

**REPUBLIC OF KENYA**

**MINISTRY OF EDUCATION**

**NATIONAL OCCUPATIONAL STANDARDS**

**FOR**

**HORTICULTURE PROCESSOR**

**LEVEL 4**



TVET CDACC

P.O. BOX 15745-00100

NAIROBI

First published 2019

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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, Vision 2030 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 of Kenya 2010 and this resulted in the formulation of the Policy Framework for Reforming Education and Training (Sessional Paper No. 14 of 2012). A key feature of this policy is the radical change in the design and delivery of the TVET training. This policy document requires that training in TVET shall be competency based, curriculum development shall be industry led, certification shall be based on demonstration of competence and mode of delivery shall allow 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 these Occupational Standards were developed for the purpose of developing a competency-based curriculum for Horticulture Produce Processing. These Occupational Standards will also be the basis for assessment of an individual for competence certification.

It is my conviction that these Occupational Standards will play a great role towards development of competent human resource for the Agriculture sector’s growth and sustainable 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 and Sessional Paper No. 14 of 2012 on Reforming Education and Training in Kenya, emphasized the need to reform curriculum development, assessment and certification in TVET. This called for shift to CBET in order 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.

The TVET Curriculum Development, Assessment and Certification Council (TVET CDACC), in conjunction with Horticulture Sector Skills Advisory Committee (SSAC), German International Cooperation and Ministry of Agriculture, Livestock and Fisheries have developed these Occupational Standards for a Horticulture processor. TVET CDACC in conjunction with Micro Enterprises Support Programme Trust (MESPT) have reviewed this Occupational Standards and incorporated Food Safety. These standards will be the bases for development of competency-based curriculum for Horticulture Production processing level 4.

The occupational standards are designed and organized with clear performance criteria for each element of a unit of competency. These standards also outline the required knowledge and skills as well as evidence guide.

I am grateful to the Council members, Council Secretariat, Horticulture SSAC, Food Safety SSAC, expert workers and all those who participated in the development and review of these occupational standards.

**CHAIRPERSON**

**TVET CDACC**

# ACKNOWLEDGMENT

These Occupational Standards were developed through combined effort of various stakeholders from private and public organizations. I am thankful to the management of these organizations for allowing their staff to participate in this course. I wish to acknowledge the invaluable contribution of industry players who provided inputs towards the development of these Standards.

I thank TVET Curriculum Development, Assessment and Certification Council (TVETCDACC) for providing guidance on the development of these Standards. My gratitude goes to Horticulture and Food Safety Sector Skills Advisory Committee (SSAC) members for their contribution to the development of these Standards. I thank all the individuals and organizations who participated in the validation of these Standards.

My gratitude also goes to NEPAD Planning and Coordinating Agency (NPCA) of the Africa Union Commission and German Ministry of Economic Cooperation and Development (BMZ) through its implementing agency German International Cooperation (GIZ) GmbH which enabled the development of these Standards through the CAADP ATVET project.

I also appreciate the office of the National Coordinator of GIZ CAADP ATVET Project which was instrumental in the cooperation between the project team, Ministry of Agriculture, Livestock and Fisheries (MoALF) and Ministry of Education.

Much gratitude goes to Micro Enterprises Support Program Trust (MESPT) who initiated the review process and the incorporation of Food Safety in the Curriculum. I acknowledge the Danish International Development Agency (DANIDA) and the European Union (EU) who sponsored the review process.

I acknowledge all other institutions which in one way or another contributed to the development of these standards.

**CHAIRPERSON,**

**HORTICULTURE SECTOR SKILLS ADVISORY COMMITTEE**

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# ABBREVIATIONS AND ACRONYMS

ATVET : Agricultural Technical and Vocational Education and Training

BC : Basic Competency

CAADP : Comprehensive Africa Agricultural Development Programme

CDACC : Curriculum Development, Assessment and Certification Council

CR : Core Competency

DANIDA Danish International Development Agency

GIZ : German International Cooperation

HG : Horticulture Processor

ICT : Information Communication Technology

KCSE : Kenya Certificate of Secondary Education

KNQA : Kenya National Qualifications Authority

MESPT Micro Enterprises Support Programme Trust

OSH : Occupation Safety and Health

OSHA : Occupation Safety and Health Act

OSHS : Occupational Safety and Health Standards

PPE : Personal Protective Equipment

SSAC : Sector Skills Advisory Committee

TVET : Technical and Vocational Education and Training

# KEY TO UNIT CODE

 **HO /OS /AT /BC /01/ 4/B**

Industry or sector

Occupational Standards

Occupational area

Type of competency

Competency number

Competency level

Version Control

# OVERVIEW

Horticulture Processor Qualification Level 4 consists of competencies that an individual must achieve to be able to carry out processing of horticultural produce. It entails storing horticultural produce, processing horticultural fruits, vegetables, flowers, nuts as well as herbs and spices and disposing off of wastes.

The units of competency comprising this qualification include the following basic and core competencies:

**BASIC UNITS OF COMPETENCY**

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

**CORE UNITS OF COMPETENCY**

|  |  |
| --- | --- |
| **Unit Code** | **Unit Title** |
| HO/OS/HG/CR/01/4/B | Store Horticultural Produce |
| HO/OS/HG/CR/02/4/B | Process Horticultural Fruits |
| HO/OS/HG/CR/03/4/B | Process Horticultural Vegetables |
| HO/OS/HG/CR/04/4/B | Process Horticultural Flowers |
| HO/OS/HG/CR/05/4/B | Process Horticultural Nuts |
| HO/OS/HG/CR/06/4/B | Process Horticultural Herbs And Spice |

#

# BASIC UNITS OF COMPETENCY

# DEMONSTRATE COMMUNICATION SKILLS

**UNIT CODE:** HO/OS/HG/BC/01/4/B

**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 sourcesbased on standard procedures
2. Effective questioning, active listening and speaking skills are used to gather and convey information based on communication needs
3. Appropriate mediumis 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
7. 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 is 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:** HO/OS/HG/BC/02/4/B

**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:** HO/OS/HG/BC/03/4/B

**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 for competence assessment
 | 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
	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:** HO/OS/HG/BC/04/4/B

**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 for competence assessment
 | 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
3. Materials relevant to the proposed activity or tasks
 |
| 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:** HO/OS/HG/BC/05/4/B

**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 for competence assessment
 | 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
3. Materials relevant to the proposed activity or tasks
 |
| 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:** HO/OS/HG/BC/06/4/B

**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. 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 for competence assessment
 | 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
	3. Materials relevant to the proposed activity or tasks
 |
| 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 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 OCUPATIONAL SAFETY AND HEALTH PRACTICES

**UNIT CODE:** HO/OS/HG/BC/07/4/B

**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**

|  |  |
| --- | --- |
| 1. This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range. Critical Aspects of Competency
 | Assessment requires evidence that the candidate:1. Arranged work area and items in accordance with
2. workplace procedures requirements
3. Followed work standards and procedures based on instructions
4. Applied ***Prevention and control measures*** based on instructions
5. Undertook orientations on ***OSH requirements and regulations*** in line with policy.
6. Provided feedback on occupational health and safety as per workplace instructions.
7. Adhered to workplace procedures for reporting hazards, incidents, injuries and sickness to as per workplace policy.
8. 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 COMPETENCY

## STORE HORTICULTURAL PRODUCE

**UNIT CODE:** HO/OS/HG/CR/01/4/B

**UNIT DESCRIPTION**

This unit specifies the competencies required to store horticultural produce. It involves applying food safety measures in receiving, sorting, cleaning, storing horticultural produce, maintaining cold chain, managing wastes and preparing the required horticultural produce store records.

**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. Apply food safety measures in storing horticultural produce
 | * 1. Possible ***sources of food safety hazards*** *are* identified and documented as per instruction
	2. ***Food safety procedures*** are followed in storing horticultural produce as instructed
	3. Standard operating procedures for preventing and mitigating food safety risks are implemented as per the identified food safety risks
 |
| 1. Prepare to store horticultural produce
 | 1. Safety procedures were followed working surface for handling the produce is set up in accordance with workplace procedures
2. ***Tools, materials &supplies and equipment*** required for storing horticultural produce are assembled based on the produce type, quantity and stores management policy
3. ***Horticultural produce*** is sorted based on the produce quality.
4. Horticultural produce is cleaned based on the produce type
5. Horticultural produce is graded based on the market demand assessment reports and the produce quality.
6. Horticultural produce are weighed according to grades and market demand.
 |
| 3. Store horticultural produce | 1. Horticultural produce is packed based on the produce type, grades, market assessment reports and available storage space.
2. ***Packed horticultural produce*** is stored based on the produce type, grades and stores management policy.
 |
| 4. Evaluate horticultural produce stored | 4.1 Space availability is evaluated in accordance with the produce quantity and packing materials4.2 Quality of horticultural produce is assessed based on instruction given. |
| 5. Complete horticultural produce storage. | 5.1 Horticultural produce storage is recorded as per the instructions5.2 Stores records are shared in accordance with the stores management policy.5.3 Horticultural waste is managed as per the environmental management policies and regulation. |

**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. Sources of food safety hazards mayinclude but not limited to**:**
 | * Water
* Chemical
* Site location
* Storage
* Storage facility
* Air
* Packaging material
* Personnel
 |
| 1. Food safety proceduresmayinclude but not limited to*:*
 | * Hand washing
* PPE (personal protective equipment)
* Personal hygiene
* Clean as you go
* Cleaning in progress
* Process flow
* Pest control
* Cleaning and sanitization
* Record keeping
* Packaging
 |
| 1. Tools may include but not limited to:
 | * Knives
* Buckets
* Bowls
* Wheel barrows
 |
| 1. Materials and supplies may include but not limited to:
 | * Water
* Pallets
* Horticultural produce
* Power
* Poly bags
* Labels
 |
| 1. Equipment may include but not limited to:
 | * Weighing scale
* Trolleys
* Cold storage equipment
* Crates
* First aid kit
* Trays
 |
| 1. Horticultural produce may include but not limited to:
 | * Indigenous and exotic leafy vegetables,
* Cut flowers,
* Root vegetables,
* Fruits,
* Nuts,
* Herbs and spices.
 |
| 1. Packed horticultural produce may include but not limited:
 | Horticultural produce placed in:* Poly bags
* Crates
* Boxes
* Buckets
 |

**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:

* Record keeping
* Basic hygiene
* Communication
* Observation
* Horticultural produce handling
* Interpersonal
* Report writing
* Numeracy

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Basic food hygiene practices
* Record keeping
* First aid
* Hygiene
* Types of storage tools, materials and equipment and their uses.
* Packaging materials
* Food safety
* Environmental management
* Waste management
* Operation of storage tools and equipment
* Reporting channels

**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. Adhered to Safety requirements as per the work place procedure and Good Agricultural Practices guide.
	2. Received, sorted, cleaned and graded horticultural produce in preparation for storage according to Good Agricultural Practices guide.
	3. Packed and stored horticultural produce as per the stores management policy.
	4. Observed the environmental protection measures laid in the work place procedures
	5. Prepared records of produce type, grades and quantities
	6. Maintained the storage facility according to the type of produce and stores management procedures
	7. Observed food safety procedures as per instructions
	8. Documented food safety records as per instructions
 |
| 1. Resource Implications for competence assessment
 | 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
	3. Materials relevant to the proposed activity or tasks
 |
| 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:* 1. On the job
	2. Off the job
	3. In work placement (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. Attitude is assessed alongside storage of horticultural produce |

## PROCESS HORTICULTURAL FRUITS

**UNIT CODE:** HO/OS/HG/CR/02/4/B

**UNIT DESCRIPTION**

This unit specifies the competencies required to process horticultural fruits. It involves applying food safety measures in setting up working surface, assembling horticultural produce processing tools, materials and equipment, receiving the produce, making various fruit products, maintaining processing unit hygiene, managing wastes generated and preparing the required fruit processing records.

**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. Apply food safety measures in processing of horticultural fruits
 | * 1. Possible ***sources of food safety hazards*** *are* identified and documented as per instruction
	2. ***Food safety procedures*** are followed in processing horticultural fruits as instructed
	3. Standard operating procedures for preventing and mitigating food safety risks are implemented as per the identified food safety risks
 |
| 1. Prepare to process horticultural fruits.
 | 1. Safety measures are adhered to during fruit processing as laid down in the work place procedures
2. Working surface is set based on the produce type and quantities
3. Horticultural fruit for processing is received based on supervisor’s instructions
4. Horticultural fruit processing ***tools, materials & supplies and equipment*** are assembled based on the fruit types and the products required.
5. Horticultural fruits for processing are weighed based on the instructions.
 |
| 3. Process the horticultural fruits | 1. Horticultural fruits are processed to various ***Fruit products*** based on units processing plan.
	1. Fruit products are packaged based on instructions
 |
| 4. Evaluate horticultural fruits processed. | 1. Quality of the fruit product is assessed based on product type and instructions.

4.2 Quantity of the products is measured as per the instructions |
| 5. Complete horticultural fruit processing. | 5.1 Packed product is stored based on the stores management policy. 5.2 Horticultural fruit processing unit, tools and equipment are cleaned according to the instructions5.3 Horticultural fruit product records are prepared and shared as per the organization’s policy5.4 Horticultural processing unit waste is managed as per the environmental management policies and regulation and the organization waste management policy |

**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. Sources of food safety hazards mayinclude but not limited to**:**
 | * Water
* Chemical
* Site location
* Storage
* Storage facility
* Air
* Packaging material
* Personnel
 |
| 1. Food safety procedures mayinclude but not limited to*:*
 | * Hand washing
* PPE (personal protective equipment)
* Personal hygiene
* Clean as you go
* Cleaning in progress
* Process flow
* Pest control
* Cleaning and sanitization
* Record keeping
* Packaging
 |
| 1. Tools may include but not limited to:
 | * Knives
* Buckets
* Sieves/ strains
* Spoons
* Sauce pans
* Bowls
* Measuring jars
* Cups
* Plates
* Basins
 |
| 1. Materials and supplies may include but not limited to:
 | * Packaging materials
* Power
* Raw materials
* Preservatives
* Labels
* Wax
* Water
* Seals
* Stationeries
 |
| 1. Equipment includes but not limited to:
 | * Weighing scales
* Sealers
* Strapping machine
* Trolleys
* Boilers
* Working benches
* Crates
* Trays
* Firefighting equipment
* First aid kits
* Metal detectors
* Blenders
* Juice extractors
 |
| 1. Fruit products may include but not limited to:
 | All processed horticultural fruits products* Fruit powders
* Jellies
* Jams
* Fruit puree
* Fruit sauces
* Slices and cubes
* Fruit wines
* Pastes
* Marmalades
* Juices
* Dried fruits
 |

**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:

* Record keeping
* Basic hygiene
* Communication
* Processing machine and equipment operation
* Observation
* Horticultural fruit products handling

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Basic food hygiene practices
* Record keeping
* First aid
* Hygiene
* Horticultural processing methods
* Types of processing tools, materials and equipment
* Occupational safety,
* food safety
* Waste management and environmental management policies
* Packaging fruit products
* Reporting channels

**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. Observed safety through use of personal protective equipment and proper handling of tools and equipment and working environment.
	2. Assembled fruit processing tools, materials and equipment in the processing unit
	3. Processed and packaged the fruit products as per the instructions
	4. Observed hygiene through maintaining cleanliness of the tools, equipment and working surfaces as well as personal hygiene.
	5. Provided records of products processed
	6. Efficiently used materials provided for processing according to instructions.
	7. Observed the environmental protection measures laid in the work place procedures
	8. Observed food safety procedures as per instructions
	9. Documented food safety records as per instructions
 |
| 1. Resource Implications for competence assessment
 | 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
	3. Materials relevant to the proposed activity or tasks
 |
| 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:* 1. On the job
	2. Off the job
	3. In work placement (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. Attitude is assessed alongside fruit processing |

##

## PROCESS HORTICULTURAL VEGETABLES

**UNIT CODE:** HO/OS/HG/CR/03/4/B

**UNIT DESCRIPTION**

This unit specifies the competencies required to process horticultural vegetables. It involves applying food safety measures in receiving the vegetables for processing, assembling vegetable processing tools, materials and equipment, making various vegetable products, managing wastes generated and preparing the required vegetable processing records.

**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. Apply food safety measures in processing horticultural vegetables
 | * 1. Possible ***sources of food safety hazards*** *are* identified and documented as per instruction
	2. ***Food safety procedures*** are followed in processing horticultural vegetables as instructed
	3. Standard operating procedures for preventing and mitigating food safety risks are implemented as per the identified food safety risks
 |
| 1. Prepare to process horticultural vegetables.
 | 1. Safety and environmental protection measures are adhered to based on work place procedures
2. ***Horticultural vegetables*** for processing is received based on instructions given
3. Horticultural vegetable processing ***tools, materials & supplies and equipment*** are assembled based on instructions given
4. The working surface is set for processing vegetables based on the instructions given
5. Horticultural vegetables are assembled, sorted, cleaned and graded based on the instructions given
6. The vegetables for processing is weighed and recorded
 |
| 3. Process the horticultural vegetables | * 1. Horticultural vegetables are processed to various products based on the instructions given.
	2. ***Processed Vegetables products*** are weighed and packaged based on instructions given
 |
| 4. Evaluate processed horticultural vegetables Products | 4.1 Quality of vegetable product is assessed based on instructions given.4.2 The quantity of the products is measured based on instructions given |
| 5. Complete horticultural vegetable processing. | 5.1 Packed product is stored based on the stores management policy. 5.2 Fruit processing unit is cleaned according to the hygiene standards5.3 Horticultural vegetable processing waste is disposed off as per the environmental management policies and regulation and the organization waste management policy.5.4 Horticultural vegetable processing records are prepared and shared as per the instructions given. |

**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. Sources of food safety hazards mayinclude but not limited to**:**
 | * Water
* Chemical
* Site location
* Storage
* Storage facility
* Air
* Packaging material
* Personnel
 |
| 1. Food safety proceduresmayinclude but not limited to*:*
 | * Hand washing
* PPE (personal protective equipment)
* Personal hygiene
* Clean as you go
* Cleaning in progress
* Process flow
* Pest control
* Cleaning and sanitization
* Record keeping
* Packaging
 |
| 1. Horticultural vegetables may include but not limited to:
 | All cultivated vegetables:* Leafy (celery)
* Fruits
* Green beans
* Floral
* Roots
 |
| 1. Tools may include but not limited to:
 | * Knives
* Buckets
* Spoons
* Sauce pans
* Bowls
* Plates
* Basins
 |
| 1. Materials and supplies may include but not limited to:
 | * Packaging materials
* Power
* Vegetables for processing
* Preservatives
* Stationeries
* Water
 |
| 1. Equipment may include but not limited to:
 | * Weighing scales
* Sealers
* Strapping machine
* Trolleys
* Boilers
* Thermometers
* Working benches
* Crates
* Trays
* Packaging equipment
* Fire-fighting equipment
* First aid kits
* Metal detectors
* pH meters
* Refractometers
* Blenders
* Juice extractors
 |
| 1. Processed Vegetable products may include but not limited to:
 | All processed horticultural fruits products* Leafy vegetable powders
* Root slices
* Vegetable juices
* Crystals
* Root vegetable flour
 |

**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:

* Record keeping
* Basic hygiene
* Communication
* Processing machine and equipment operation
* Observation
* Packaging
* Labeling
* Horticultural vegetable products handling

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Basic food hygiene practices
* Record keeping
* First aid
* Hygiene
* Types of processing tools, materials and equipment
* Occupational safety,
* food safety
* Food processing regulations and standards
* Waste management and environmental management policies
* Packaging fruit products
* Record keeping.

**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. Set up the working surface as per the instructions given
	2. Observed safety through use of personal protective equipment when handling tools and equipment as well as in working environment according to Good Agricultural Practices guide.
	3. Assembled vegetable processing tools, materials and equipment in the processing unit based on instructions given
	4. Processed and packaged the vegetable products as per the instructions given
	5. Observed hygiene through maintaining cleanliness of the tools, equipment and working surfaces as well as personal hygiene.
	6. Provided records of products processed
	7. Efficiently used materials provided for processing.
	8. Observed the environmental protection measures laid in the work place procedures
	9. Observed food safety procedures as per instructions
	10. Documented food safety records as per instructions
 |
| 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
	3. Materials relevant to the proposed activity or tasks
 |
| 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:* 1. On the job
	2. Off the job
	3. In work placement (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. Attitude is assessed alongside horticultural vegetable processing. |

##

## PROCESS HORTICULTURAL FLOWERS

**UNIT CODE:** HO/OS/HG/CR/04/4/B

**UNIT DESCRIPTION**

This unit specifies the competencies required to process horticultural flowers. It involves setting up working surface, assembling flower processing tools, materials and equipment, acquiring flowers for processing, sorting, grading and preservation as well as managing wastes and preparing the required horticultural flower processing documentation.

**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 to process horticultural flowers.
 | * 1. Working surface is set up as per the instructions given.
	2. ***Horticultural flower*** processing ***tools, materials & supplies and equipment*** are assembled in the processing room as per the flower type and quantities.
	3. Horticultural flowers for processing is received based on instructions given
	4. Horticultural flowers processing tools, materials and equipment are assembled based on the instructions given
	5. Horticultural flowers are pre-cooled based on instructions given.
	6. Quantity of horticultural flower for processing is recorded
 |
| 2. Process horticultural flowers | * 1. Horticultural flowers are sorted based on flower type.
	2. Horticultural flowers are graded based on bud size, number of leaves and stem sizes
	3. ***Horticultural flowers products*** are preserved based on instructions given.
	4. Horticultural flower bouquets are made based on instructions given.
	5. Horticultural flowers are dried based on instructions given
 |
| 3. Evaluate horticultural flower processed. | 3.1 Quality of the flower product is assessed based on instructions given.3.2 The quantity of the flower product is recorded based on instructions given |
| 4. Complete horticultural flower processing. | 4.1 The processed flower product is packed based on the flower product type and market demand4.2 Packed flower product is labeled and addressed based on the instructions given4.4. Horticultural flower processing waste is managed as per the environmental management policies and regulation and the organisation waste management policy.4.5 Horticultural flower processing records are prepared and shared as per the instructions given. |

**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. Horticultural flowers may include but not limited to:
 | * All cut flowers
 |
| 1. Tools includes but not limited to:
 | * Knives
* Buckets
* Secateurs
 |
| 1. Materials and supplies may include but not limited to:
 | * Packaging materials
* Power
* Flowers for processing
* Preservatives
* Stationeries
* Water
* Straps
* Hangers
* Litter bins
 |
| 1. Equipment may include but not limited to:
 | * Strapping machine
* Trolleys
* Thermometers
* Working benches
* Trays
* Packaging equipment
* Fire-fighting equipment
* First aid kits
* Driers
 |
| 1. Horticultural flowers products mayinclude but not limited to:
 | All processed horticultural flower products* Bouquet
* Dried flowers
 |

**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
* Observation
* Interpersonal
* Horticultural flower handling

**Required knowledge**

The individual needs to demonstrate knowledge of:

* First aid
* Hygiene
* Horticultural flower processing methods
* Flower processing tools, materials and equipment
* Occupational safety,
* Waste management
* Types of packaging materials
* Records keeping

**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. Set up the working surface according to the instructions given
	2. Observed safety through use of personal protective equipment when handling tools and equipment as well as in working environment according to instructions given.
	3. Received flower processing tools, materials and equipment in the processing unit as per instructions given
	4. Prepared records of products as per the instructions given
	5. Efficient used materials provided for processing.
	6. Environment management is observed as per the environmental management policies.
 |
| 1. Resource Implications for competence assessment
 | 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
	3. Materials relevant to the proposed activity or tasks
 |
| 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:* 1. On the job
	2. Off the job
	3. Work placement (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. Attitude is assessed alongside flower processing. |

##

## PROCESS HORTICULTURAL NUTS

**UNIT CODE:** HO/OS/HG/CR/05/4/B

**UNIT DESCRIPTION**

This unit specifies the competencies required to process horticultural nuts. It involves applying food safety measures in setting up horticultural nut processing working surface, assembling nut processing tools, materials and equipment, acquiring nuts for processing, receiving, sorting, grading, processing, managing waste and preparing the required nut processing records.

**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. Apply food safety measures in processing horticultural nuts
 | * 1. Possible ***sources of food safety hazards*** *are* identified and documented as per instruction
	2. ***Food safety procedures*** are followed in processing horticultural nuts
	3. Standard operating procedures for preventing and mitigating food safety risks are implemented as per the identified food safety risks
 |
| 1. Prepare to process horticultural nuts.
 | * 1. The working surface for nut processing is set up as per the instructions given
	2. ***Horticultural nuts*** for processing are acquired based on procurement policy and market demand.
	3. Horticultural nut processing ***tools, materials & supplies and equipment*** are assembled based on the instructions given
	4. Horticultural nuts are sorted based on nut type and the instructions given
	5. Horticultural nuts for processing are weighed and recorded based on quantities required for processing.
 |
| 3. Process the horticultural nuts | * 1. Horticultural nuts are processed into various ***horticultural nut products*** based on the instructions given and nut type.
	2. Horticultural nut products are packaged and labeled based the instructions given
 |
| 4. Evaluate processed horticultural nut products. | 4.1 Quality of the horticultural nut product is assessed based on type of nuts as well as the instructions given.4.2 The quantity of the nut product is measured based on the instructions given |
| 5. Complete horticultural nut processing. | * 1. Packaged horticultural nut product is packed based on the instructions given and stores management policies.
	2. Horticultural processing unit is cleaned as per hygiene standards
	3. Horticultural nut processing by-products and waste is managed as per the organization waste and by-product management policy.
	4. Horticultural nut processing records are prepared and shared as per the organization’s policy.
 |

**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. Sources of food safety hazards mayinclude but not limited to**:**
 | * Water
* Chemical
* Site location
* Storage
* Storage facility
* Air
* Packaging material
* Personnel
 |
| 1. Food safety proceduresmayinclude but not limited to:
 | * Hand washing
* PPE (personal protective equipment)
* Personal hygiene
* Clean as you go
* Cleaning in progress
* Process flow
* Pest control
* Cleaning and sanitization
* Record keeping
* Packaging
 |
| 1. Horticultural nut may include but not limited to:
 | * Ground nut
* Macadamia
* Cashew
* Coconuts
 |
| 1. Tools may include but not limited to:
 | * Knives
* Buckets
* Spoons
* Sauce pans
* Drying mats
* Bowls
* Plates
* Basins
 |
| 1. Materials and supplies may include but not limited to:
 | * Packaging materials
* Power
* Heat
* Nuts for processing
* Preservatives
* Labels
* Stationeries
* Water
* Litter bins
* Poly bags
* Salt
 |
| 1. Equipment may include but not limited to:
 | * Strapping machine
* Trolleys
* Thermometers
* Working benches
* Trays
* Packaging equipment
* Fire-fighting equipment
* First aid kits
* Driers
* Milling machine
 |
| 1. Horticultural nut products mayinclude but not limited to:
 | All processed horticultural nut products* Fried
* Baked
* Powder
* Nut pastes
* Seasoned nuts
* Nut oil
* Roasted
 |

**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:

* Record keeping
* Basic hygiene
* Communication
* Processing machine and equipment operation
* Processing
* Observation
* Packaging
* Interpersonal

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Basic food hygiene practices
* Record keeping
* First aid
* Hygiene
* Horticultural nut processing methods
* Types of nut processing tools, materials and equipment
* Occupational safety,
* Food safety
* By-products and waste management
* Produce packaging

**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. Set up the working surface based on the nut type and the instructions given
	2. Observed safety through use of personal protective equipment and proper handling of tools and equipment and working environment.
	3. Assembled nut processing tools, materials and equipment in the processing unit
	4. Received sorted, processed and packaged nuts as per the instructions given and nut type.
	5. Observed hygiene through maintaining cleanliness of the tools, equipment and working surfaces as well as personal hygiene.
	6. Prepared records of products, the instructions given
	7. Efficiently used materials provided for processing.
	8. Observed the environmental protection measures laid in the work place procedures
	9. Observed food safety procedures as per instructions
	10. Documented food safety records as per instructions
 |
| 1. Resource Implications for competence assessment
 | 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
	3. Materials relevant to the proposed activity or tasks
 |
| 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:* 1. On the job
	2. Off the job
	3. Work placement (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. Attitude is assessed alongside Horticultural nut processing |

## PROCESS HORTICULTURAL HERBS AND SPICES

**UNIT CODE:** HO/OS/HG/CR/06/4/B

**UNIT DESCRIPTION**

This unit specifies the competencies required to process horticultural herbs and spices. It involves applying food safety measures in setting up horticultural herbs and spices processing working surface, assembling herbs and spices processing tools, materials and equipment, receiving, sorting, grading and processing the herbs & spices to various products, managing waste and preparing the required reports.

**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. Apply food safety measures in processing horticultural herbs and spices
 | * 1. Possible ***sources of food safety hazards*** *are* identified and documented as per instruction
	2. ***Food safety procedures*** are followed in processing of horticultural herbs and spices
	3. Standard operating procedures for preventing and mitigating food safety risks are implemented as per the identified food safety risks
 |
| 1. Prepare to process horticultural herbs and spices.
 | * 1. Working surface is set up as per the instructions given
	2. Horticultural herbs and spices for processing are received based on the instructions given.
	3. Horticultural herbs and spices processing ***tools, materials &supplies and equipment*** are assembled based on their types, amount and the final products required.
	4. Horticultural herbs and spices are sorted based on herb type and the instructions given.
	5. Safety measures are adhered to as per the work place procedures.
 |
| 3. Process the horticultural herbs and spices | * 1. Horticultural spices are processed into various ***horticultural spices products*** based on the instructions given
	2. Horticultural herbs are processed into various ***horticultural herb products*** based on the instructions given
 |
| 4. Evaluate quality of the horticultural herbs and spices products. | 4.1 Quality of the horticultural herbs and spices product is assessed based on the instructions given.4.2 Quantity of the herbs and spices product is measured based on the instructions given |
| 5. Complete horticultural herbs and spices processing. | * 1. Packaged horticultural herbs and spices product is packed and stored based on the stores management policies.
	2. Horticultural herbs and spices processing waste is disposed of as per the environmental management policies and regulation and the organization waste and byproduct management policy.
	3. Horticultural herbs and spices processing records are prepared and shared as per the organization’s policy.
 |

**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. Sources of food safety hazards may include but not limited to**:**
 | * Water
* Chemical
* Site location
* Storage
* Storage facility
* Air
* Packaging material
* Personnel
 |
| 1. Food safety procedures may include but not limited to:
 | * Hand washing
* PPE (personal protective equipment)
* Personal hygiene
* Clean as you go
* Cleaning in progress
* Process flow
* Pest control
* Cleaning and sanitization
* Record keeping
* Packaging
 |
| 1. Tools mayincludes but not limited to:
 | * Knives
* Buckets
* Spoons
* Sauce pans
* Bowls
* Plates
* Mortars and pestles
* Basins
 |
| 1. Materials & supplies may include but not limited to:
 | * Packaging materials
* Power source
* Herbs and spices for processing
* Preservatives
* Labels
* Driers
* Salts
* Heat source
* Stationeries
* Water source
* Seals
 |
| 1. Equipment may include but not limited to:
 | * Weighing scales
* Sealers
* Strapping machine
* Trolleys
* Boilers
* Thermometers
* Working benches
* Crates
* Trays
* Packaging equipment
* Firefighting equipment
* First aid kits
 |
| 1. Horticultural herbs and spices may include but not limited to:
 | * Onions
* Sage
* Rosemary
* Thymes
* Aloe Vera
* Ginger
* Cinnamon
* Coriander
* Parsley
* Ginger
* Dill
* Chives
* Mint
* Garlic
 |

**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:

* Record keeping
* Basic hygiene
* Communication
* Processing machine and equipment operation
* Processing
* Observation
* Interpersonal
* Packaging
* Operating cold rooms

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Basic food hygiene practices
* Record keeping
* First aid
* Hygiene
* Horticultural herbs and spices processing methods
* Types of herbs and spices processing tools, materials and equipment
* Occupational safety,
* Food safety
* Food processing regulations and standards
* Waste management
* Packaging

**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. Set up the horticulture herbs and spices working surface as per the instructions given
	2. Observed safety through use of personal protective equipment when handling tools and equipment as well as in working environment according to Good Agricultural Practices guide.
	3. Assembled herbs and spices processing tools, materials and equipment in the processing unit as per the Good Agricultural Practices.
	4. Received, sorted, processed and packaged the horticultural herbs and spices the instructions given.
	5. Observed hygiene through maintaining cleanliness of the tools, equipment and working surfaces as well as personal hygiene.
	6. Prepared documents of products the instructions given
	7. Efficiently used materials provided for processing.
	8. Observed the environmental protection measures laid in the work place procedures
	9. Observed food safety procedures as per instructions
	10. Documented food safety records as per instructions
 |
| 1. Resource Implications for competence assessment
 | 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
	3. Materials relevant to the proposed activity or tasks
 |
| 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:* 1. On the job
	2. Off the job
	3. Work placement (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. Attitude is assessed alongside herbs and spices processing. |