulations
* Basic quality control and assurance concepts
* Building relations with customer and employees
* Building competitive advantage of the enterprise
* Business growth strategies

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |  |
| --- | --- | --- |
| 1. Critical aspects of Competency
 | Assessment requires evidence that the candidate:

|  |
| --- |
| 1. Demonstrated entrepreneurial skills
2. Demonstrate competencies to create a small-scale business
3. Demonstrated ability to conceptualize and plan a micro/small business
4. Grew customer base for the small-scale business
5. Demonstrated ability to manage/operate a micro/small-scale business
6. Demonstrated competencies to grow a micro/small-scale business
 |

 |
| 1. Resource Implications
 |

|  |
| --- |
| The following resources should be provided:  |

1. Assessment location
2. Case studies on micro/small-scale enterprises
3. Assessment materials
 |
| 1. Methods of Assessment
 | Competency in this unit may be assessed through:

|  |  |
| --- | --- |
| 1. Written tests
2. Observation
3. Oral questioning
4. Portfolio
5. Projects
 |  |

 |
| 1. Context of Assessment
 | Competency may be assessed 1. On the job
2. Off the job
3. During industrial attachment
 |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE EMPLOYABILITY SKILLS

**UNIT CODE: POL/OS/BR/BC/05/4/A**

**UNIT DESCRIPTON**

This unit covers competencies required to demonstrate employability skills. It involves conducting self-management, demonstrating critical safe work habits, demonstrating workplace learning and workplace ethics.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms are elaborated in the Range*** |
| 1. Conduct self-management
 | 1. Personal vision, mission and goals are formulated based on potential and in relation to organization objectives
2. Emotional intelligence is demonstrated as per workplace requirements.
3. Individual performance is evaluated and monitored according to the agreed targets.
4. Assertiveness is developed and maintained based on the requirements of the job.
5. Accountability and responsibility for own actions are demonstrated based on workplace instructions.
6. Self-esteem and a positive self-image are developed and maintained based on values.
7. Time management, attendance and punctuality are observed as per the organization policy.
8. Goals are managed as per the organization’s objective
9. Self-strengths and weaknesses are identified based on personal objectives
 |
| 1. Demonstrate critical safe work habits
 | 1. Stress is managed in accordance with workplace policy.
2. Punctuality and time consciousness is demonstrated in line with workplace policy.
3. Personal objectives are integrated with organization goals based on organization’s strategic plan.
4. ***Resources*** are utilized in accordance with workplace policy.
5. Work priorities are set in accordance to workplace goals and objectives.
6. Leisure time is recognized and utilized in line with personal objectives.
7. ***Drugs and substances of abuse*** are identified and avoided based on workplace policy.
8. HIV and AIDS prevention awareness is demonstrated in line with workplace policy.
9. Safety consciousness is demonstrated in the workplace based on organization safety policy.
10. ***Emerging issues*** are identified and dealt with in accordance with organization policy.
 |
| 1. Demonstrate workplace learning
 | * 1. Learning opportunities are sought and managed based on job requirement and organization policy.
	2. Improvement in performance is demonstrated based on courses attended.
	3. Application of learning is demonstrated in both technical and non-technical aspects based on requirements of the job
	4. Time and effort is invested in learning new skills based on job requirements
	5. Initiative is taken to create more effective and efficient processes and procedures in line with workplace policy.
	6. New systems are developed and maintained in accordance with the requirements of the job.
	7. Awareness of personal role in workplace ***innovation*** is demonstrated based on requirements of the job.
 |
| 1. Demonstrate workplace ethics
 | 1. Policies and guidelines are observed as per the workplace requirements
2. Self-worth and professionalism is exercised in line with personal goals and organizational policies
3. Code of conduct is observed as per the workplace requirements
4. Integrity is demonstrated as per legal requirement
 |

**RANGE**

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Range** | **Variable** |
| 1. Personal objectives may include but not limited to:
 | * Long term
* Short term
* Broad
* Specific
 |
| 1. Feedback may include but not limited to:
 | * Verbal
* Written
* Informal
* Formal
 |
| 1. Team may include but not limited to:
 | * Small work group
* Staff in a section/department
* Inter-agency group
 |
| 1. Drug and substance abuse may include but not limited to:
 | * Alcohol
* Tobacco
* Miraa
* Over-the-counter drugs
* Cocaine
* Bhang
* Glue
 |
| 1. Emerging issues may include but not limited to:
 | * Terrorism
* Social media
* National cohesion
* Open offices
 |
| 1. Range of media for learning may include but not limited to:
 | * Mentoring
* peer support and networking
* IT and courses
 |
| 1. Innovation may include but not limited to:
 | * New ideas
* Original ideas
* Different ideas
* Methods/procedures
* Processes
* New tools
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Communication
* Interpersonal
* Critical thinking
* Observation
* Organizing
* Record keeping
* Problem solving
* Decision Making
* Resource utilization

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Work values and ethics
* Company policies
* Company operations, procedures and standards
* Occupational Health and safety procedures
* Fundamental rights at work
* Personal hygiene practices
* Workplace communication
* Concept of time
* Time management
* Decision making
* Types of resources
* Work planning
* Record keeping
* Workplace problems and how to deal with them
* Assertiveness
* Team work
* HIV and AIDS
* Drug and substance abuse
* Safe work habits
* Professional growth and development
* Technology in the workplace
* Emerging issues
	+ Social media
	+ Terrorism
	+ National cohesion

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical aspects of Competency
 | Assessment requires evidence that the candidate:* 1. Conducted self-management
	2. Demonstrated critical safe work habits
	3. Demonstrated workplace learning
	4. Demonstrated workplace ethics
 |
| 1. Resource Implications
 | The following resources should be provided:1. Access to relevant workplace where assessment can take place
2. Appropriately simulated environment where assessment can take place
 |
| 1. Methods of Assessment
 | Competency in this unit may be assessed through: 1. Oral questioning
2. Portfolio of evidence
3. Third Party Reports
4. Written tests
 |
| 1. Context of Assessment
 | Competency may be assessed 1. On-the-job
2. Off-the –job
3. During Industrial attachment
 |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE ENVIRONMENTAL LITERACY

**UNIT CODE:** POL/OS/BR/BC/06/4/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to demonstrate environmental literacy. It involves controlling environmental hazard, controlling environmental pollution, demonstrating sustainable resource use and evaluating current practices in relation to resource usage.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms*** ***are elaborated in the Range*** |
| 1. Control environmental hazard
 | * 1. Storage methods for environmentally hazardous materials are followed according to environmental regulations and OSHS.
	2. Disposal methods of hazardous wastes are followed according to environmental regulations and OSHS.
	3. ***PPE*** is used according to OSHS.
 |
| 1. Control environmental pollution
 | * 1. ***Environmental pollution*** ***control measures*** are compiled following standard protocol.
	2. Procedures for solid waste management are observed according Environmental Management and Coordination Act 1999
	3. Methods for minimizing noise pollution complied following environmental regulations.
 |
| 1. Demonstrate sustainable use of resource s
 | * 1. Methods for minimizing wastage are complied with.
	2. ***Waste management procedures*** are employed following principles of 3Rs (Reduce, Reuse, Recycle)
	3. Methods for economizing or reducing resource consumption are practiced.
 |
| 1. Evaluate current practices in relation to resource usage
 | * 1. Information on resource efficiency ***systems and procedures*** are collected and provided as per work groups/sector
	2. ***Current resource usage*** is measured and recorded as per work group/sector
	3. Current purchasing strategies are analyzed and recorded according to industry procedures.
	4. Current work processes to access information and data is analyzed following enterprise protocol.
 |
| 1. 5. Identify environmental legislations/conventions for environmental concerns
 | 1. Environmental legislations/conventions and local ordinances are identified according to the different environmental aspects/impact
2. Industrial standard/environmental practices are described according to the different environmental concerns
 |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. PPE may include but are not limited to:
 | * Masks
* Gloves
* Goggles
* Safety hat
* Overall
* Hearing protector
* Safety boots
 |
| 1. Environmental pollution control measures may include but are not limited to:
 | * Methods for minimizing or stopping spread and ingestion of airborne particles
* Methods for minimizing or stopping spread and inhaling gases and fumes
* Methods for minimizing or stopping spread and ingestion of liquid wastes
 |
| 1. Waste management procedures may include but are not limited to:
 | * Sorting
* Storing of items
* Recycling of items
* Disposal of items
* Handling
* Transport
 |
| 1. Current resources usage may include but are not limited to:
 | * Electric
* Water
* Fuel
* Telecommunications
* Supplies
* Materials
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Measuring
* Recording
* Analytical
* Monitoring
* Writing
* Communication

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Storage methods of environmentally hazardous materials
* Disposal methods of hazardous wastes
* Usage of PPE Environmental regulations
* OSHS
* Types of pollution
* Environmental pollution control measures
* Different solid wastes
* Solid waste management
* Different noise pollution
* Methods of minimizing noise pollution
* Solid Waste Act
* Methods of minimizing wastage
* Waste management procedures
* Economizing of resource consumption
* Principle of 3Rs
* Types of resources
* Techniques in measuring current usage of resources
* Calculating current usage of resources
* Types of workplace environmental hazards
* Environmental regulations
* Environmental regulations applying to the enterprise.
* Procedures for assessing compliance with environmental regulations.
* Collection of information on environmental and resource efficiency systems and procedures,
* Measurement and recording of current resource usage
* Analysis and recording of current purchasing strategies.
* Analysis current work processes to access information and data Analysis of data and information

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency
 | Assessment requires evidence that the candidate:1. Controlled environmental hazards
2. Controlled environmental pollution
3. Demonstrated sustainable resource use
4. Evaluated current practices in relation to resource usage
 |
| 1. Resource Implications
 | The following resources should be provided:* 1. Workplace with storage facilities
	2. Tools, materials and equipment relevant to the tasks (e.g. cleaning tools, cleaning materials, trash bags, etc.)
	3. PPEs
	4. Manuals and references
	5. Legislation, policies, procedures, protocols and local ordinances relating to environmental protection
	6. Case studies/scenarios relating to environmental Protection
 |
| 1. Methods of Assessment
 | Competency in this unit may be assessed through:1. Observation
2. Oral questioning
3. Written tests
4. Third party reports
5. Portfolio
 |
| 1. Context of Assessment
 | Competency may be assessed1. On the job
2. Off the job
3. During industrial attachment
 |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE OCUPATIONAL SAFETY AND HEALTH PRACTICES

**UNIT CODE:** POL/OS/BR/BC/07/4/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to practice safety and health and comply with OSH requirements relevant to work. It involves observing workplace procedures for hazards and risk prevention and participating in arrangements for workplace safety and health maintenance.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms*** ***are elaborated in the Range*** |
| 1. Adhere to workplace procedures for hazards and risk prevention
 | 1. Arrangement of work area and items in accordance with

workplace procedures requirements 1. Work standards and procedures are followed based on instructions
2. ***Prevention and control measures*** are applied based on instructions
 |
| 1. Participate in arrangements for workplace safety and health maintenance
 | 1. Orientations on ***OSH requirements and regulations*** is undertaken in line with policy.
2. Feedback on occupational health and safety are provided as per workplace instructions.
3. Workplace procedures for reporting hazards, incidents, injuries and sickness are adhered to as per workplace policy.
4. ***OSH-related training needs*** are identified and proposed as per workplace policy.
 |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Prevention and control measures may include but are not limited to:
 | * Eliminate the hazard
* Isolate the hazard
* Substitute the hazard with a safer alternative
* Use administrative controls to reduce the risk
* Use engineering controls to reduce the risk
* Use personal protective equipment
* Safety, Health and Work Environment Evaluation
* Periodic and/or special medical examinations of workers
 |
| 1. Safety gears /PPE (Personal Protective Equipment’s) may include but are not limited to:
 | * Arm/Hand guard, gloves
* Eye protection (goggles, shield)
* Hearing protection (ear muffs, ear plugs)
* Hair Net/cap/bonnet
* Hard hat
* Face protection (mask, shield)
* Apron/Gown/coverall/jump suit
* Anti-static suits
* High-visibility reflective vest
 |
| 1. Incidents and emergencies may include but are not limited to:
 | * Chemical spills
* Equipment/vehicle accidents
* Explosion
* Fire
* Gas leak
* Injury to personnel
* Structural collapse
* Toxic and/or flammable vapors emission.
 |
| 1. OSH requirements / regulations may include but are not limited to:
 | * Building code
* Permit to Operate
 |
| 1. OSH-related trainings may include but are not limited to:
 | * Safety Orientations relevant to tasks
* Safe and Correct Operation of Tools and Equipment
* Health Orientations/trainings
* Prevention and Control of OSH Hazards in the workplace
* Chemical Handling
* Safety Trainings
* Prevention and Control of Work-related Injuries and Illness
* Basic First-aid Trainings
* Emergency Response Trainings
* Trainings on use of fire-extinguisher
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Communication
* Knowledge management
* Collaborating
* Interpersonal
* Troubleshooting
* Critical thinking
* Observation

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* General OSH principles and legislations
* Principles of good housekeeping (5S)
* Company/workplace policies/ guidelines
* Standards and safety requirements of work process and procedures
* Standard Workplace emergency plan and procedures
* Safety and health requirements of tasks
* Workplace guidelines on providing feedback on OSH and security concerns
* OSH regulations
* Hazard control procedures
* OSH trainings relevant to work

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency
 | 1. Assessment requires evidence that the candidate:
2. Arranged work area and items in accordance with
3. workplace procedures requirements
4. Followed work standards and procedures based on instructions
5. Applied ***Prevention and control measures*** based on instructions
6. Undertook orientations on ***OSH requirements and regulations*** in line with policy.
7. Provided feedback on occupational health and safety as per workplace instructions.
8. Adhered to workplace procedures for reporting hazards, incidents, injuries and sickness to as per workplace policy.
9. Identified and proposed ***OSH-related training needs*** as per workplace policy.
 |
| 1. Resource Implications
 | The following resources should be provided:1. Access to relevant workplace where assessment can take place
2. Appropriately simulated environment where assessment can take place
 |
| 1. Methods of Assessment
 | Competency in this unit may be assessed through: 1. Oral questioning
2. Portfolio of evidence
3. Third Party Reports
4. Written tests
 |
| 1. Context of Assessment
 | Competency may be assessed 1. On-the-job
2. Off-the –job
3. During Industrial attachment
 |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# CORE UNITS OF LEARNING

# CONSTRUCT POULTRY STRUCTURES

**UNIT CODE:** POL/OS/BR/CR/01/4/A

**UNIT DESCRIPTION:**

This unit specifies the competencies required to construct poultry structures. It involves preparing to construct poultry structures, constructing poultry structures, installing poultry house structures and equipping the poultry house.

|  |  |
| --- | --- |
| **ELEMENT**These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms are elaborated in the range.*** |
| 1. Prepare to construct poultry structures
 | 1. Suitable poultry house design for construction is selected and acquired based on production system, cost and farmers’ preferences
2. Construction materials are procured based on selected procurement method
3. Construction materials are transported according to work place policy
4. Construction materials are stored according to work place policy
5. Construction materials are assembled at construction site according to work place policy
6. Site of the poultry house is determined based on guidelines in the ***Poultry Production Manual (PPM)***
7. Site of the poultry house is cleared based on guidelines in the PPM
8. ***Personal Protection Equipment and Apparel (PPE)***are gathered and donned based on work requirements
 |
| 1. Construct poultry house structure
 | 1. ***Poultry house*** layout is pegged according to design
2. Poultry house foundation is excavated based on house design, topography and soil type
3. Poultry house foundation is laid based on type of construction materials and design
4. ***Poultry house parts*** are constructed as per house design and type of construction materials procured.
 |
| 1. Install poultry house structures
 | 1. Suitable ***poultry house structures*** designs are identified based on production system, cost and farmers’ preferences
2. Fixed poultry house structures are constructed as per design and type of construction materials available
3. Period of installation of poultry house structures is determined based on the age of the birds
4. Movable poultry house structures are installed in the poultry house based on the design and pattern recommended in the PPM
 |
| 1. Equip poultry house
 | 1. ***Poultry house equipment*** are acquired based on work place procedures and poultry house requirements
2. Poultry house equipment are stored according to work place procedures
3. Poultry house equipment are installed as per specifications in the PPM
 |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Poultry Production Manual (PPM) may include but not limited to:
 | * National Poultry Development Programme Manual
* Production manuals by breeding and multiplication organizations like Issa Brown, Cobb, Kenchic and KALRO
 |
| 1. Personal Protection Equipment and Apparel (PPE) may include but not limited to:
 | * Overalls
* Gumboots
* Nose and mouth mask
 | * Goggles
* Gloves
* Head gear
 |
| 1. Poultry house may include but not limited to:
 | * Standard open sided house
* Environmentally controlled house
* Slated floor house
 | * Battery cage house
* Deep litter house
 |
| 1. Poultry house parts may include but not limited to:
 | * Walls
* Floor
* Roof
 |  |
| 1. Poultry house structures may include but not limited to:
 | * Nest boxes
* Perches
* Cages
* Pallets
 | * Electrical / water lines
* Slatted floors
* Brooder
 |
| 1. Poultry house equipment may include but not limited to:
 | * Waterers
* Feeders
* Thermometer
 | * Heat source
* Hygrometer
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required skills**

The individual needs to demonstrate the following skills:

* Communication
* Fabrication
* Negotiation
* Numeracy
* Observation
* Problem solving

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Area measurements and conversions
* Basic carpentry
* Basic masonry
* Feeding and watering spacing allowances
* Geometry (symmetry)
* Handling and assessment construction materials
* House orientation
* Occupational health and safety procedures
* Types of poultry house equipment

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency
 | Assessment requires evidence that the candidate:* 1. Selected and acquired suitable poultry house design for construction based on production system, cost and farmers’ preferences
	2. Determined site of the poultry house based on guidelines in the Poultry Production Manual (PPM)
	3. Gathered and donned appropriate Personal Protection Equipment and Apparel (PPE) based on work requirements
	4. Constructed poultry house parts as per house design and type of construction materials procured.
	5. Identified suitable ***poultry house structures*** designs based on production system, cost and farmers’ preference.
	6. Constructed poultry house structures as per suitable design and type of construction materials available
	7. Installed poultry house structures timely as per the pattern recommended in the PPM
	8. Equipped poultry house timely with the required poultry house equipment
 |
| 1. Resource Implications
 | The following resources **MUST** be provided:* 1. Assessment location / Upcoming broiler production farm
	2. Personal Protective Equipment and Apparel
	3. Stationery
 |
| 1. Methods of Assessment
 | Competency may be assessed through:* 1. Observation
	2. Written tests
	3. Oral questioning
	4. Third party report
 |
| 1. Context of Assessment
 | Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment. |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.  |

# MANAGE POULTRY BROODING

**UNIT CODE:** POL/OS/BR/CR/02/4/A

**UNIT DESCRIPTION:**

This unit specifies the competencies required to manage poultry brooding. It involves preparing chick brooder, acquiring day-old chicks, feeding brooding chicks, managing brooder house micro climate and maintaining brooder hygiene. It also entails performing chick vaccination, controlling poultry vermin, controlling poultry predators and monitoring chick performance.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms are elaborated in the range.*** |
| 1. Prepare chick brooder
 | 1. ***Brooder construction materials*** are selected as per farm practices
2. Brooder is constructed as per ***poultry production manual (PPM)*** guidelines.
3. Chick brooder is equipped with ***chick brooder equipment*** as per poultry production guidelines
4. Cleaning and disinfection of the brooder is undertaken based on Standard Operation Procedures (SOPs) of poultry production facilities
5. Brooder equipment are cleaned and sterilized as per the SOPs.
 |
| 1. Acquire day-old chicks
 | 1. Day-old chicks are sourced as per work place policy and PPM guidelines
2. Day-old chicks are transported as per PPM and animal welfare guidelines
3. Placement of day-old chicks is done as per poultry production guidelines in the PPM
 |
| 1. Feed brooding chicks
 | 1. Suitable type and form of chick feed is identified and selected based on flock age and feeding requirements
2. Feeding frequency is determined based on PPM guidelines
3. Feeding and watering equipment are ***prepared*** based on their condition, position and flock size
4. Adequate amount of chicks feed and water is determined and dispensed based on flock feeding requirements
 |
| 1. Manage brooder house micro climate
 | 1. Micro climate tools and equipment are identified as per environmental conditions and bird requirements.
2. ***Micro climate*** variations are assessed as per poultry production manual guidelines.
3. Brooder micro climate is moderated as per the requirements of the birds
 |
| 1. Maintain brooder hygiene
 | 1. Bio-safety measures are implemented as per guidelines in the poultry production manual and work place policies
2. Bio-safety conformity is monitored as per work place requirements
 |
| 1. Perform chick vaccination
 | 1. ***Vaccination preparations*** are done accordance with PPM and vaccine manufacturer’s guidelines
2. Poultry vaccine is re-constituted according to manufacturer’s guidelines
3. Poultry vaccines are administered in accordance with developed schedule
4. Vaccinated poultry are observed to ascertain vaccine intake and check for abnormal reactions in accordance with PPM and vaccine manufacturer’s guidelines
5. Vaccination details are recorded as per PPM guidelines and farm policies
 |
| 1. Control poultry vermin
 | 1. Chicken vermins are identified based on the geographic area
2. Vermin control method is selected according to the type of vermins identified
3. 7.3 Vermins are controlled as per the type of method selected, vermicide manufacturer’s guidelines and poultry production manual
 |
| 1. Control poultry predators
 | 1. Chicken predators are identified based on the geographic area
2. Predator control method is selected according to the type of predators identified
3. Predators are controlled as per the type of method selected and manufacturer’s guidelines of control drug or trap.
 |
| 1. Monitor chick performance
 | 1. Poultry vices are monitored as per PPM guidelines and work place practices
2. ***Performance assessment*** is carried out as per PPM guidelines and work place procedures
3. Culling criteria are designed based on chick performance, stocking capacity and work place procedures
4. Chicks are culled according to designed culling criteria and work place procedures.
 |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Brooder construction materials may include but not limited to:
 | * Cardboard
* Wooden pegs
* Litter material
 |  |
| 1. Poultry production manual (PPM) may include but not limited to:
 | * National Poultry Development Programme Manual
* Production manuals by breeding and multiplication organizations like Issa Brown, Cobb, Kenchic and KALRO
 |  |
| 1. Chick brooder equipment may include but not limited to:
 | * Brooder thermometer
* Charcoal jiko
* Infra-red bulb
* Gas burner
* Kerosene lamb
 | * Chick feeder
* Chick drinker
* Hygrometer
 |
| 1. Prepared may include but not limited to:
 | * Removing foreign material
* Removing spoilt left-over feed
* Washing
* Drying
* Positioning in right pattern and height
 |
| 1. Micro climate may include but not limited to:
 | * Humidity
* Temperature
* Light
* Ventilation/ Air Flow
 |
| 1. Vaccination preparations may include but not limited to:
 | * Provision of anti-stress nutritional premixes
* Feed and water withdrawal
* Confirmation of bird numbers to determine dosage
* Provision of disinfectant free water
* Positioning vaccine receptacles in the poultry house for oral vaccines
* Confine and restrain poultry for injectable and ocular-nasal vaccines
 |
| 1. Vaccination details may include but not limited to:
 | * Type of vaccine
* Type of disease vaccinated against
* Age of poultry
* Date and time of vaccination
* Date of manufacture and expiry of vaccine
* Vaccine source and batch number
* Route of vaccine administration (IM, wing stab, sub cutaneous, intra nasal, intra ocular or spray)
* Number of birds vaccinated
* Identification of birds (flock, type, breed)
 |
| 1. Performance assessment may include but not limited to:
 | * Weighing
* Calculating growth rate
* Observing physical appearance, gait and behavior
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required skills**

The individual needs to demonstrate the following skills:

* Carpentry
* Communication
* Handling
* Negotiation
* Numeracy
* Observation
* Chick handling
* Vaccination skills

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Brooder design and requirements
* Carpentry
* Chick sources and acquisition
* Chick transportation
* Animal welfare regulations
* Chick placement
* Algebra
* Chick feeds and feeding requirements
* Chick feeding and watering practices
* Scales and measurement
* Chick micro climate
* Chick behavior
* Heat sources
* Heat transfer
* Light sources and intensity
* Lighting programmed
* Brooder bio-safety
* Chick diseases
* Poultry vaccination programme
* Vermin, pest and predator control

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency
 | Assessment requires evidence that the candidate:* 1. Acquired chicks in a timely and efficient manner
	2. Transported chicks with due consideration to animal welfare regulations
	3. Accurately set-up chick brooder micro climate and equipment
	4. Placed chicks in the brooder considering suitable stocking density
	5. Appropriately moderated brooder micro- climate
	6. Provided correct type of chick feed at adequate amounts and frequency
	7. Implemented suitable bio- safety measures
	8. Followed vaccination schedule as planned
	9. Put in place control measures for vermin and predators.
 |
| 1. Resource Implications
 | The following resources **MUST** be provided:* 1. Assessment location / Broiler farm with brooder unit
	2. Personal Protective Equipment and Apparel
	3. Stationery
 |
| 1. Methods of Assessment
 | Competency may be assessed through:* 1. Observation
	2. Written tests
	3. Oral questioning
 |
| 1. Context of Assessment
 | Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment. |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.  |

# MANAGE BROILER FINISHERS

**UNIT CODE:** POL/OS/BR/CR/03/4/A

**UNIT DESCRIPTION:**

This unit specifies the competencies required to manage broiler finishers. It involves feeding broiler finishers, maintaining broiler house hygiene, managing broiler health, monitoring broiler performance and maintaining broiler production records. It also includes managing broiler dispatch and sanitizing poultry house and equipment.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms are elaborated in the range.*** |
| 1. Feed broiler finishers
 | 1. Type and form of poultry feed is determined and acquired based on flock age and work place procurement procedures
2. ***Feeding tools and equipment*** are identified and gathered as per poultry production guidelines.
3. Amount of broiler finisher feed is determined and weighed based on broiler finisher flock feeding requirements
4. ***Feeding and watering equipment are prepared*** based on their condition, position and flock size
5. Broiler finisher feeding frequency is determined based on guidelines in the PPM
6. Broiler finisher feed and water is dispensed according to amount of weighed feed and water requirements
 |
| 1. Maintain broiler house hygiene
 | 1. ***Bio-safety structures/facilities*** are identified and prepared as per work place requirements
2. Bio-safety measures are implemented as per biosecurity design and farm practices
3. Bio-safety conformity is monitored as per biosecurity design and work place requirement
 |
| 1. Manage broiler health
 | 1. Broiler vaccination schedule is executed as per the farm practice
2. Vaccination equipment are selected as per the farm practice
3. Broiler vaccination records are kept as per organizational requirements
4. ***Vaccination procedures*** are carried out as per type of vaccine
5. ***Post-vaccination behavior*** is monitored as per farm practices
6. Broiler deworming schedule is determined as per poultry production guidelines
7. Vermin control is carried out as per farm practice
8. Broiler health is monitored as per ***animal health guidelines***
 |
| 1. Monitor broiler performance
 | 1. ***Poultry vices*** are monitored as per work place practices
2. Performance assessment equipment and tools are selected and gathered as per the farm practice
3. ***Performance assessment*** is carried out as per work place procedures.
 |
| 1. Maintain broiler production records
 | * 1. Broiler records are entered based on recommended format in the PPM type of activity and farm practices
	2. Broiler records are documented as per farm practices.
 |
| 1. Manage broiler dispatch
 | * 1. Mature broilers are restrained as per animal welfare regulations and farm practices
	2. Mature broilers are weighed, sorted and graded according to PPM guidelines and market requirements with due regard to their welfare
	3. Packaging and loading of meat poultry is carried out as per animal welfare guidelines
	4. Loaded poultry are dispatched based on work place policy and practices
	5. Recording of broiler dispatch is done as per the work place requirements.
	6. Transportation is carried out as per animal welfare guidelines.
 |
| 1. Sanitize poultry house and equipment
 | * 1. Detergents, sanitizers and tools for cleaning boilers’ house /equipment are identified and gathered based on poultry guidelines.
	2. Litter is removed from boilers house is performed as per work place procedures
	3. Poultry house is cleaned based on poultry house cleaning guidelines in the PPM
	4. Litter is disposed or reused as per PPM guidelines and work place procedures
	5. Sanitization procedures are performed based on guidelines on disinfection in the PPM and those of the manufacturer of detergent/disinfectant
 |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range**  |
| 1. Feeding tools and equipment may include but not limited to:
 | * Weighing scale / balance
* Grower feeder
* Drinker
* Scoop
 |
| 1. Feeding and watering equipment are prepared may include but not limited to:
 | * Removing foreign material
* Removing spoilt left-over feed
* Washing
* Drying

Positioning in right pattern and height |
| 1. Bio-safety structures / facilities may include but not limited to:
 | * Perimeter fences
* Footbath
* Showers
* Vehicle dip
* Hand wash facilities
* Disposal pits
* Waste bins
 |
| 1. Vaccination procedures

may include but not limited to: | * Vaccine constitution
* Water deprivation
* Vaccine administration
 |
| 1. Post-vaccination behavior may include but not limited to:
 | * Vaccine reactions
* Health behavior
 |
| 1. Animal health guidelines may include but not limited to:
 | * Animal behavior
* Animal examination procedures
 |
| 1. Poultry vices may include but not limited to:
 | * Pecking
* Cannibalism
 |
| 1. Performance assessment

may include but not limited to:  | * Weighing
* Physical appearance
* Gait
* Behavior
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required skills**

The individual needs to demonstrate the following skills:

* Communication
* Handling
* Numeracy
* Observation
* Poultry Handling
* Record keeping
* Vaccination

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Algebra
* Bio-safety
* Book keeping
* Environmental management
* Handling
* Poultry behavior
* Poultry health
* Poultry management
* Poultry welfare

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency
 | Assessment requires evidence that the candidate:* 1. Maintained the recommended stocking density in the broiler finisher house
	2. Moderated house micro- climate appropriately
	3. Provided broiler feeds correctly
	4. Observed all set bio- safety measures
	5. Followed broiler vaccination schedule as planned
	6. Dispatched mature broilers following correct procedure
	7. Cleaned and sanitized poultry house and equipment correctly
 |
| 1. Resource Implications
 | The following resources **MUST** be provided:* 1. Assessment location / broiler farm
	2. Personal Protective Equipment and Apparel
	3. Assessment materials
 |
| 1. Methods of Assessment
 | Competency may be assessed through:* 1. Observation
	2. Written tests
	3. Oral questioning
 |
| 1. Context of Assessment
 | Competency may be assessed on the job, off the job or during industrial attachment. Off the job assessment must be undertaken in a closely simulated workplace environment. |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.  |

# PRODUCE BROILER FEED

**UNIT CODE:** POL/OS/BR/CR/04/4/A

**UNIT DESCRIPTION:**

This unit specifies the competencies required to produce broiler feed. It involves acquiring poultry feed ingredients, processing broiler feed ingredients, mixing the processed feed ingredients and storage of the formulated feed.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms are elaborated in the range.*** |
| 1. Acquire broiler feed ingredients
 | 1. Poultry feed formula is acquired from an animal nutritionist
2. Sources of ***feed ingredients*** are identified based on market forces and acquired formula
3. Feed ingredients are procured based on standard procurement procedures at the work place
4. Feed ingredients are labeled as per regulatory body requirements and/or farm practices
5. Feed ingredients are stored as per work place practice
 |
| 1. Process poultry feed ingredients
 | 1. Feed processing machinery is checked to ensure good working condition according to operation manuals
2. Poultry feed processing machinery is operated based on the operation manual and type of feed to produce
3. ***Feed ingredients are processed*** according to feed manufacturing guidelines form of presentation and good manufacturing practices (GMP)
 |
| 1. Mix processed broiler feed ingredients
 | 1. Poultry feed mixing method is identified and selected based on available resources, flock and enterprise sizes
2. Mixing machinery is checked to ensure good working condition and operated based on the operators manual
3. Prepared feed ingredients are mixed as per feed manufacturing guidelines
4. Mixed ration is ***further processed*** according to desired form of presentation and work place regulations
 |
| 1. Store formulated feed
 | 1. Poultry feed is placed in food grade packaging materials according to standard regulations
2. Feed ration is weighed and weights customized based on market demand and size of packaging material
3. Packaged and labeled feed is sealed according to feed formulation guidelines
4. Packaged feed is labeled as per farm practice
5. Packaged feed is stored as per work place practice.
 |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Feed Ingredients may include but not limited to:
 | * Feedstuff
* Additives
 |
| 1. Feed ingredients are processed may include but not limited to:
 | * Drying
* Sieving
* Grinding
* Oil extraction
 |
| 1. Further processed may include but not limited to:
 | * Pelleting
* Crumbs
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required skills**

The individual needs to demonstrate the following skills:

* Communication
* Computer
* Judging
* Mixing
* Negotiation
* Numeracy
* Operation of feed milling equipment and machinery

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Animal feed processing procedures
* Feed formulation equipment and machine maintenance
* Feed mixing methods
* Forms of poultry feed presentation
* Classes of feedstuff
* Types of nutrients
* Types of feed mixers
* Sourcing of feedstuff
* Pest control
* Poultry behavior
* Storage conditions

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency
 | Assessment requires evidence that the candidate:* 1. Acquired correct formula based on type and age of poultry
	2. Processed feed ingredients appropriately according to desired particle size
	3. Mixed feed ingredients
	4. Packaged and stored feed as recommended
 |
| 1. Resource Implications
 | The following resources must be provided:* 1. Assessment location / poultry feed formulation plant
	2. Personal Protective Equipment and Apparel
	3. Assessment materials
 |
| 1. Methods of Assessment
 | Competency may be assessed through:* 1. Observation
	2. Written tests
	3. Practical tests
	4. Oral questioning
	5. Third party report
 |
| 1. Context of Assessment
 | Competency may be assessed on the job, off the job or during industrial attachment. Off the job assessment must be undertaken in a closely simulated workplace environment. |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.  |

# MANAGE POULTRY HEALTH AND WELFARE

**UNIT CODE:** POL/OS/BR/CR/05/4/A

**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.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**These are assessable statements which specify the required level of performance for each of the elements.***Bold and italicized terms are elaborated in the range.*** |
| 1. Maintain poultry biosecurity
 | * 1. ***Biosecurity structures and equipment*** are constructed and installed respectively in accordance with the designs and ***poultry production manuals (PPM)***
	2. ***Biosecurity measures*** are determined as per farm practice
	3. Personal Protection Equipment and Apparel are identified, gathered and donned based on job requirements
 |
| 1. Acquire poultry health equipment and materials
 | 1. ***Flock health management*** ***tools, equipment, materials*** and ***supplies*** are identified based on PPM guidelines and work place policy
2. Flock health management tools, equipment, materials and supplies are sourced based on PPM guidelines and work place policy
3. Flock health management tools, equipment, materials and supplies are stored based on PPM guidelines and work place policy
 |
| 1. Manage poultry vaccination
 | 1. Poultry vaccination schedule developed according to guidelines of PPM, work place policy and disease prevalence
2. ***Vaccination*** ***preparations*** are done accordance with PPM and vaccine manufacturer’s guidelines
3. Poultry vaccine is re-constituted according to manufacturer’s guidelines
4. Poultry vaccines are administered in accordance with developed schedule
5. Vaccinated poultry are observed to ascertain vaccine intake and check for abnormal reactions in accordance with PPM and vaccine manufacturer’s guidelines
6. ***Vaccination details*** are recorded as per PPM guidelines and farm policies
 |
| 1. Control poultry parasites
 | 1. Poultry flock performance, behavior and droppings are observed daily to detect presence of internal and external parasites as per PPM guidelines
2. Poultry flock is de-wormed to control internal parasites according to drug manufacturer’s guidelines
3. External parasites are controlled as per the guidelines in the PPM
4. ***Parasite control details*** are recorded as per PPM guidelines and farm policies
 |
| 1. Manage poultry diseases and vices
 | * 1. Poultry showing signs of disease are isolated for further observation per PPM guidelines
	2. Qualified veterinary professional is contacted for diagnosis and treatment of sick birds.
	3. Poultry are monitored for vices as per farm practice
	4. Poultry vices are controlled as per poultry production manuals
	5. ***Samples*** are collected for diagnostic laboratory analysis using standard sampling procedures
 |
| 1. Maintain poultry health records
 | 1. Poultry health record charts are designed as per PPM
2. Data is entered and monitored daily, weekly or monthly as per the chart
3. Poultry record results acted upon as per PPM
 |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Biosecurity structures and equipment may include but not limited to:
 | * Boundary fence (electric or stone wall)
* Gate
* Entry showers, both at the gate and at the house sites
* Foot bathes and vehicle sprayers
* Hand washing gadgets
* Post mortem rooms
* Mortality disposal pits
* Rodent and pest control traps
 |
| 1. Poultry production manuals (PPM) may include but not limited to:
 | * National Poultry Development Programme Manual
* Breeder’s manuals by breeders like Cobb and Issa Brown
 |
| 1. Biosecurity measures may include but not limited to:
 | * Color coded clothing for different parts of the farm e.g. feed stores, egg sorting and flock houses
* Human traffic restriction
* Showering
* Rodent and pest control traps
* Personal protective equipment
 |
| 1. Flock health management tools, equipment, materials and supplies may include but not limited to:
 | * Sprayers
* De-beakers
* Chicken catching rods
 |
| 1. Vaccination preparations may include but not limited to:
 | * Provision of anti-stress nutritional premixes
* Feed and water withdrawal
* Confirmation of bird numbers to determine dosage
* Provision of disinfectant free water
* Positioning vaccine receptacles in the poultry house for oral vaccines
* Confine and restrain poultry for injectable and ocular-nasal vaccines
 |
| 1. Vaccination details may include but not limited to:
 | * Type of vaccine
* Type of disease vaccinated against
* Age of poultry
* Date and time of vaccination
* Date of manufacture and expiry of vaccine
* Vaccine source and batch number
* Route of vaccine administration (IM, wing stab, sub cutaneous, intra nasal, intra ocular or spray)
* Number of birds vaccinated
* Identification of birds (flock, type, breed)
 |
| 1. Parasite control details may include but not limited to:
 | * Type of vaccine
* Type of disease vaccinated against
* Age of poultry
* Date and time of vaccination
* Date of manufacture and expiry of vaccine
* Number of birds vaccinated
* Identification of birds (flock, type, breed)
 |
| 1. Samples may include but not limited to:
 | * Swabs
* Blood
* Feces
* Organs
* Feed
* Sick bird
* Carcass
* Water
* Vaccines
* Litter material
* Parasites
 |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required skills**

The individual needs to demonstrate the following skills:

* Animal health applied skills
* Cleaning
* Communication
* De-beaking
* Diagnostic
* Farm equipment operation skills
* Negotiation
* Observation
* Poultry handling and care
* Record keeping
* Vaccination

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Animal health care
* Animal welfare
* Cleaning and disinfection procedures
* De-beaking procedure
* Microbiology
* Mode of disease and parasite spread
* Parasitology
* Poultry behavior
* Poultry biosecurity measures
* Poultry gross anatomy and basic physiology
* Poultry Immunology
* Poultry nutritional disorders
* Procurement procedures
* Reconstitution of vaccines
* Record keeping
* Refrigeration methods
* Sampling procedures
* Signs of ill health in poultry
* Types of cleaning agents, sanitizers and disinfectant
* Types of external and internal poultry parasites
* Types of parasitic poultry diseases
* Types of poultry records
* Types of vaccines
* Vaccination sites

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency
 | Assessment requires evidence that the candidate:* 1. Implemented biosecurity measures
	2. put in place control measures for internal and external parasites
	3. Implemented vaccination program
	4. Entered and kept accurate and up to date poultry vaccination / health records
 |
| 1. Resource Implications
 | The following resources must be provided:* 1. Assessment location / Poultry production farm
	2. Personal Protective Equipment and Apparel
	3. Assessment materials
 |
| 1. Methods of Assessment
 | Competency may be assessed through:* 1. Observation
	2. Written tests
	3. Oral questioning
	4. Third party report
 |
| 1. Context of Assessment
 | Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment. |
| 1. Guidance information for assessment
 | Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.  |