****

**REPUBLIC OF KENYA**

**COMPETENCY BASED CURRICULUM**

**FOR**

**PIG PRODUCTION**

**LEVEL 3**



TVET CDACC

P.O. BOX 15745-00100

NAIROBI

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**Council Secretary/CEO**

**TVET Curriculum Development, Assessment and Certification Council**

**P.O. Box 15745–00100**

**Nairobi, Kenya**

**Email: info@tvetcdacc.go.ke**

# FOREWORD

The provision of quality education and training is fundamental to the Government’s overall strategy for social economic development. Quality education and training will contribute to achievement of Kenya’s development blueprint and sustainable development goals.

Reforms in the education sector are necessary for the achievement of Kenya Vision 2030 and meeting the provisions of the Constitution of Kenya 2010. The education sector had to be aligned to the Constitution and this resulted to the formulation of the Policy Framework for Reforming Education and Training. A key feature of this policy is the radical change in the design and delivery of TVET training. This policy document requires that training in TVET be competency based, curriculum development be industry led, certification be based on demonstration of competence and mode of delivery allows for multiple entry and exit in TVET programmes.

These reforms demand that Industry takes a leading role in curriculum development to ensure the curriculum addresses its competence needs. It is against this background that this curriculum has been developed.

It is my conviction that this curriculum will play a great role towards development of competent human resource for the Agriculture Sector’s growth and development.

**PRINCIPAL SECRETARY, VOCATIONAL AND TECHNICAL TRAINING**

**MINISTRY OF EDUCATION**

# PREFACE

Kenya Vision 2030 aims to transform the country into a newly industrializing, “middle-income country providing a high-quality life to all its citizens by the year 2030”. Kenya intends to create a globally competitive and adaptive human resource base to meet the requirements of a rapidly industrializing economy through life-long education and training. TVET has a responsibility of facilitating the process of inculcating knowledge, skills and attitudes necessary for catapulting the nation to a globally competitive country, hence the paradigm shift to embrace Competency Based Education and Training (CBET).

The Technical and Vocational Education and Training Act No. 29 of 2013 on Reforming Education and Training in Kenya, emphasized the need to reform curriculum development, assessment and certification. This called for a shift to CBET to address the mismatch between skills acquired through training and skills needed by industry as well as increase the global competitiveness of Kenyan labour force.

TVET Curriculum Development, Assessment and Certification Council (TVET CDACC) in conjunction withAgriculture Sector Skills Advisory Committee (SSAC) and Ministry of livestock have developed this curriculum.

This curriculum has been developed following the CBET framework policy; the CBETA standards and guidelines provided by the TVET Authority and the Kenya National Qualification Framework designed by the Kenya National Qualification Authority.

This curriculum is designed and organized with an outline of learning outcomes; suggested delivery methods, training/learning resources and methods of assessing the trainee’s achievement. The curriculum is competency-based and allows multiple entry and exit to the course.

I am grateful to the Council Members, Council Secretariat, Agriculture SSAC, expert workers and all those who participated in the development of this curriculum.

**CHAIRPERSON,**

**TVET CDACC**

# ACKNOWLEDGMENT

This curriculum has been designed for competency-based training and has independent units of learning that allow the trainee flexibility in entry and exit. In developing the curriculum, significant involvement and support was received from various organizations.

I recognize with appreciation the role of the Agriculture Sector Skills Advisory Committee (SSAC) in ensuring that competencies required by the industry are addressed in the curriculum. I also thank all stakeholders in the Apiculture sector for their valuable input and all those who participated in the process of developing this curriculum.

I am convinced that this curriculum will go a long way in ensuring that workers in Apiculture Sector acquire competencies that will enable them to perform their work more efficiently.

**COUNCIL SECRETARY/CEO**

**TVET CDACC**

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ACRONYMS AND ABBREVIATIONS

CDACC Curriculum Development Assessment and Certification Council

CU Curriculum

BC Basic Competency

CC Core Competency

CO Common Units

KCSE Kenya Certificate of Secondary Education

KNQA Kenya National Qualifications Authority

OSHA Occupation Safety and Health Act

PPE Personal Protective Equipment

SSAC Sector Skills Advisory Committee

TVET Technical and Vocational Education and Training

# KEY TO UNIT CODE

**AGR / CU/PIG/ BC/ /01/ 4/A**

Industry or sector

Curriculum

Occupational area

Type of competency

Competency number

Competence level

Version Control

# COURSE OVERVIEW

The Pig production level three (3) qualification consists of competencies that a person must achieve to construct a pig unit, produce pig stock, produce pig feeds, produce pig products and by-products and market pig and pig products within the institution’s/organizations acceptable standard operating procedures (SOPs).

**Units of Learning**

This course consists of basic and core units of learning as indicated below:

**Basic Units of Learning**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours** | **Credit factor** |
| AGR/CU/PP/BC/01/4/A | Communication skills | 15 | 1.5 |
| AGR/CU/PP/BC/02/4/A | Numeracy skills | 15 | 1.5 |
| AGR/CU/PP/BC/03/4/A | Digital literacy | 20 | 2 |
| AGR/CU/PP/BC/04/4/A | Entrepreneurial skills | 40 | 4 |
| AGR/CU/PP/BC/05/4/A | Employability skills | 20 | 2 |
| AGR/CU/PP/BC/06/4/A | Environmental literacy | 15 | 1.5 |
| AGR/CU/PP/BC/07/4/A | Occupational safety and health practices | 15 | 1.5 |
| **Total** |  | **140** | **14** |

**Core units of learning**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours** | **Credit factor** |
| AGR/CU/PP/CR/01/4/A | Pig unit construction | 40 | 4 |
| AGR/CU/PP/CR/02/4/A | Pig stock production | 60 | 6 |
| AGR/CU/PP/CR/03/4/A | Pig feeds production | 60 | 6 |
| AGR/CU/PP/CR/06/4/A | Production of pig products and by-products | 50 | 5 |
| AGR/CU/PP/CR/07/4/A | Pigs and pig products marketing | 40 | 4 |
| AGR/CU/PP/CR/08/4/A | Industrial attachment | 200 | 20 |
| **Total** |  | **450** | **45** |
| **Grand Total** |  | **590** | **59** |

**Entry Requirements**

An individual entering this course should have any of the following minimum requirements:

1. KCPE

**Or**

1. Kenya Certificate of Secondary Education (KCSE) E

**Or**

1. Equivalent qualifications as determined by Kenya National Qualifications Authority (KNQA)

**Trainer qualification**

A trainer for this course should have a higher qualification than the level of this course

**Assessment**

The course will be assessed at two levels: internally and externally. Internal assessment is continuous and is conducted by the trainer who is monitored by an accredited internal verifier while external assessment is the responsibility of TVET CDACC.

**Certification**

A candidate will be issued with a Certificate of Competency for each Unit of Competency. To attain the qualification National certificate Level 3 Pig production, the candidate must demonstrate competence in all the units of competency as given in qualification pack. These certificates will be issued by TVET CDACC in conjunction with training provider

# BASIC UNITS OF LEARNING

# COMMUNICATION SKILLS

**UNIT CODE:** AGR/CU/PP/BC/01/3/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Communication Skills

**Duration of Unit:** 15 hours

**Unit Description**

This unit specifies the competencies required to demonstrate communication skills. It involves, obtaining and conveying workplace information, speaking English at a basic operational level, participating in workplace meetings and discussions, and completing relevant work-related documents.

**Summary of Learning Outcomes**

1. Obtain and convey workplace information
2. Speak English at a basic operational level
3. Participate in workplace meetings and discussions
4. Complete relevant work-related documents

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Obtain and convey workplace information | * Communication process * Modes of communication * Medium of communication * Effective communication * Barriers to communication * Flow of communication * Sources of information * Types of questions * Organizational policies * Workplace etiquette * Ethical work practices in handling communication | * Written tests * Oral questioning |
| 1. Speak English at a basic operational level | * English grammar   + Nouns, verbs, adjectives, adverbs, pronouns prepositions * English speaking   + Pronunciation   + Simple conversations * Taking verbal instructions * Reading and writing in English * Forms of expression in English | * Written tests * Oral * Role play |
| 1. Participate in workplace meetings and discussions | * Nature of workplace meetings * Meeting protocols * Workplace interactions | * Oral questioning * Written tests |
| 1. Complete relevant work-related documents | * Types and purposes of workplace documents and forms * Methods used in filling forms and documents * Recording workplace data * Process of distributing workplace forms and documents * Report writing * Types of workplace reports | * Written tests * Oral questioning |

**Suggested Methods of Instruction**

* Discussion
* Role play
* Brainstorming
* Viewing of related videos
* Role play

**Recommended Resources**

* Desktop computers/laptops
* Projectors
* Report writing templates
* Pens
* Notebooks

**NUMERACY SKILLS**

**UNIT CODE:** AGR/CU/PP/BC/02/3/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Numeracy Skills

**Duration of Unit:** 15 hours

**Unit Description**

This unit covers the competencies required to identify and undertake simple numerical processes. The person who is competent in this unit shall be able to use / work with whole numbers and money up to one hundred thousand; Locate, compare and use highly familiar measurement; Use highly familiar maps and diagrams; Identify and use some common 2D shapes; and locate specific Information in highly familiar tables, graphs and charts for work.

**Summary of Learning Outcomes**

1. Use whole numbers for work
2. Locate, compare and use highly familiar measurement for work
3. Use highly familiar maps and diagrams for work
4. Identify and use some common 2D shapes for work
5. Locate specific Information in highly familiar tables, graphs and charts for work

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Use whole numbers for work | * Whole numbers * Use of Zeros * Use of halves * Sizes * Grouping of numbers * Addition and subtraction of whole numbers * Numerical information, * Symbols | * Written tests * Assignments * Supervised exercises |
| 1. Locate, compare and use highly familiar measurement for work | * Measurements * Units of measurements and their use * Digital time am and pm * Calendars | * Written tests * Assignments * Supervised exercises |
| 1. Use highly familiar maps and diagrams for work | * + Use of Maps and * Diagrams simple * symbols and pictorial   + Giving simple oral directions to locate objects | * Oral * Assignments * Supervised exercises |
| 1. Identify and use some common 2D shapes for work | * + Two dimensional shapes   + Describe common objects in terms of size and shape   + Compare objects   + Group common objects based on shape, size, color and features | * Written tests * Assignments * Supervised exercises |
| 1. Locate specific Information in highly familiar tables, graphs and charts for work | * + Simple tables   + Features of simple graphs and charts   + Numerical information in tables, graphs & charts | * Oral * Assignments * Supervised exercises |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory.
* Practical demonstration of tasks by trainer
* Role play
* Discussion
* Demonstration by trainees and comments and corrections by trainers

**Recommended Resources**

* Common 2D shapes objects
* Calculator
* Basic measuring instruments
* Mathematical tables

**DIGITAL LITERACY**

**UNIT CODE:** AGR/CU/PP/BC/03/3/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Digital Literacy

**Duration of Unit:** 20 hours

**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 tasks and applying internet and email in communication at workplace.

**Summary of Learning Outcomes**

1. Identify computer hardware and software
2. Apply security measures to data, hardware and software
3. Apply computer software in solving tasks
4. Apply internet and email in communication at workplace

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Identify computer hardware and software | * Definition of a computer * Functions of a computer * Components of a computer * Classification of computers * Computer software | * Written tests * Practice assignments |
| 1. Apply security measures to data, hardware and software | * Data security and control * Security threats and control measures * Types of computer crimes * Detection and protection against computer crimes | * Written tests * Oral presentation |
| 1. Apply computer software in solving tasks | * Operating systems * Word processing * Spread sheets * Data base | * Oral questioning * Practical |
| 1. Apply internet and email in communication at workplace | * Computer networks * Uses of internet * Electronic mail (e-mail) concept | * Oral questioning * Oral presentation * Written test |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Assignments
* Viewing of related videos
* Group discussions

**Recommended Resources**

* Desk top computers
* Laptop computers
* Other digital devices
* Printers
* Storage devices
* Internet access
* Computer software

**ENTREPRENEURIAL SKILLS**

**UNIT CODE:** AGR/CU/PP/BC/04/3/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Entrepreneurial Skills

**Duration of unit:** 40 hours

**Unit description**

This unit describes the competencies required to demonstrate entrepreneurial competencies. It involves, developing entrepreneurial culture, identifying entrepreneurial opportunities, starting, operating and growing a small business.

**Summary of Learning Outcomes**

1. Develop entrepreneurial culture
2. Identify entrepreneurial opportunities
3. Start a small business
4. Operate a small business
5. Grow a small business

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Develop entrepreneurial culture | * Definition of entrepreneur * Importance of entrepreneurship * Common terminologies in entrepreneurship * Entrepreneurship and employment creation * Formal and informal employment * Habits that promote entrepreneurial development * Cultural factors that inhibit entrepreneurship | * Individual/group assignments * Written tests * Oral |
| 1. Identify entrepreneurial opportunities | * Types, characteristics, qualities & role of entrepreneurs * SWOT analysis * Generating Business ideas * Business opportunities * Evaluation of business opportunities | * Individual/group assignments * Written tests * Oral questioning * Oral presentation |
| 1. Start a small business | * Factors to consider when starting a small business * Legal requirement for starting a small business * Procedure of starting a small business * The dos and don’ts of starting a small business * Challenges faced when starting a small business and mitigating factors * Launch of a small business | * Oral questioning * Individual/group assignments * Written tests |
| 1. Operate a small business | * Organizational structure of a small business * Managing small business finances * Book keeping * Business support services * Marketing for small businesses * Basic IT application in small business | * Individual/group assignments * Written tests |
| 1. Grow a small business | * Methods of growing/expanding a small business * Resources for growing small business * Small business growth plan * ICT and business growth | * Individual/group assignments * Written tests |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* assignments
* Role play
* Case study

**Recommended Resources**

* Case studies for small businesses
* Business plan template
* Laptop/ desktop computer
* Internet
* Telephone
* Writing materials

**EMPLOYABILITY SKILLS**

**UNIT CODE:** AGR/CU/PP/BC/05/3/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Employability Skills

**Duration of Unit:** 20 hours

**Unit Description**

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.

**Summary of Learning Outcomes**

1. Conduct self-management
2. Demonstrate critical safe work habits
3. Demonstrate workplace learning
4. Demonstrate workplace ethics

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Conduct self-management | * Self-awareness * Formulating personal vision, mission and goals * Strategies for overcoming life challenges * Emotional intelligence * Assertiveness * Developing and maintaining high self-esteem * Developing and maintaining positive self-image * Accountability and responsibility * Good work habits * Self-awareness * Financial literacy * Healthy lifestyle practices | * Written tests * Oral questioning * Portfolio of evidence * Third party report |
| 1. Demonstrate critical safe work habits | * Stress and stress management * Punctuality and time consciousness * Interpersonal communication * Sharing information * Resources utilization * HIV and AIDS * Drug and substance abuse * Handling emerging issues | * Written tests * Oral questioning * Portfolio of evidence * Third party report |
| 1. Demonstrate workplace learning | * Personal training needs identification and assessment * Cultural aspects of work * Application of learning * Safe use of technology * Identifying opportunities * Workplace innovation * Handling emerging issues * Future trends and concerns in learning | * Written tests * Oral questioning * Portfolio of evidence * Third party report |
| 1. Demonstrate workplace ethics | * Meaning of ethics * Ethical perspectives * Values and beliefs * Organization code of ethics * Common ethical dilemmas * Organization culture * Corruption, bribery and conflict of interest * Privacy and data protection * Harassment and mutual respect * Financial responsibility/accountability * Etiquette * Emerging issues in ethics | * Written tests * Oral questioning * Portfolio of evidence * Third party report |

**Suggested Methods of Instruction**

* Simulation/Role play
* Group Discussion
* Presentations
* Q&A
* Case studies
* Assignments

**Recommended Resources**

* Computers
* Stationery
* Charts
* Video clips
* Audio tapes
* Radio sets
* TV sets
* LCD projectors

**ENVIRONMENTAL LITERACY**

**UNIT CODE**: AGR/CU/PP/BC/06/3/A

**Relationship to Occupational Standards**:

This unit addresses the Unit of Competency: Demonstrate Environmental Literacy

**Duration of Unit:** 15 hours

**Unit Description**

This unit specifies the competencies required to demonstrate environmental literacy. It involves controlling environmental hazard ,controlling environmental pollution and demonstrating sustainable resource use.

**Summary of Learning Outcomes**

1. Control environmental hazard
2. Control environmental Pollution
3. Demonstrate sustainable resource use

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Control environmental hazard | * Environmental Management and Coordination Act 1999 * Solid Waste Act * Storage of environmentally hazardous materials * Disposal of hazardous wastes * Types and uses of PPEs in line with environmental regulations * Occupational Safety and Health Act 2007 | * Written tests * Oral questions * Observation of work procedures |
| 1. Control environmental pollution | * Types of pollution * Environmental pollution control and management * Procedures for waste management | * Written tests * Oral questions * Observation of work procedures |
| 1. Demonstrate sustainable use of resource | * Types of resources * Sustainable resource use and management * Principles of 3Rs (Reduce, Reuse, Recycle) | * Written tests * Oral questions * Observation of work procedures |

**Suggested Methods of Instruction**

* Instructor led facilitation theory
* Discussion
* Demonstration by trainer
* Assignments
* Field trip

**Recommended Resources**

* Standard operating and/or other workplace procedures manuals
* Specific job procedures manuals
* Solid Waste Act
* Environmental Management and Coordination Act 1999
* Machine/equipment manufacturer’s specifications and instructions
* Personal Protective Equipment (PPE)

**OCCUPATIONAL SAFETY AND HEALTH PRACTICES**

**UNIT CODE:** AGR/CU/PP/BC/07/3/A

**Relationship to Occupational Standards**

This unit addresses the unit of competency: Demonstrate safety and health practices

**Duration of Unit:** 15 hours

**Unit Description**

This unit specifies the competencies required to practice and promote safety and health at work. It entails preparing to practice safety and health at work and complying and promoting compliance of workers to organization’s occupational safety and health instructions and requirements.

**Summary of Learning Outcomes**

1. Prepare to apply workplace safety and health practices
2. Compliance with occupational safety and health Act

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Prepare to apply workplace safety and health practices | * Awareness of legislation that outlines the minimum standards for occupational safety and health requirements/ regulations * Benefits of implementing an occupational safety and health program * Safety requirements/ regulations of own work and of other workers * Workplace standards and procedures for incidents and emergencies * Prevention and Control Measures for accidents, injuries and sickness | * Oral tests * Written questions * Observation of work procedures |
| 2. Compliance with occupational safety and health Act | * Safety instructions and safety signs * Safe handling of tools, equipment and materials * Use of safe guards and safety devices * Reporting of hazards, incidents, injuries and sickness in the workplace | * Written tests * Oral questions * Observation of work procedures |

**Suggested Methods of Instruction**

* Assigments
* Discussion
* Q&A
* Role play
* Viewing of related videos

**Recommended Resources**

* Occupational safety and health standards
* Standard operating and/or other workplace procedures manuals
* Specific job procedures manuals
* Client/supplier instructions
* Organizational or external personnel
* Machine/equipment manufacturer’s specifications and instructions
* Quality standards

# CORE UNITS OF LEARNING

# PIG UNIT CONSTRUCTION

**UNIT CODE:** AGR/CU/PP/CR/01/3/A

**Relationship to Occupational Standards**

This unit addresses the unit of competency: construct pig Unit

**Duration of Unit: 40** hours

**Unit Description**

This unit covers the competencies required to oversee the construction of a pig Unit. It involves determining pig Unit construction site, planning for pig Unit construction resources, overseeing pig Unit construction activities and maintenance activities.

**Summary of Learning Outcomes**

1. Identify and mark pig Unit construction site,
2. Gather pig unit construction materials for pig Unit construction
3. Participate in pig Unit construction activities.
4. Identify areas of the pig Unit requiring repair and maintenance

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

| **Learning Outcome** | **Content** | **Methods of assessment** |
| --- | --- | --- |
| 1. Identify and mark pig unit construction site | * + Basic pig unit designs   + Site identification and marking of a pig unit   + Tools and equipment used in site preparation   + Pig unit site preparation | * Written test * Observation * Third party report * Oral questioning * Interviews |
| 1. Gather pig unit construction materials | * + Pig unit construction resources   + Documentation of delivered construction materials on site   + Storage of construction materials | * + Written test   + Observation   + Third party report   + Oral questioning   + Interviews |
| 1. Participate in pig Unit construction activities | * Procedures of construction materials issuance * Documentation of construction materials issuance * Monitoring of issued construction materials * Preparation of completion report | * Written test * Observation * Third party report * Oral questioning * Interviews |
| 1. Identify areas of pig unit requiring repair and maintenance | * Characteristics of functional components of a pig unit * Floor * Drainage * Heating and lighting systems * Roofing * Walls * Feed and water facilities * Pig unit maintenance requirements and resources * Pig unit repair and maintenance regulations * Labour supervision * Documenting repair and maintenance activities | * Written test * Observation * Third party report * Oral questioning * Interviews |

**Suggested Methods of instructions**

* Projects
* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Field Visit
* Videos

**Recommended Resources**

|  |  |  |
| --- | --- | --- |
| Functional pig farm with the following: | | |
| * Tractors * Trailer * Slashers * Wheelbarrow * Spade * rake * Crowbar * Hammer * Nails * Assorted Building materials and equipment * Video projector | * Saw * Metal bars Poles * Stones * Sand * Cement * Ballast * Wall charts Computer and software (AICAD) | * Tape measures * Barbed/chain link * Land Live fence planting materials * Hoe * Technical drawing sets |

# PIG STOCK PRODUCTION

**UNIT CODE:** AGR/CU/PP/CR/02/3/A

**Relationship to Occupational Standards**

This unit addresses the unit of competency: produce pig stock

**Duration of Units: 60** hours

**Unit Description**

This unit covers the competencies required to produce pig stock. It involves implementing a pig breeding programme, carrying out routine pig stock management practices as well as herd health management and bio-security practices.

**Summary of Learning Outcomes**

1. Implement pig breeding programme
2. Carry out routine pig stock management practices
3. Carry out health management and bio-security practices

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

| **Learning Outcome** | **Content** | **Methods of Assessment** |
| --- | --- | --- |
| 1. Gather information on pig breeding programme development | * + Meaning of terms: breeds, breeding, breeding programme, selection, litter, crossbreeding,   + Identification of breeds.   + Components of a breeding programme     - Signs of heat in pigs     - Age at first farrowing     - Gestation management   + Breeding methods; natural and artificial | * Written test * Observation * Third party report * Oral questioning * Interviews |
| 1. Carry out routine pig stock management practices | * Meaning of terms: Generic, non-generic, piglets, weaners, boar, gilt, runt, sow, rigs, porkers, baconers, farrowing, parity, barrow, in-pig, pig cycle, hereditary abnormalities, farrowing * Generic pig stock management practices * Non-generic pig stock management practices * Animal welfare * Pig routine management practices records and record keeping * Pig production cycle * Management of different classes of pigs | * + Written test   + Observation   + Third party report   + Oral questioning   + Interviews |
| 1. Carry out health management and bio-security practices | * Meaning of terms; health, disease, vaccination ,mortality ,morbidity ,quarantine , notifiable diseases, zoonosis * Importance of security of the pig unit, bio-security and health management * Types of diseases and parasites * Poisons and poisonous substances * Signs of healthy a pig * Signs and symptoms of ill-health in a pig * Pig stock health management practices * Pig farm bio-security practices * Pig herd health management records | * Written test * Observation * Third party report * Oral questioning * Interviews |

**Suggested Methods of instructions**

* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Outreach programme
* Field visit

**Recommended Resources**

1. Pig unit
2. Pig farmers handbook
3. Pig audiovisuals
4. Weighing equipment
5. Tooth clippers
6. Restrainers
7. Surgical blades
8. Disinfectants
9. Sprayers
10. Health kit
11. Protective clothing
12. Cleaning equipment; brooms, wheelbarrow, buckets
13. Identification equipment
14. Heating equipment/system
15. Pregnancy detector
16. Grooming equipment
17. Water and waterers
18. Fostering kit
19. Detergent
20. Chains to prevent cannibalism
21. Feeds and feeders
22. Records and record materials
23. Stationeries

# PIG FEEDS PRODUCTION

**UNIT CODE:** AGR/CU/PP/CR/03/3/A

**Relationship to Occupational Standards**

This unit addresses the unit of competency: produce pig feeds

**Duration of Unit:**  60 hours

**Unit Description**

This unit covers the competencies required to produce pig feeds. It involves identifying and sourcing pig feed raw materials, identifying, selecting and applying pig feed production formulae and compounding and storing pig feed rations. It also entails marketing and selling pig feeds.

**Summary of Learning Outcomes**

1. Receive and store feed formulation raw materials
2. Compound feed ration
3. Market and sell pig feeds

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

| **Learning Outcome** | **Content** | **Methods of Assessment** |
| --- | --- | --- |
| 1. Receive and store feed compounding raw materials | * + Meaning of the terms: * Nutrient * Nutrition * Food/Feed stuff * Diet * Ration * Compounded feed * Types and quality of pig feed raw materials * Nutritional value of different pig feed raw materials * Energy feeds * Protein feeds * Vitamins feeds * Minerals feeds * Water * Alternative pig feed resources * Storage of pig feed raw materials | * Written test * Observation * Third party report * Oral questioning * Interviews |
| 1. Compound feed ration | * Workplace safety and regulations * Tools and Equipment used in compounding feed rations and basic maintenance * Methods of preparing pig feed ingredients * Mixing pig feed ingredients * Packaging, labelling and storage of compound feed ration. * Work place waste management * Documentation of pig feed formulation activities. | * Written test * Observation * Third party report * Oral questioning * Interviews |
| 1. Marketing of pig feeds | * Meaning of the terms * Market * Marketing * Market Survey * Methods of market survey * Types of marketing channels * Implement a marketing strategy * Sale of pig feeds * Documentation of marketing activities. | * Written test * Observation * Third party report * Oral questioning * Interviews |

**Suggested Methods of Delivery**

* Projects
* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Field visits

**Recommended Resources**

|  |  |  |
| --- | --- | --- |
| Functional pig farm with the following: | | |
| * Tractors * Trailer * Chopping implements * Hammer mills * Grinding mills * Feed mixers * Feedstuff * Detergents * Fumigants * Sealing equipment * Labeling equipment * Shovel * Wheelbarrow * Canvas | * Water * Packaging material * Labels * Feed stores * Stationery * Weighing equipment * Calculators * Computer * Accounting documents * Store control documents * Pest control equipment and materials * Brooms * Scrubbers * Mops | * Pelleting machines * Sampling kits * Feedstuff nutrient content tables * Gunny bags * Twines * PPEs * Waste management equipment and material * Livestock production manual * Source of power |

# PIG PRODUCTS AND BY-PRODUCTS PROCESSING

**UNIT CODE:** AGR/CU/PP/CR/04/3/A

**Relationship to Occupational Standards**

This unit addresses the unit of competency: process pig products and by-products

**Duration of Unit:**  50 hours

**Unit Description**

This unit covers the competencies required to participate in processing of pig products and pig by-products. It involves collecting market data and information; assembling raw materials for processing pig products and by-products. It also entails storage of raw materials and finished products.

This standard applies in the pig production industry.

**Summary of Learning Outcomes**

1. Collect market data and information
2. Assemble raw materials for processing
3. Process and store pig products
4. Produce and store pig by-products

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

| **Learning Outcome** | **Content** | **Methods of Assessment** |
| --- | --- | --- |
| * + - 1. Collect market data and information | * + Meaning of terms- market data, information, feedback   + Distribution and data collection tools   + Methods of data analysis   + Methods of data presentation | * Written test * Observation * Third party report * Oral questioning * Interviews |
| 1. Identify pig products and by-products to process | * + Meaning of terms- products, by-products, processing, value addition, utilization   + Types of products and by-products   + Factors affecting the choice of products to be processed | * Written test * Observation * Third party report * Oral questioning * Interviews |
| 1. Assemble raw materials for processing | * + Meaning of terms - raw materials, Certification, resources   + Types of permits and certification   + Types of processing resources | * + Written test   + Observation   + Third party report   + Oral questioning   + Interviews |
| 1. Process and store pig products | * Different types of Pigs and pig products * Factors to consider when selecting pigs for processing pig products * Standard slaughter procedures * Types of meat cuts * Meat portioning * Food safety and hygiene when handling meat products * Tools and equipment used in processing pig products * Recipes of different pig products * Factors affecting shelf life of pig products * Packaging of processed pig products * Preservation of pig products * Safe storage of processed pig products * Personal safety and maintenance of machines and equipment * Documentation of processed pig products | * Written test * Observation * Third party report * Oral questioning * Interviews |
| 1. Process and store pig by-products | * Types of pig by-products * Methods of processing pig by- products * Packaging of pig by-products * Labelling of pig by- products * Storage of pig by-products * Documentation of processed pig by-products | * Written test * Observation * Third party report * Oral questioning * Interviews |

**Suggested Methods of instructions**

* Projects
* Demonstration by trainer
* Practice by the trainee/Industrial attachment
* Discussions
* Direct instruction
* Factory visits

**Recommended Resources**

Tools and equipment

Chopping boards, vacuum packers, sterilizers, trays, band saws, mincers, bowl choppers, sausage casing machines, meat slicers, chopping knives, electric/mechanical stunners, butchers cleavers, sharpening steel, hooks and rollers, chain glove, electronic weighing balance, chutes, table conveyer belts, trolleys, galvanized wheel barrows, hoists, forklifts, spades, deep freezers, chillers, refrigerators, brooms, brushes, labeling and sealing machines, deboning machines, evaporators, air conditioners, smoking chambers, autoclave machines, quality assurance equipment and reagents

PPEs

White dust coats, white gumboots, gloves, white cap/helmet, hair nets, white plastic aprons, dust masks, safety goggles, ear muffs and first aid kits

Materials and supplies

Portable water, Raw materials, packaging materials, labeling materials, sanitizers, disposable towels, liquid soap dispensers, ultra violet insect traps, lubricants, detergents and stationery

Processing facility

Processing rooms, cold rooms, stores, cloak rooms, lavatory facilities, laboratory facilities, office space, furniture, condemnation pits, incinerators, washing basins, footbath, water reservoirs and bio-digester

# PIGS, PIG PRODUCTS AND PIG BY-PRODUCTS MARKETING

**UNIT CODE:** AGR/CU/PP/CR/05/4/A

**Relationship to Occupational Standards**

This unit addresses the unit of competency: market pigs, pig products and pig by -products

**Duration of Unit: 40** hours

**Unit Description**

This unit covers the competencies required to market pigs and pig products. It involves implementing a marketing strategy and selling of pigs and pig products.

**Summary of Learning Outcomes**

1. Implement marketing strategy
2. Sale of pigs and pig products

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

| **Learning Outcome** | **Content** | **Methods of Assessment** |
| --- | --- | --- |
| 1. Implement marketing strategy | * + Meaning of terms: market, market strategy, market information, market trends   + Components of market information   + Feedback mechanisms   + Types of product promotion materials | * Written test * Observation * Third party report * Oral questioning * Interviews |
| 1. Sale of pigs, pig products and pig by-products | * + Meaning of terms: product, by- products and product outlets   + Categories of pigs   + Types of pig products, by- products   + Types of pig product outlets   + Information on product prices   + Distribution channels of pig products   + Documentation of sales records | * + Written test   + Observation   + Third party report   + Oral questioning   + Interviews |

**Suggested Methods of instructions**

* Projects
* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Field visits

**Recommended Resources**

* PPEs
* Capital
* Products
* Stationery
* market channels
* means of transport
* communication media
* legal documents
* office space
* furniture
* desktop computers/laptops
* Internet connection
* Projectors
* Telephone
* Report writing templates
* Business plan templates
* cold chain
* product carriers
* books of account
* ETR Machines and market schedules