****

**REPUBLIC OF KENYA**

**COMPETENCY BASED CURRICULUM**

**FOR**

**SWEET POTATO PROCESSING**

**LEVEL 3**

****

TVET CDACC

P.O. BOX 15745-00100

NAIROBI

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# 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’s 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 in 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 Sweet Potato sector’s growth and development.

**PRINCIPAL SECRETARY, VOCATIONAL AND TECHNICAL TRAINING**

**MINISTRY OF EDUCATION**

# PREFACE

Kenya’s 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 with Sweet Potato Sector Skills Advisory Committee (SSAC) 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, Sweet Potato 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 Sweet Potato Sector Skills Advisory Committee (SSAC) in ensuring that competencies required by the industry are addressed in the curriculum. I also thank all stakeholders in Sweet Potato 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 Sweet Potato Processing sector acquire the competencies that will enable them to perform their work more efficiently and effectively.

**COUNCIL SECRETARY/CEO**

**TVET CDACC**

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# ACRONYMS AND ABBREVIATIONS

A Control Version

AGR Agriculture and Rural Development

BC Basic Competency

CBET Competency-Based Education and Training

CDACC Curriculum Development, Assessment and Certification Council

CR Core Competency

CU Curriculum

ICT Information communication technology

NEMA National Environment Management Authority

OSH Occupational Safety and Health

PPEs Personal Protective Equipment

SOPs Standard Operating Procedures

SPP Sweet Potato Processing

TVET Technical and Vocational Education and Training

# KEY TO UNIT CODE

**AGR/CU/SPP/BC/01/3/A**

Industry or sector

Curriculum

Occupational area

Type of competency

Competency number

Competency level

Control version

# COURSE OVERVIEW

Sweet Potato Processing Certificate level 3 qualification consists of units of learning that a person must achieve to produce sweet potato puree, sweet potato flour, sweet potato crisps and dry sweet potato chips.

The units of learning leading to Sweet Potato Processing certificate level 3 qualification include the following seven basic and four core:

**Basic Units of Learning**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours** | **Credit factor** |
| AGR/CU/SPP/BC/01/3/A | Communication skills | 15 | 1.5 |
| AGR/CU/SPP/BC/02/3/A | Numeracy skills | 15 | 1.5 |
| AGR/CU/SPP/BC/03/3/A | Digital literacy | 20 | 2.0 |
| AGR/CU/SPP/BC/04/3/A | Entrepreneurial skills | 40 | 4.0 |
| AGR/CU/SPP/BC/05/3/A | Employability skills | 20 | 2.0 |
| AGR/CU/SPP/BC/06/3/A | Environmental literacy | 15 | 1.5 |
| AGR/CU/SPP/BC/07/3/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/SPP/CR/01/3/A | Sweet potato puree | 40 | 4 |
| AGR/CU/SPP/CR/02/3/A | Sweet potato flour | 40 | 4 |
| AGR/CU/SPP/CR/03/3/A | Sweet potato crisps | 30 | 4 |
| AGR/CU/SPP/CR/04/3/A | Dry Sweet potato chips | 20 | 2 |
|  | Industrial attachment | 300 | 30 |
| **Total** | | **430** | **43** |
| **Grand total** | | **570** | **57** |

The total duration of the course for an average trainee is 570 hours including 300 hours (12 weeks) of field attachment

**Entry Requirements**

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

1. Kenya Certificate of Primary Education (KCPE) or Kenya Certificate of Secondary Education (KCSE)

**Or**

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

**Field attachment**

An individual enrolled in this course will undergo a field attachment for a period of 12 weeks in a Sweet potato processing plant.

**Assessment**

The course will be assessed at two levels:

1. **Internal assessment**: conducted continuously by the trainer (internal assessor) who is monitored by an accredited internal verifier.
2. **External assessment:** conducted by an accredited external assessor who is monitored by an accredited external verifier?

The assessors and verifiers are accredited by TVET CDACC which also coordinates external assessment.

**Certification**

An individual will be awarded a Certificate of Competency on demonstration of competence in a unit of competency. To be awarded Certificate in Sweet Potato Processing Level 3, an individual must demonstrate competence in all the units of competency.

These certificates will be awarded by TVET CDACC in conjunction with the training provider.

# BASIC UNITS OF LEARNING

# COMMUNICATION SKILLS

**UNIT CODE:** AGR/CU/SPP/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 Instructions**

* 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/SPP/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 Instructions**

* 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/SPP/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 Instructions**

* 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/SPP/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 Instructions**

* 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/SPP/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 Instructions**

* 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/SPP/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 Instructions**

* 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/SPP/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 Instructions**

* 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

# SWEET POTATO PUREE

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

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Produce sweet potato puree

**Duration of Unit:** 40 Hours

**Unit Description**

This unit specifies the competencies required to produce sweet potato puree. It involves washing sweet potato roots, steaming and cooling sweet potato roots, pureeing steamed sweet potato roots, packaging sweet potato puree and implementing pre-requisite programmes.

**Summary of Learning Outcomes**

1. Wash sweet potato roots
2. Steam and cool sweet roots
3. Puree steamed sweet potato roots
4. Package sweet potato puree
5. Implement pre-requisite programmes

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Sort and trim sweet potato roots | * Sorting and trimming of sweet potato roots * Root quality attributes-flesh color, shape, size, skin quality * Importance of sorting and trimming sweet potato roots * Sorting and trimming tools & equipment | * Written tests * Oral questions * Practical tests * Observation |
| 1. Wash sweet potato roots | * Importance of washing sweet potato roots * Raw material contaminants * Methods of washing * Manual * Mechanical * Factors determining the choice of washing method * Operation and basic maintenance of washing machines & equipment | * Written tests * Oral questions * Practical tests * Observation |
| 1. Steam and cool sweet roots | * Size reduction and its significance * Size reduction tools and equipment * Size reduction methods * Cooking/preparation methods   + Boiling   + Steaming * Advantages and Disadvantages of each cooking method * Cooling techniques   + Advantages and disadvantages * Operation and basic maintenance of steamer and chiller | * Written tests * Oral questions * Practical tests * Observation * Third party report |
| 1. Puree steamed sweet potato roots | * Operations and basic maintenance of pureeing machine   + Cleaning,   + Assembly * Puree handling.   + Frozen puree/ cold chain. | * Written tests * Oral questions * Practical tests * Observation |
| 1. Package sweet potato puree | * Functions of packaging * Types of puree packaging   + Vacuum packaging * Operation and basic maintenance of packaging equipment. * Packaging materials; hermetic packages, re-usable cans, plastic bags * Factors to consider in selection of puree packaging material * Labeling and coding of the product * Significance of food storage * Basic storage conditions for puree | * Written tests * Oral questions * Practical tests * Observation |
| 1. Implement pre-requisite programmes | * Food premise hygiene and sanitation   + Equipment cleaning and storage   + Water quality * Personal hygiene * Waste disposal | * Written tests * Oral questions * Practical tests * Observation |

**Suggested Methods of Instruction**

* Direct instruction
* Field trips/site visits
* Group discussions
* Demonstration by trainer
* Practice by the trainee
* Exercises

**List of Recommended Resources**

* Computers
* Projectors
* Flip charts
* Calculators
* Internet

# SWEET POTATO FLOUR

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

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Produce sweet potato flour

**Duration of Unit:** 40 Hours

**Unit Description**

This unit specifies the competencies required to produce sweet potato flour. It involves preparing sweet potato roots, drying sweet potato chips, and milling sweet potato chips, packaging sweet potato flour and implementing pre-requisite programmes.

**Summary of Learning Outcomes**

1. Prepare sweet potato roots
2. Dry sweet potato chips
3. Mill sweet potato chips
4. Package sweet potato flour
5. Implement pre-requisite programmes

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Prepare sweet potato roots | * Sorting methods and tools * Cleaning methods and tools * Dry cleaning * Wet cleaning * Size reduction | * Observation * Oral questions * Written tests * Practical tests |
| 1. Dry sweet potato chips | * Importance of drying * Drying pre-treatments * Drying tools and equipment * Drying methods | * Observation * Written tests * Oral questions * Practical tests |
| 1. Mill sweet potato chips | * Milling methods * Types of mills * Hammer * Disc * Roller | * Observation * Written tests * Oral questions * Practical tests * Supervised exercises |
| 1. Package sweet potato flour | * Packaging materials, their advantages and disadvantages * Packaging tools and equipment * Packaging methods * Labelling and coding of the product * Storage | * Observation * Written tests * Oral questions * Practical tests |
| 1. Implement pre-requisite programmes | * Food premise hygiene and sanitation * Equipment cleaning and storage * Water quality * Personal hygiene * Waste disposal | * Written tests * Oral questions * Practical tests * Observation |

**Suggested Methods of Instruction**

* Direct instruction
* Field trips/site visits
* Group discussions
* Demonstration by trainer
* Practice by the trainee
* Exercises

**List of Recommended Resources**

* Computers
* Projectors
* Flip charts
* Calculators
* Internet

# SWEET POTATO CRISPS

**UNIT CODE:** AGR/CU/SPP/CR/03/4/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Produce sweet potato crisps

**Duration of Unit:** 30 Hours

**Unit Description**

This unit specifies the competencies required to produce sweet potato crisps. It involves preparing sweet potato slices, frying sweet potato slices, seasoning sweet potato crisps, packaging sweet potato crisps and implementing pre-requisite programmes.

**Summary of Learning Outcomes**

1. Prepare sweet potato slices
2. Fry sweet potato slices
3. Season sweet potato crisps
4. Package sweet potato crisps
5. Implement pre-requisite programmes

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Prepare sweet potato slices | * Sorting methods and tools * Cleaning methods and tools * Peeling methods and tools * Handling peels * Size reduction * Premise and equipment hygiene and sanitation * Personal hygiene * Waste disposal | * Observation * Written tests * Oral questions * Practical tests |
| 1. Fry sweet potato slices | * Frying conditions * Frying tools and equipment * Frying methods * De – oiling * Grading of crisps | * Observation * Written tests * Oral questions * Practical tests * Supervised exercises |
| 1. Season sweet potato crisps | * Importance of seasoning * Types of seasoning and seasoning ingredients * Seasoning tools and equipment * Seasoning methods | * Observation * Written tests * Oral questions * Practical tests |
| 1. Package sweet potato crisps | * Packaging materials, their advantages and disadvantages * Packaging tools and equipment * Packaging methods * Labelling and coding of the product * Storage | * Written tests * Oral questions * Practical tests * Observation |
| 1. Implement pre-requisite programmes | * Food premise hygiene and sanitation * Equipment cleaning and storage * Water quality * Personal hygiene * Waste disposal | * Written tests * Oral questions * Practical tests * Observation |

**Suggested Methods of Instruction**

* Direct instruction
* Field trips/site visits
* Group discussions
* Demonstration by trainer
* Practice by the trainee
* Exercises

**List of Recommended Resources**

* Computers
* Projectors
* Flip charts
* Calculators
* Internet

# DRY SWEET POTATO CHIPS

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

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Produce dry sweet potato chips

**Duration of Unit:** 20 Hours

**Unit Description**

This unit specifies the competencies required to produce dry sweet potato chips. It involves preparing sweet potato roots, drying sweet potato chips, packaging sweet potato chips and implementing pre-requisite programmes.

**Summary of Learning Outcomes**

1. Prepare sweet potato roots
2. Dry sweet potato chips
3. Package sweet potato chips
4. Implement pre-requisite programmes

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Prepare sweet potato roots | * Sorting methods and tools * Cleaning methods and tools * Size reduction and tools | * Observation * Oral questions * Written tests * Practical tests |
| 1. Dry sweet potato chips | * Importance of drying * Drying pre-treatments * Drying tools and equipment * Drying methods | * Written tests * Oral questions * Practical tests * Observation |
| 1. Package sweet potato chips | * Packaging materials, their advantages and disadvantages * Packaging tools and equipment * Packaging methods * Labelling and coding of the product * Storage | * Written tests * Oral questions * Practical tests * Observation |
| 1. Implement pre-requisite programmes | * Food premise hygiene and sanitation   + Equipment cleaning and storage   + Water quality * Personal hygiene * Waste disposal | * Written tests * Oral questions * Practical tests * Observation |

**Suggested Methods of Instruction**

* Direct instruction
* Field trips/site visits
* Group discussions
* Demonstration by trainer
* Practice by the trainee
* Exercises

**List of Recommended Resources**

* Computers
* Projectors
* Flip charts
* Calculators
* Internet