

**REPUBLIC OF KENYA**

**NATIONAAL OCCUPATIONAL STANDARDS**

**FOR**

**AGRI-PRENEUR**

**LEVEL 6**

**ISCED CODE:** **0811 554 A**

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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 the 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. These reforms resulted to 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 be competency based, certification be based on demonstration of competence and mode of delivery allows for multiple entry and exit in TVET programmes.

The reforms also 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 developing a Competency-Based Education and Training (CBET) curriculum for Agripreneurship Technologist level 6. These Occupational Standards will also be the basis for the assessment of an individual for competency certification.

It is my conviction that these Occupational Standards will play a great role in the development of a competent human resource for sustainable development.

**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. This called for a shift to CBET to address the mismatch between skills acquired through training and skills needed by the industry as well as increase the global competitiveness of the Kenyan labour force.

The National Polytechnics, in conjunction with the industry experts through the Industry Advisory Board (IAB), sector regulator boards, TVETA authority, and qualification awarding institution has developed these Occupational Standards for Agripreneurship Technologist level 6. The occupational standards will be the basis for the development of a competency-based education and training curriculum for Agripreneurship Technologist level 6.

I am grateful to the Governing Council Members, TVETA, sector regulators, the industry experts, and subject experts who participated in the development of these standards.

**ACKNOWLEDGMENT**

These Occupational Standards were developed through the 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 input towards the development of these Occupational Standards.

I also thank all the individuals and organizations who participated in the validation of these Occupational Standards.

# ABBREVIATIONS AND ACRONYMS

|  |  |
| --- | --- |
| ISCED | International Standard Classification of Education |
| TVET | Technical and vocational education and training |
| TVETA | Technical and Vocational Education Training Authority |

# KEY TO UNIT CODE

Sector / Industry

Sub Sector

Occupational Area

Version Control

Unit of Competence Number

ISCED level, Programme Orientation and Level of Completion

xx

x

xxx

x

x

x

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# OVERVIEW

Agri-preneurshipLevel 6 qualification consists of competencies required by a person to offer agripreneurial services.These competencies include carrying out agriculture market research, developing Agro- enterprise business plan, preparing Agri-enterprise work plan, performing Agri-enterprise budgeting, implementing Agri-enterprise work plan, developing Agri-enterprise record, operating farm machinery, applying principles of crop production and applying principles of livestock production. It also involves application of soil science principles, application of irrigation and drainage and application of communication skills, work ethics and practices, digital literacy and entrepreneurial skills.

Units of competency comprising Agri-enterpreneurship level 6 qualification include the following basic, common and core competencies:

# SUMMARY OF UNITS OF COMPETENCY

|  |  |
| --- | --- |
| **BASIC UNITS OF COMPETENCY** | |
| **UNIT CODE** | **UNIT TITLE** |
| 0611 551 1A | Apply Digital Literacy |
| 0031 541 2A | Apply Communication Skills |
| 1022 551 3A | Apply work ethics and practices |
| **COMMON UNITS OF COMPETENCY** | |
| 0811 551 05A | Apply soil science principles |
| 0811 551 06A | Apply farm irrigation and drainage systems |
| 0811 551 07A | Operate farm machinery |
| 0811 551 08A | Apply geographic information systems |
| **CORE UNITS OF COMPETENCY** | |
| 0811 551 09A | Carry out agricultural market research |
| 0811 551 10A | Carry out crop production |
| 0811 551 11A | Carry out animal production |
| 0811 551 12A | Develop Agri-enterprise business plan |
| 0811 551 13A | Perform Agri-enterprise farm budgeting |
| 0811 551 14A | Prepare Agri-enterprise work plan |
| 0811 551 15A | Develop Agri-enterprise records |

# 

# BASIC UNITS OF COMPETENCY

# APPLY DIGITAL LITERACY

**UNIT CODE:** **0611 551 01**

**UNIT DESCRIPTION:**

This unit covers the competencies required to demonstrate digital literacy. It involves operating computer devices, solving tasks using the Office suite, accessing online/offline data and information, performing online communication and collaboration, applying cybersecurity skills and performing jobs online. It also involves applying job entry techniques.

**ELEMENTS AND PERFORMANCE CRITERIA**

| **ELEMENT**  These describe the key outcomes that make up workplace functions | **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. Operate computer devices | * 1. C***omputer device*** usage is determined as per workplace requirements.   2. ***Computer hardware*** is identified according to job requirements.   3. ***Computer software*** is identified according to workplace requirements.   4. Computer devices are turned on or off as per the correct workplace procedure.   5. ***Mouse techniques*** are applied in solving tasks as per workplace requirements.   6. Keyboardtechniques are applied in solving tasks as per workplace requirements.   7. Computer files and folders are created and managed as per workplace requirements.   8. ***Internet connection option***s are identified and applied in connecting computer devices to the Internet.   9. ***External devices*** are identified and connected to the computer devices as per the job requirement. |
| 1. Solve tasks using Office suite | 1. ***Word processing concepts***are applied in solving workplace tasks as per job requirements. 2. Worksheet data is entered and prepared in accordance with work procedures. 3. Worksheet data is built and edited in accordance with workplace procedures. 4. ***Data manipulation*** on a worksheet is undertaken in accordance with work requirements. 5. Worksheets are saved and printed in accordance with job requirements. 6. ***Electronic presentation concepts***are applied in solving workplace tasks as per job requirements. |
| 1. Manage data and information | * 1. Office ***internet services*** are identified and applied in accordance with office procedures.   2. ***Internet access applications*** are determined in accordance with office operation procedures.   3. Internet search is performed as per job requirements.   4. Online digital content is downloaded in accordance with workplace requirements.   5. Digital content is identified and backed up in accordance with workplace procedures. |
| 1. Perform online communication and collaborations | * 1. Netiquette principles are observed as per work requirements.   2. Electronic mail communication is executed in accordance with workplace policy.   3. Digital content copyright and licenses are identified and applied according to workplace policies and regulatory requirements.   4. ***Online*** ***collaboration tools*** are applied in accordance with workplace policies and regulatory requirements. |
| 1. Apply cybersecurity skills | * 1. ***Data protection*** and ***privacy*** is classified in accordance with workplace policies and regulatory requirements.   2. ***Internet security threats*** are identified as per workplace policies and regulatory requirements.   3. Computer threats and crimes are detected in accordance to Information Management security guidelines   4. ***Cybersecurity control measures*** are applied in accordance with workplace policies and regulatory requirements. |
| 1. Perform online jobs | * 1. ***Online job platforms*** are identified as per the job requirements.   2. Online accounts and profiles are created in accordance with the work requirements.   3. Online jobs are identified according to the bidder’s skillset.   4. Online digital identity is managed according to industry best practices.   5. Online job bidding is done as per the specific job requirements.   6. Online tasks are executed according to the job requirements.   7. Personal online payment account is managed in accordance with financial regulations. |
| 1. Apply job entry techniques | * 1. ***Job opportunities*** are sought based on competencies.   2. A winning resume/CV is developed as per job advertisement.   3. An application/cover letter is developed based on the job advertisement.   4. ***certificates and testimonials*** are organized as per resume.   5. ***Interview skills*** are demonstrated as per job advertisement. |

**RANGE**

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

| **Variable** | **Range** |
| --- | --- |
| 1. Computer devices may include but are not limited to: | 1. Desktops 2. Laptops 3. Smartphones 4. Tablets 5. Smartwatches |
| 1. Computer hardware may include but are not limited to: | 1. The System Unit E.g. Motherboard, CPU, casing, 2. Input Devices e.g. Pointing, keying, scanning, voice/speech recognition, direct data capture devices. 3. Output Devices e.g. hardcopy output and softcopy output 4. Storage Devices e.g. main memory e.g. RAM, secondary storage (Solid state devices, Hard Drives, CDs & DVDs, Memory cards, Flash drives 5. Computer Ports e.g. HDMI, DVI, VGA, USB type C etc. |
| 1. Computer software may include but are not limited to: | 1. System software e.g. Operating System (Windows, Macintosh, Linux, Android, iOS) 2. Application Software e.g. Word Processors, Spreadsheets, Presentations etc. 3. Utility Software e.g. Antivirus programs |
| 1. External devices may include but are not limited to: | 1. Printers 2. Projectors 3. Smart Boards 4. Speakers 5. External storage drives  * Digital/Smart TVs |
| 1. Word processing concepts may include but are not limited to: | 1. Creating word documents 2. Editing word documents 3. Formatting word documents 4. Saving word documents 5. Printing word documents |
| 1. Mouse techniques may include but are not limited to: | 1. Clicking 2. Double-clicking 3. Right-clicking 4. Drag and drop |
| 1. Internet connection options may include but are not limited to: | 1. Mobile Networks/Data Plans 2. Wireless Hotspots 3. Cabled (Ethernet/Fiber) 4. Dial-Up 5. Satellite 6. ISDN (Integrated Services Digital Network) |
| 1. Data manipulation may include but are not limited to: | 1. Use of formulae 2. Use of functions 3. Sorting 4. Filtering 5. Visual representation using charts |
| 1. Electronic presentation concepts may include but are not limited to: | 1. Creating slides 2. Editing slides 3. Formatting slides 4. Applying slide effects and transitions 5. Creating and playing slideshows 6. Saving presentations 7. Printing slides and handouts |
| 1. Internet services may include but are not limited to: | 1. Communication Services 2. Information Retrieval Services 3. File Transfer 4. World Wide Web Services 5. Web Services 6. Directory Services 7. Automatic Network Address Configuration 8. NewsGroup 9. Ecommerce |
| 1. Internet access applications/software may include but are not limited to: | 1. Browsers 2. Email Apps 3. eCommerce Apps |
| 1. Online collaboration tools may include but are not limited to: | 1. Online Storage 2. Online productivity applications 3. Online meetings, 4. Online learning environments, 5. Online calendars 6. Social networks |
| 1. Data protection and privacy may include but not limited to: | 1. Confidentiality of data/information 2. Integrity of data/information 3. Availability of data/information |
| 1. Internet security threats may include but not limited to: | 1. Malware attacks 2. Social engineering attacks 3. Software supply chain attacks 4. Advanced persistent threats (APT) 5. Distributed denial of service (DDoS) 6. Man-in-the-middle attack (MitM) 7. Password attacks 8. IoT Attacks 9. [Phishing Attacks](https://onlinedegrees.sandiego.edu/top-cyber-security-threats/#phishing-attacks) 10. [Ransomware](https://onlinedegrees.sandiego.edu/top-cyber-security-threats/#ransomware) |
| 1. Security threats control measures may include but not limited to: | 1. Counter measures against cyber terrorism 2. Physical Controls 3. Technical/Logical Controls 4. Operational Controls |
| 1. Online job platforms may include but are not limited to: | * 1. Remotask   2. Data annotation.tech   3. Cloudworker   4. Upwork   5. Oneforma   6. Appen |
| 1. Job opportunities may include but not limited to: | * 1. Self employment   2. Service provision   3. Product development   4. Salaried employment |
| 1. Certificates and testimonialsmay include but not limited to: | * 1. Academic credentials   2. Letters of previous employments/ services rendered   3. Letters of commendation   4. Certifications of participation   5. Awards |
| 1. Interview skills may include but not limited to: | * 1. Listening skills   2. Grooming   3. Language command   4. Articulation of issues   5. Body language   6. Time management   7. Honesty   8. Generally knowledgeable in current affairs and technical area |

**REQUIRED KNOWLEDGE AND SKILLS**

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

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Computer Hardware and Software Concepts
* Computer Security Concepts (Data security and privacy)
* Cyber security threats and control measures
* Understanding Computer Crimes
* Detection and protection against computer crimes
* Laws governing protection of ICT in Kenya
* Digital Identity Management
* Netiquette Principles
* Fundamentals of Copyright and Licenses
* Word processing;

Functions and concepts of word processing;

Documents and tables creation and manipulations;

Document editing;

Document formatting;

Word processing utilities

* Spreadsheets;

Meaning, types and importance of spreadsheets;

Components of spreadsheets;

Functions, formulae, and charts, uses and layout;

Data formulation, manipulation and application to cells;

Editing & formatting spreadsheets;

* Presentation Packages;

Types of presentation Packages.

Creating, formulating, running, editing, printing and presenting slides and handouts

* Networking and Internet;

Internet connectivity.

Browser and digital content management;

Managing data, information, and digital content

Electronic mail and World Wide Web

* Fundamentals of Online Working;

Online Profile Management;

e-Portfolio Management;

Online Jobs Bidding;

Online Payment Systems;

* Job entry techniques

Job searching sites

Interview preparation skills

Interview handling

**Required skills**

The individual needs to demonstrate the following skills:

* Active listening
* Keyboard Skills
* Mouse Skills
* Analytical skills
* Creativity
* Interpretation Skills
* Communication
* Spreadsheet operations (applying fundamental operations such as addition, subtraction, division and multiplication)
* Computer Use Safety Skills
* Document Editing Skills
* Document Formatting Skills
* Document Printing Skills
* Netiquette Skills
* Internet Browsing Skills
* Problem Solving Skills
* Online Collaboration Skills
* Cybersecurity Skills
* CV writing
* grooming

**EVIDENCE GUIDE**

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

|  |  |
| --- | --- |
| 1. Critical aspects of competency | ***Assessment requires evidence that the candidate:***   * 1. Operated computer devices as per workplace policies and regulations.   2. Solved tasks using the office suite as per workplace policies and regulations.   3. Manage data and information as per workplace policies and regulations.   4. Performed online communication and collaboration as per workplace policies and regulations.   5. Applied cybersecurity skills in accordance with workplace policies and regulations.   6. Executed online tasks according to the job requirements.   7. Searched for job opportunity based on competencies.   8. Prepared job requirement documentations based on job opportunity.   9. Demonstrated interview skills based on the job opportunity. |
| 1. Resource implications | The following resources should be provided:   * 1. Appropriately simulated environment where assessment can take place.   2. Access to relevant work environments where assessment can take place.   3. Resources relevant to the proposed activities or task. |
| 1. Methods of assessment | Competency in this unit may be assessed through:   * 1. Observation   2. Oral assessment   3. Portfolio of evidence   4. Interviews   5. Third party report   6. Written assessment   7. Practical assessment   8. Projects |
| 1. Context of assessment | Competency may be assessed:   * 1. On the job   2. In a simulated work environment. |
| 1. Guidance information for assessment | * 1. Holistic assessment with other units relevant to the industry sector and workplace job role is recommended. |

# APPLY COMMUNICATION SKILLS

**UNIT CODE: 0031 541 2**

**UNIT DESCRIPTION**

This unit covers the competencies required to demonstrate communication skills. It involves applying communication channels, written, non-verbal, oral, and group communication skills.

**ELEMENTS AND PERFORMANCE CRITERIA**

| **ELEMENT**  These describe the key outcomes that make up workplace function | **PERFORMANCE CRITERIA**  These are assessable statements that specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the Range*** |
| --- | --- |
| 1. Apply communication channels | 1. Specific communication channels are identified and applied based on workplace requirements. 2. Challenges are identified and addressed as per the operational standards of the organization. 3. Communication channels are evaluated to meet workplace needs. |
| 1. Apply written communication skills | * 1. Types of written communication are identified and applied according to the workplace requirements.   2. Written communication needs are identified and implemented according to workplace procedures.   3. Written communication guidelines are analyzed, evaluated, and revised based on workplace needs. |
| 1. Apply non-verbal communication skills | 3.1 Existing non-verbal communication techniques are identified and applied based on organization policy.  3.2 Non-verbal communication techniques are articulated to enhance inclusivity according to workplace requirements.  3.3 Non-verbal communication techniques are modeled to enhance inclusivity according to workplace requirements. |
| 1. Apply oral communication skills | 4.1 Types of oral communication are identified and established as per organization policy.  4.2 Pathways of oral communication are identified and established as per organization policy.  4.3 Pathways of oral communication are reviewed according to organization procedures.  4.4 Pathways of oral communication are maintained according to the organization standards. |
| 1. Apply group communication skills | 1. Group communication strategies are appliedbased on the workplace needs. 2. Groups are organized in accordance with workplace procedures. 3. Effective questioning, listening and non-verbal communication techniques are used as per needs.   5.4 Group communication challenges are identified and addressed according to the workplace needs. |

**RANGE**

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

| **Variable** | **Range** |
| --- | --- |
| 1. Communication strategies may include but are not limited to: | 1. Language switch 2. Comprehension check 3. Repetition 4. Asking confirmation 5. Paraphrasing 6. Clarification request 7. Translation 8. Restructuring 9. Generalization |
| 1. Effective group interaction may include but not limited to: | 1. Identifying and evaluating what is occurring within an interaction in a non-judgmental way. 2. Using active listening. 3. Making decision about appropriate words, behavior. 4. Putting together response which is culturally appropriate. 5. Expressing an individual perspective. 6. Expressing own philosophy, ideology and background and exploring impact with relevance to communication |
| 1. Situations may include but are not limited to: | 1. Establishing rapport 2. Eliciting facts and information 3. Facilitating resolution of issues 4. Developing action plans |

**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:

* Active listening
* Interpretation
* Negotiation
* Writing
* Oral skills
* Creative thinking
* Critical thinking
* Decision making
* Analytical
* Innovation
* Conflict skills
* Leadership
* Problem solving skills
* Management
* Organizational
* Teamwork

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Communication process
* Dynamics of groups
* Styles of group leadership
* Key elements of communications strategy
* Principles of effective communication
* Turn-taking techniques
* Conflict resolution techniques
* Work planning
* Work organization
* Company policies
* Company operations and procedure standards
* Fundamental rights at the workplace
* Personal hygiene
* Accountability
* Workplace problems and how to deal with them

**EVIDENCE GUIDE**

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

|  |  |
| --- | --- |
| 1. Critical aspects of Competency. | Assessment requires evidence that the candidate:   * 1. Identified and applied specific communication channels based on workplace requirements.   2. Identified and applied specific written communication correspondence according to the workplace requirements.   3. Applied and developed non-verbal strategies to communicate in all areas of the workplace requirements.   4. Established pathways of oral communication as per workplace policy.   5. Applied group communication strategies based on workplace needs. |
| 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. Resources relevant to the proposed activity or tasks. |
| 1. Methods of Assessment | Competency in this unit may be assessed through:   * 1. Observation   2. Oral assessment   3. Portfolio of evidence   4. Interviews   5. Third party report   6. Written assessment   7. Practical assessment   8. Projects |
| 1. Context of Assessment | Competency may be assessed:   1. On-the-job 2. In a simulated work environment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# APPLY WORK ETHICS AND PRACTICES

**UNIT CODE:** **1022 551 3**

**UNIT DESCRIPTION**

This unit covers competencies required to effectively apply work ethics and practices. It involves the ability to: conduct self-management, promote ethical work practices and values, promote teamwork, manage workplace conflicts, maintain professional and personal development, apply problem-solving and promote customer care.

**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 Range*** |
| --- | --- |
| 1. Apply self-management skills | 1. Personal vision, mission and goals are formulated based on potential and concerning organization objectives and strategic plan 2. Self-esteem and a positive self-image are developed and maintained based on value 3. Emotional intelligence and stress management are demonstrated as per workplace requirements. 4. Assertiveness is developed and maintained based on the requirements of the job. 5. Accountability and responsibility for one's actions are demonstrated based on workplace instructions. 6. Time management, attendance and punctuality are observed as per the organization’s policy. 7. Personal goals are managed as per the organization’s objective 8. Self-strengths and weaknesses are identified based on personal objectives 9. Motivation, initiative and proactivity are utilized as per the organization policy 10. Individual performance is evaluated and monitored according to the agreed targets. |
| 1. Promote ethical work practices and values | 1. Integrity is demonstrated as per acceptable norms 2. Codes of conduct is applied as per the workplace requirements 3. Policies and guidelines are observed as per the workplace requirements 4. Professionalism is exercised in line with organizational policies |
| 1. Promote Team work | 3.1 ***Teams*** are formed to enhance productivity based on organization’s objectives  3.2 Duties are assigned to teams under the organization policy.  3.3 Team activities are managed and coordinated as per set objectives.  3.4 Team performance is evaluated based on set targets as per workplace policy.  3.5 ***Conflicts*** are resolved between team members in line with organization policy.  3.6 Gender and diversity-related issues are identified and mainstreamed in accordance with workplace policy.  3.7 Healthy ***relationships*** are developed and maintained in line with the workplace.  3.8 Adaptability and flexibility are applied in dealing with team members as per workplace policies |
| 1. Maintain professional and personal development | 4.1 ***Personal growth and development*** needs are identified and assessed in line with the requirements of the job.  ***4.2 Training and career opportunities*** are identified and utilized based on job requirements.  4.3 ***Resources*** for training are mobilized and allocated based on organizations and individual skills needs.  4.4 Licenses and certifications relevant to the job and career are obtained and renewed as per policy.  4.5 Recognitions are sought as proof of career advancement in line with professional requirements.  4.6 Work priorities and personal commitments are balanced and managed based on the requirements of the job and personal objectives.  4.7 Dynamism and on-the-job learning are embraced in line with the organization’s goals and objectives. |
| 1. Apply Problem solving skills | 1. ***Creative, innovative*** and practical solutions are developed based on the problem 2. Independence and initiative in identifying and solving problems are demonstrated based on the requirements of the job. 3. Team problems are solved as per the workplace guidelines 4. Problem-solving strategies are applied as per the workplace guidelines 5. Problems are analyzed and assumptions tested as per the context of data and circumstances |
| 1. Promote Customer Care | 1. Customers' needs are identified based on their characteristics 2. Customer ***feedback*** is allowed and facilitated in line with organization policies. 3. Customer concerns and complaints are analyzed and resolved in line with the set organizational culture. 4. Proactive customer outreach programs are implemented as per organizational policies 5. Customer retention strategies are developed and implemented in line with the organizational policy |

**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. Feedback may include but not limited to: | 1. Verbal 2. Written 3. Informal 4. Formal |
| 1. Conflicts include but are not limited to: | 1. Interpersonal Conflict. 2. Intrapersonal Conflict. 3. Intergroup Conflict. 4. Intragroup Conflict. |
| 1. Relationships may include but not limited to: | 1. Man/Woman 2. Trainer/trainee 3. Employee/employer 4. Client/service provider 5. Husband/wife 6. Boy/girl 7. Parent/child 8. Sibling relationships |
| 1. Team may include but not limited to: | 1. Small work group 2. Staff in a section/department 3. Inter-agency group 4. Virtual teams |
| 1. Personal growth may include but not limited to: | * Growth in the job * Career mobility * Gains and exposure the job gives * Net workings * Benefits that accrue to the individual as a result of noteworthy performance |
| 1. Personal objectives may include but not limited to: | 1. Long term 2. Short term 3. Broad 4. Specific |
| 1. Trainings and career opportunities may include but not limited to | 1. Participation in training programs 2. Serving as Resource Persons in conferences and workshops 3. Capacity building |
| 1. Resource may include may but not limited to: | 1. Human 2. Financial 3. Technology |
| 1. Creative and innovative may include but not limited to: | 1. New ideas 2. Original ideas 3. Different ideas 4. Methods/procedures 5. Processes 6. New tools |
| 1. Emerging issues may include but not limited to: | 1. Artificial Intelligence 2. Data confidentiality 3. National cohesion 4. Open offices |

**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:

* Active listening
* Critical thinking
* Organizational
* Negotiation
* Monitoring
* Evaluation
* Problem solving
* Decision Making
* Leadership
* Creative/innovative thinking
* Adaptability
* Conflict management
* Emotional intelligence
* Teamwork

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Work values and ethics
* Company policies and procedures
* Company operations, procedures and standards
* Flexibility and adaptability
* Concept of time and leisure time
* Decision making
* Work planning
* Organizing work
* Monitoring and evaluation
* Record keeping
* Gender and diversity mainstreaming
* Drug and substance abuse
* Professional growth and development
* creativity
* Innovation
* problem solving
* customer care
* mentoring and coaching.
* Emerging 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 require evidence that the candidate:   * 1. Applied self-management skills as per organizational procedures.   2. Promoted ethical practices and values as per organizational procedures.   3. Promoted Teamwork as per workplace assignments.   4. Maintained professional and personal development as per organizational procedures.   5. Applied Problem-solving skills based on work requirements.   6. Identified customer needs based on their characteristics.   7. Gave back Customer feedback in line with organization policies. |
| 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. Resources 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 test 4. Portfolio of Evidence 5. Interview 6. Third party report |
| 1. Context of Assessment | Competency may be assessed:   1. On-the-job 2. In a simulated work environment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

**COMMON UNITS OF COMPETENCY**

# APPLY SOIL SCIENCE PRINCIPLES

**UNIT CODE: 0811 551 05A**

**UNIT DESCRIPTION**

This unit specifies the competencies required to apply soil science principles. It includes competencies for performing soil sampling and analysis and improving soil fertility.

**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. Perform soil sampling | 1. ***Personal protective equipment*** are worn as per work requirement 2. ***Soil sampling tools*** and ***soil testing equipment*** are assembled as per work requirement 3. Soil samples are obtained as per work procedure 4. Composite soil samples are prepared and recorded for analysis as per ***sampling procedures*** |
| 1. Perform soil analysis | * 1. Personal protective equipment are worn as per work requirement   2. Soil analysis equipment and materials are assembled according to work requirement   3. Soil samples are processed based on test requirement   4. ***Soil properties*** are analysed in accordance to work requirement   5. Soil analysis report is prepared as per work procedure |
| 1. Improve soil fertility | * 1. Personal protective equipment are worn as per work requirement   2. Tools, equipment and materials are assembled according to work requirement   3. ***Fertilizers*** are prepared as per soil analysis report   4. ***Soil amendments*** are applied as per soil analysis report   5. ***Soil conservation measures*** are applied as per field condition |

**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. Soil sampling toolsincludes but not limited to: | * Hoes * Machetes * Secateurs * Shovels * Soil augur * Panga * Hammer * Saw * Bucket * Shears * Dibbler * Pegs |
| 1. Soil testing equipment includes but not limited to: | * Digestion block * Kjeldahl apparatus * UV-VIS Spectrophotometer * Atomic absorption spectrophotometer (AAS) * Flame photometer * pH meter * EC meter * TDS meter * Fume chamber * Measuring cylinders * Assorted glassware for routine laboratory procedures * Mechanical stirrer * Electric shaker * Eureka cans * Meteorological equipment |
| 1. Personal protective equipment includes but not limited to: | * Gloves * Safety goggles * Safety boots * Overalls * Dust coat * Ear muffs * Face masks |
| 1. Sampling procedures includes but not limited to: | * Field layout * Sample collection * Compositing * Packaging * Processing * Storage |
| 1. Soil propertiesincludes but not limited to: | * Soil texture * Soil aggregation * Soil consistency * Soil colour * Soil moisture * Soil air * Soil bulk density * Water holding capacity * Soil pH * Soil EC * Cation exchange capacity * Percent base saturation * Salt index * Microbial activity * CN ratio * Nutrients concentration |
| 1. Fertilizersinclude but not limited to: | * Organic fertilizers * Inorganic fertilizers |
| 1. Soil amendmentsinclude but not limited to: | * Fertilizers * Agricultural lime * Gypsum |
| 1. Soil conservation measuresinclude but not limited to: | * Cover cropping * Mulching * Strip cropping * Building of terraces * Minimum tillage * Contour ploughing |

**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
* Nutrients deficiency scouting
* Equipment calibration
* Technical Report writing
* Soil sampling
* Soil testing
* Plant tissue analysis
* Fertilizer recommendation
* Computation of lime requirement
* Observation
* Digital literacy

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Essential plant nutrients
* Soil-plant relationship
* Types of fertilizers and their nutrition content
* Fertilizer formulation and use
* Sources of soil acidity
* Management of soil acidity
* Types of tools and equipment used in soil sampling and soil testing
* Soil sampling and testing
* Soil degradation
* Soil conservation
* Standard operating procedures
* Accounting principles
* Waste Management
* Occupational Safety and Health Procedures

**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 measures by using Personal Protective Equipment (PPE) and correct tools 2. Assemble soil sampling tools and soil testing equipment 3. Collected soil samples as per soil sampling procedures 4. Processed soil samples for laboratory analysis in accordance to work procedures 5. Analysed soil physical, chemical and biological properties in accordance to work procedures 6. Computed fertilizer application rates as per crop nutrient requirement 7. Computed lime requirement as per soil analysis report and agronomic requirement 8. Applied soil amendments as per soil analysis report 9. Applied soil conservation measures as per field conditions |
| 1. Resource Implications (required for assessment) | The following resources must be provided during assessment:   1. Appropriately simulated environment where assessment can take place. 2. Access to relevant work environments where assessment can take place. 3. Resources relevant to the proposed activities or task. |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical   2. Project   3. Third party report   4. Portfolio of evidence   5. Written tests   6. Oral questioning |
| 1. Context of Assessment | This competency may be assessed in a work place or in a simulated work place. |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector and workplace job role is recommended |

# OPERATE FARM IRRIGATION AND DRAINAGE SYSTEMS

**UNIT CODE: 0811 551 06**

**UNIT DESCRIPTION**

This unit specifies the competencies required by an agri-preneurship technician level 6 to carry out farm irrigation and drainage. It involves designing farm irrigation and drainage systems, installing farm irrigation and drainage systems and maintaining farm irrigation and drainage systems.

**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. Design farm irrigation and drainage systems | 1. ***Farm irrigation and drainage system*** work drawingis prepared as per work requirement 2. Farm irrigation and drainage system design approvals is obtained as per work requirement 3. Farm irrigation and drainage system material costing is prepared as per approved designs and drawing 4. Farm irrigation and drainage system material schedule is prepared based on design and drawing |
| 1. Install farm irrigation and drainage systems | * 1. Personal protective equipment are worn based on OSHA   2. ***Farm irrigation and drainage system tools and equipment*** are assembled as per work requirements.   3. Farm irrigation and drainage system is installed as per approved designs and work drawings   4. Farm irrigation and drainage system is tested as per work requirements |
| 1. Maintain farm irrigation and drainage systems | 1. Personal protective equipment are worn based on OSHA 2. Farm irrigation and drainage systemmaintenance schedule is prepared as per irrigation and drainage system manuals 3. Farm irrigation and drainage system tools and equipmentare assembled as per work requirement. 4. Farm irrigation and drainage system is maintained as per work 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.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Farm irrigation and drainage system includes but not limited to: | * Surface * Sub surface * Sprinkler * Trickle * Centre pivot |
| 1. Farm irrigation and drainage system tools and equipmentincludes but not limited to: | * Drip kit * Pipes * Fittings * Water meter * Flow meters * Pumps |

**REQUIRED KNOWLEDGE AND SKILLS**

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

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Data analysis and presentation
* Computer application packages
* Field assessment procedures
* Different land condition
* Different farm tools and materials
* Soil and water conservation
* Occupational safety and health procedures

**Required skills**

The individual needs to demonstrate the following skills:

* Record keeping
* Planning
* Technical report writing
* Digital literacy
* Measuring
* Decision making
* Communication skills

**EVIDENCE GUIDE**

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

|  |  |
| --- | --- |
| 1. Critical aspects of competency | Assessment requires evidence that the candidate:   1. Wornpersonal protective equipmentbased on OSHA 2. Prepared working drawings as per work requirements 3. Prepared bill of quantities as per approved designs and drawings 4. Prepared material schedule based on design and drawings 5. Installed irrigation and drainage systems according to designs and working drawings 6. Prepared maintenance schedule as per irrigation and drainage system 7. Maintained irrigation and drainage systems as per work requirement |
| 1. Resource implications | The following resources should be provided:   1. Access to relevant workplace or appropriately simulated environment where assessment can take place 2. Materials relevant to the proposed activity or tasks |
| 1. Methods of Assessment | * 1. Competency may be assessed through:   2. Practical   3. Project   4. Third party report   5. Portfolio of evidence   6. Written tests   7. Oral questioning |
| 1. Context of Assessment | 4.1 This competency may be assessed in a work place or in a simulated work place. |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector and workplace job role is recommended. |

# OPERATE FARM MACHINERY

**CODE: 0811 551 07**

**UNIT DESCRIPTION**

This unit equips trainees with knowledge and skills to operate farm power and machinery. The unit entails description of the types and sources of farm power, demonstration of the working principles of the internal combustion engine and tractor systems and maintenance of the tractor and tractor systems. It also involves operation and maintenance of farm tools, equipment and machinery.

**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. Operate hand tools and equipment | * 1. ***Hand tools*** and ***equipment*** are assembled as per work requirement   2. Hand tools and equipment are utilized as per work procedure   3. Hand tools and equipment are serviced as per work procedure   4. Hand tools and equipment are stored as per work procedure |
| 1. Operate tillage machinery | * 1. ***Personal protective equipment*** is worn as per safety procedures   2. ***Tillage machinery*** is operated as per work procedures   3. Tillage machinery is maintained as per work procedure   4. Tillage machinery is stored as per work procedure |
| 1. Operate planting machinery | 1. Personal protective equipment is worn as per safety procedure 2. ***Planting machinery*** is calibrated as per work requirement 3. Planting machinery is operated as per work procedure 4. Planting machinery is maintained as per work procedure 5. Planting machinery is stored as per work procedure |
| 1. Operate crop protection machinery | * 1. Personal protective equipment is worn as per safety procedure   2. ***Crop protection machinery*** calibrated as per work requirement   3. Crop protection machinery is operated as per work requirement   4. Crop protection machinery is maintained as per work procedure   5. Crop protection machinery is stored as per work requirement |
| 1. Operate harvesting machinery | * 1. Personal protective equipment is worn as per safety procedures   2. Harvesting machinery is operated as per work procedures   3. Harvesting machinery is maintained as per work requirement   4. Harvesting machinery is stored as per work requirement |
| 1. Operate agro-processing machinery | * 1. Personal protective equipment is worn as per safety procedures   2. ***Agro-processing machinery*** is operated as per work requirement   3. Agro-processing machinery is maintained and repaired as per work requirement   4. Agro-processing machinery is stored as per work requirement |

**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. Personal protective equipment include but not limited to: | * Eye protection equipment * Hearing protection equipment * Feet protection equipment * Respiratory protection equipment * Gloves * Full body suits |
| 1. Hand tools and equipment include but not limited to: | * Garden tools and equipment * Livestock handling tools and equipment * Cultivation tools and equipment * Harvesting tools and equipment * Crop protection tools and equipment |
| 1. Tillage machineryinclude but not limited to: | * Ploughs * Harrows * Tillers * Rotavators * Subsoilers |
| 1. Planting machineryinclude but not limited to: | * Seed drills * Planters * Ridgers * Fertilizer distributors * Manure spreaders |
| 1. Crop protection machineryinclude but not limited to: | * Sprayers * Dusters |
| 1. Harvesting machineryinclude but not limited to: | * Balers * Mowers * Combined harvesters * Potato harvester * Threshers |
| 1. Processing machineryinclude but not limited to: | * Mills * Grinders * Shellers * Dryers * Elevators conveyors |
| 1. Secondary tillagemachinery include but not limited to: | * Harrows * rotary tillers |
| 1. Sowing machsineryinclude but not limited to: | * seed drill * planters * potato planter |
| 1. Crop protectioninclude but not limited to: | * boom sprayer * dusters * knapsack sprayers |

# APPLY GEOGRAPHIC INFORMATION SYSTEMS

**UNIT CODE: 0811 551 08**

**UNIT DESCRIPTION**

This unit covers the competencies required to apply information systems It involves Applying GIS and remote sensing techniques, performing geo-graphic communication and producing geo-maps.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace functions | **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 GIS and remote sensing techniques | 1.1 objectives and guiding principles are determined as per national environment policy, 2013  1.2 management of ecosystems and sustainable natural resource use as per national environment policy, 2013  1.3 environmental stewardship as per national environment policy, 2013  1.4 environmental quality and health as per national environment policy, 2013  1.5 environmental governance laws are determined as per national environment policy, 2013 |
| 2. Perform geo-graphic communication | 2.1 Digital maps developed to scale as per Open Geospatial Consortium  2.2 Digital maps presented to scale as per Open Geospatial Consortium  2.3 Graphs are generated as per Open Geospatial Consortium  2.4 Images are geo-referenced and processed as per Open Geospatial Consortium.  2.5 Digital models are generated from raw data as per Open Geospatial Consortium |
| 3. Produce geo-maps | 3.1 Maps are generated as per Federal Geographic Data Committee  3.2 Maps are designed and compiled as per Federal Geographic Data Committee  3.3 Maps are projected Coordinate reference systems are applied a per Federal Geographic Data Committee |

**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. ***Collected*** includes but not limited to: | * + GNSS receivers   + Aerial photography * · Remote sensing |
| 2. ***Coordinate reference systems*** includes but not limited to: | * + Geographical coordinates * · Projected Coordinate system |
| 3. ***Map projections*** includes but not limited to: | * + UTM (Universal Transverse Mercator) * · UPS (Universal Polar Stereographic) |

**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:

* ICT skills
* Operating GNSS receivers
* Geo-referencing
* Collecting data
* Taking aerial photographs
* Scanning maps
* Layering features
* Interpretation
* Presentation
* Mathematical skills
* Designing maps

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Map layout
* Geographical information systems
* Types of GNSS receivers
* Aerial photography
* Digital models
* Watershed delineation
* Remote sensing
* Data processing
* Data presentation
* Mapping scales
* Map projections
* Geo-referencing
* Map design
* Reference systems

**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:  1.1 Collected data  1.2 Processed data  1.3 Mapped natural resources  1.4 Designed, developed and presented digital maps  1.5 Generated graphs  1.6 Geo-referenced and processed images  1.7 Generated digital models |
| · 2. Resource Implications | 2.1 Appropriately simulated environment where assessment can take place.  2.2 Access to relevant work environments where assessment can take place.  2.3 Resources relevant to the proposed activities or task. |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical   2. Project   3. Third party report   4. Portfolio of evidence   5. Written tests   6. Oral questioning |
| 1. Context of Assessment | 4.1 This competency may be assessed in a work place or in a simulated work place. |
| 5. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

**CORE UNITS OF COMPETENCY**

# CARRY OUT AGRICULTURE MARKET RESEARCH

**UNIT CODE: 0811 551 09**

**UNIT DESCRIPTION**

This unit specifies the competencies required to carry out agricultural market research. It involves conducting Agri-enterprise market survey, collecting Agric- market data, analyzing Agri-enterprise market data, interpreting Agri-enterprise market data and selecting Agri-enterprise.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace functions | **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 Agri-enterprise market survey | 1. ***Agri-enterprise data collection tools*** are prepared as per work requirement 2. ***Agri-enterprise focus areas*** are mapped as per work requirement 3. Agri-enterprise market survey is carried out as per work procedure |
| * + - 1. Collect Agri-enterprise market data | * 1. ***Agri-enterprise data collection method*** is selected as per work requirement   2. Agri-enterprise data collection enumerators are recruited as per work requirement   3. Agri-enterprise Enumerators are oriented as per work requirement   4. Agri-enterprise consent is obtained as per work requirement   5. ***Agri-enterprise data*** is collected as per work requirement |
| * + - 1. Analyze Agri-enterprise market data | * 1. ***Agri-enterprise data analysis tools*** are prepared as per work procedures   2. Agri-enterprise data processing as per work procedure   3. Agri-enterprise data analysis is done as per work procedure |
| * + - 1. Interpret Agri-enterprise market data | 1. Agri-enterprise data is interpreted as per ***research context*** 2. Agri-enterprise research key findings are compared with research expectations as per work procedure 3. Agri-enterprise research limitations are established as per work procedure 4. Agri-enterprise implications are mapped out as per work procedure |
| * + - 1. Select agri-enterprise | 1. Agri-enterprise research implications are weighed as per work requirement 2. Agri-enterprise decision is made as per work requirement 3. Agri-enterprise decision review is done as per work 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.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Agri-enterprise data collection toolsincludes but not limited to: | * Mobile data APP * GIS * Remote sensing * Online questionnaires * Social media tools |
| 1. Agri-enterprise focus areas includes but not limited to: | * Supply chain partners * Consumer groups * Reachable market groups * Export promotion agencies * Buyer groups * Market research farms * Trade associations |
| 1. Agri-enterprise data collection method includes but not limited to: | * Field observations * Field survey * Interviews * Sensor technology * Weather stations * Crop monitoring software * Supply chain tracking * Market surveys |
| 1. Agri-enterprise datainclude but not limited to: | * Production data * Field data * Weather data * Market data * Financial data * Supply chain data * Customer data * Regulatory data * Research operational data |
| 1. Agri-enterprise data analysis toolsincludes but not limited to: | * Statistical software * Microsoft excel * Data visualization tools * Supply chain analytical tools * Market intelligence platforms |

**REQUIRED KNOWLEDGE AND SKILLS**

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

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Data interpretation
* Observation
* Data collection
* Crop monitoring
* Decision making
* Market intelligence
* Data analysis
* Survey

**Required skills**

The individual needs to demonstrate the following skills:

* Measuring
* Interviewing skills
* Data analysis
* Numeracy skills
* Observation
* Negotiation
* Digital literacy
* Data processing

**EVIDENCE GUIDE**

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

|  |  |
| --- | --- |
| 1. Critical aspects of competency | Assessment requires evidence that the candidate:   * 1. Prepared Agri-enterprise data collection tools as per work requirement   2. Mapped Agri-enterprise focus areas as per work requirement   3. Carried out Agri-enterprise market survey work procedure   4. Recruited Agri-enterprise data collection enumerators as per work requirement   5. Performed Agri-enterprise data processing as per work procedure   6. Conducted Agri-enterprise data analysis as per work procedure   7. Mapped out Agri-enterprise implications as per work procedure |
| 1. Resource implications | The following resources should be provided:   1. Appropriately simulated environment where assessment can take place. 2. Access to relevant work environments where assessment can take place. 3. Resources relevant to the proposed activities or task. |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical   2. Project   3. Third party report   4. Portfolio of evidence   5. Written tests   6. Oral questioning |
| 1. Context of Assessment | 4.1 This competency may be assessed in a work place or in a simulated work place. |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector and workplace job role is recommended. |

# CARRY OUT CROP PRODUCTION

**UNIT CODE: 0811 551 10**

**UNIT DESCRIPTION**

This unit specifies the competencies required by a Agri-enterprise technologist level 6 to apply crop production principles. It involves production of annual crops, production of perennial crops and production of horticulture.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace functions | **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. Produce annual crops | 1. ***Personal protective equipment*** are worn as per work requirement 2. ***Land preparation tools and equipment*** are assembled as per work requirement 3. ***Land preparation practices*** is performed as per work requirement 4. ***Planting materials*** are prepared as per work requirement 5. ***Planting methods*** are applied as per work requirement 6. ***Crop routine management*** practices is carried out as per work requirement 7. ***Crop harvesting methods*** are applied as per work requirement |
| * + - 1. Produce perennial crops | 1. Personal protective equipment are worn as per work requirement 2. Land preparation tools and equipment are assembled as per work requirement 3. Land preparation practices is performed as per work requirement 4. Planting materials are prepared as per work requirement 5. Planting methods are applied as per work requirement 6. crop routine management practices is carried out as per work requirement 7. crop harvesting methods are applied as per work requirement |
| * + - 1. Produce horticulture crops | 1. Personal protective equipment are worn as per work requirement 2. Land preparation tools and equipment are assembled as per work requirement 3. Land preparation practices is performed as per work requirement 4. Planting materials are prepared as per work requirement 5. Planting methods are applied as per work requirement 6. crop routine management practices is carried out as per work requirement 7. crop harvesting methods are applied as per work 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.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1.Personal protective equipment may include but are not limited to: | * Overall * Headgear * Gloves * Gumboots * Goggles |
| 1. Land preparation tools and equipment may include but are not limited to | * Land clearing tools and equipment * Tillage tools and equipment |
| 1. Land preparation practicesmay include but are not limited to | * Land clearing * Primary cultivation * Secondary cultivation * Tertiary practices |
| 1. Planting materialsmay include but are not limited to | * Seeds * Splits * Suckers * Corms * Slips * Setts * Cuttings |
| 1. Crop routine management may include but are not limited to | * Pruning * Irrigation * Pest control * Disease control * Weeding * Staking * Propping * De-suckering * Fertilizer application * Trellising * Mulching * Gapping * Thinning |
| 1. Crop harvesting methods may include but are not limited to | * Picking * Cutting * Plucking * Digging |

**REQUIRED KNOWLEDGE AND SKILLS**

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

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Utilization of tools and equipment
* Fertilizer application
* Routine crop management practices
* Farm machinery operation

**Required skills**

The individual needs to demonstrate the following skills:

* Planting skills
* Pest and disease control skills
* Land clearing practices
* Tertiary operation practices
* Irrigation techniques
* Treatment of planting materials

**EVIDENCE GUIDE**

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

|  |  |
| --- | --- |
| 1. Critical aspects of competency | Assessment requires evidence that the candidate:   1. Performed land preparation practices as per work requirement 2. Prepared planting materials as per work requirement 3. Applied planting methods as per work requirement 4. Carried out crop routine management practices as per work requirement 5. Applied crop harvesting methods as per work requirement |
| 1. Resource implications | The following resources should be provided:   * 1. Appropriately simulated environment where assessment can take place   2. Access to relevant work environment   3. Resources relevant to the proposed activities or tasks |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical   2. Project   3. Third party report   4. Portfolio of evidence   5. Written tests   6. Oral questioning |
| 1. Context of Assessment | * 1. This competency may be assessed in a work place or in a simulated work place. |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector and workplace job role is recommended. |

# CARRY OUT ANIMAL PRODUCTION

**UNIT CODE: 0811 551 11**

**UNIT DESCRIPTION**

This unit specifies the competencies required by Agri-enterprise technologist level 6 to apply principles of ruminant production, non-ruminant production, bee keeping and fish farming

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace functions | **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. Produce ruminant animals | 1. ***Ruminant animals*** are identified as per animal production manual 2. Ruminant animal ***breeding stock selection method*** is applied out as per work requirement 3. ***Breeding methods*** are applied as per work procedure 4. ***Animals feeding practices*** are applied as per work requirement 5. ***Animals routine management practices*** are performed as per work procedure 6. ***Animal parasites*** control methodsare applied as per work requirement 7. ***Animal disease control methods*** are applied as per work requirement |
| 2. Produce non- ruminant animals | * 1. ***Non-Ruminant animals*** are identified as per animal production manual   2. Non -Ruminant animal breeding stock selection is carried out as per work requirement   3. Breeding methods are applied as per work procedure   4. Animals feeding practices are applied as per work requirement   5. Animals routine management practices are performed as per work procedure   6. Animal parasites control methods are applied as per work requirement   7. Animal disease control methods are applied as per work requirement |
| 3.Produce emerging- livestock | * 1. ***Emerging- livestock*** are identified as per animal production manual   2. Emerging- livestock breeding stock selection is carried out as per work requirement   3. Breeding methods are applied as per work procedure   4. Animals feeding practices are applied as per work requirement   5. Animals routine management practices are performed as per work procedure   6. Animal parasites control methods are applied as per work requirement   7. Animal disease control methods are applied as per work requirement |
| 1. Conduct fish farming | 1. ***Fish species*** are identified as per fish production manual 2. ***Fish farm site selection*** is carried out as per work requirement 3. Fish pond is constructed as per work requirement 4. ***Fish Pond*** ***maintenance practice*** is carried out as per work requirement 5. Fish predatorsandparasites are controlled as per FPM 6. ***Fish diseases causes*** are controlled as per work procedures 7. Fish pond stocking is carried out as per work requirement |
| 1. Conduct bee keeping | 1. Apiary site is identified as per work requirement and farm plan 2. ***Bee hives*** are constructed as per work procedure 3. Apiary site is prepared as per the work procedures 4. Bee hives are erected in the apiary as per work requirement 5. Bee hives are stocked as per work procedures 6. ***Bee products*** are harvested as per the work 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. Ruminant animals may include but are not limited to: | * Cattle * Goats * Camel * Sheep * Donkey |
| 1. Breeding stock selection method may include but are not limited to: | * Tandem method * Progeny testing * Random selection * Contemporary comparison |
| 1. Breeding methods may include but are not limited to: | * Natural mating * Artificial insemination * Embryo transplant |
| 1. Animals feeding practices may include but are not limited to: | * Steaming up * Creep feeding * Flushing |
| 1. Animals routine management practices may include but are not limited to: | * Castration * Docking * Hoof trimming * Shearing * Dehorning * Identification * Cleaning animal houses * Disbudding * Vaccination |
| 1. Animals parasites may include but are not limited to: | * External parasites – keds, tsetsefly, fleas, lice, tick * Internal parasites- roundworm, tapeworm, liver fluke, hookworm. |
| 1. Animal disease control methods may include but are not limited to: | * Quarantine * Vaccination * Isolation * Proper breeding and selection * Proper feeding and nutrition * Proper hygiene * Use of prophylactic drugs * Use of antiseptics |
| 1. Non-Ruminant animals may include but are not limited to: | * Poultry * Rabbit * Pigs |
| 1. Emerging animals may include but are not limited to: | * Crocodiles * Ostrich * Snakes * Maggots * Earthworms |
| 1. Fish species animals may include but are not limited to: | * Marine fish * Fresh water fish |
| 1. Fish farm site selection may include but are not limited to: | * Security * Species of fish to be reared * Type of soil * Availability of water * Source of reputable fingerlings * Management skills |
| 1. Fish Pond maintenance practice may include but are not limited to: | * Feeding * Aeration * Water flow rate control * Water quality monitoring * Predator control * Sludge removal * Declogging of drainage system * Cleaning of filters * Harvesting * Growth monitoring * Fingerling/fry grading * Marketing of hatchery products * Fish health monitoring * Fish propagation * Fish stocking * Fingerling packaging and transport * De-siltation * Fertilization |
| 1. Fish diseases causes may include but are not limited to: | * Environmental/water quality causes * Hereditary/genetic causes * Microbial/pathogenic causes * Nutritional causes * Physical injury |
| 1. Bee hives may include but are not limited to: | * Lungstroth * Kenya top bar hive * Box hive |
| 1. Bee products may include but are not limited to: | * Honey * Propolis * Bee venom * Creamed honey * Manuka honey * Comb honey * Honeycomb * Beeswax * Bee pollen * Royal jelly |

**REQUIRED KNOWLEDGE AND SKILLS**

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

Required knowledge

The individual needs to demonstrate knowledge of:

* Genetics
* Numeracy skills
* Digital literacy
* Fish health monitoring techniques
* Livestock routine management practices

**Required skills**

The individual needs to demonstrate the following skills:

* Quarantine
* Vaccination
* Isolation
* breeding and selection
* Proper feeding and nutrition Water flow rate control
* Water quality monitoring
* Predator control in fish ponds
* Sludge removal in fish ponds

**EVIDENCE GUIDE**

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

|  |  |
| --- | --- |
| * + - 1. Critical aspects of competency | Assessment requires evidence that the candidate:   * 1. Applied Ruminant animal breeding stock selection method out as per work requirement   2. Applied Breeding methods as per work procedure   3. Applied Animals feeding practices as per work requirement   4. Performed Animals routine management practices as per work procedure   5. Applied Animal parasites control methods as per work requirement   6. Applied Animal disease control methods as per work requirement   7. Carried out Non -Ruminant animal breeding stock selection as per work requirement   8. Carried out Emerging- livestock breeding stock selection as per work requirement   9. Constructed Fish pond as per work requirement   10. Carried out Fish Pond maintenance practice as per work requirement   11. Controlled Fish predators and parasites as per FPM   12. Controlled Fish diseases causes as per work procedures   13. Carried out Fish pond stocking as per work requirement   14. Constructed Bee hives are per work procedure   15. Stocked Bee hives as per work procedures   16. Harvested Bee products are per the work procedures |
| * + - 1. Resource implications | The following resources should be provided:   * 1. Appropriately simulated environment where assessment can take place   2. Access to relevant work environment   3. Resources relevant to the proposed activities or tasks |
| * + - 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical   2. Project   3. Third party report   4. Portfolio of evidence   5. Written tests   6. Oral questioning |
| * + - 1. Context of Assessment | * 1. This competency may be assessed in a work place or in a simulated work place. |
| * + - 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector and workplace job role is recommended. |

# DEVELOP AGRI-ENTERPRISE BUSINESS PLAN

**UNIT CODE: 0811 551 12**

**UNIT DESCRIPTION**

This unit specifies the competencies required to develop agri-enterprise business plan. These involves Designing an agri-enterprise, design agri-enterprise market plan, design an agri-enterprise management plan, design agri-enterprise production/operation plan and design an agri-enterprise financial plan.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace functions | **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. Design agri-enterprise | 1. Agri-enterprise name identification is carried out as per work requirement 2. Agri-enterprise location is selected as per work requirement 3. ***Agri –enterprise products and services*** are established as per work requirement 4. ***Agri- enterprise ownership*** is established as per work requirement 5. Agri-enterprise entry and growth strategies are applied as per work procedure 6. Agri-enterprise goals are established as per work procedure |
| 1. Design agri-enterprise market plan | 1. Agri-enterprise customer identification is carried out as per work procedure 2. Agri-enterprise market competition analysis is carried out as per work requirement 3. ***Agri-enterprise advertisement and promotion methods*** are applied as per work procedure 4. Agri-enterprise pricing strategies are applied as per work procedure 5. Agri-enterprise sales strategies are applied as per work requirement 6. Agri -enterprise distribution strategies are selected as per work requirement |
| 1. Design an Agri-enterprise management plan | 1. Agri-enterprise organization structure is designed as per work requirement 2. Agri-enterprise management personnel is selected as per work procedure 3. Agric- enterprise personnel duties and responsibilities are established as per work procedure 4. Agric- enterprise personnel remuneration and incentives are established as per work requirement 5. Agric- enterprise recruitment, promotion and appraisal strategies are established as per work procedure |
| 1. Design agri-enterprise production/operation plan | 1. Agri-enterprise layout is designed as per work procedure 2. Agri-enterprise production facilities identification is carried out as per work requirement 3. Agri–enterprise production strategy is established as per work requirement 4. Agri-enterprise production process is performed as per work requirement 5. Agri- enterprise production regulations are applied as per work requirement |
| 1. Design an agri-enterprise financial plan | 1. Agri-enterprise infrastructure is set up as per work requirement 2. Agri -enterprise support services are obtained as per work requirement 3. Agri-enterprise operations are performed as per work procedure |

**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. Agri –enterprise products and servicesincludes but not limited to: | * Crop produce * Livestock produce * Processed farm produce * Farm tools, equipment and machinery * Farm inputs and supplies * Consultant and advisory services * Trainings and capacity building |
| 1. Agri- enterprise ownership includes but not limited to: | * Sole proprietorship * Partnership * Cooperatives and societies * Limited liability company |
| 1. Agri-enterprise advertisement and promotion methods includes but not limited to: | * Online marketing * Search engine optimization * Email marketing * Content marketing * Direct mail * Print advertising * Local advert * Customer testimonials * Influencer marketing * Event marketing |
| 1. Agri-enterprise production facilitiesinclude but not limited to: | * Processing plants * Ranches * Storage facilities * Greenhouses * Aquaculture facilities * Apiculture facilities * Education and training centers |
| 1. Agri- enterprise production regulations include but not limited to: | * Food and safety regulations * Environmental regulations * Animal welfare * Organic satisfaction standard * Worker safety regulations * Trade and export regulation * Land use and zoning regulation * Water rights regulations |
| 1. Agri- enterprise financial statementsincludes but not limited to: | * Income statements * Balance sheet * Cash flow statements * Statements of charges in equity |
| 1. Agri- enterprise sources of fundinginclude but not limited to | * Personal savings * Family and Inheritance * Bank loans * Government grants * Agricultural credit programmes * Supplier credit * Government subsidies * Venture capital |

**REQUIRED KNOWLEDGE AND SKILLS**

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

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Product/services management
* Market research
* Human resource management
* Business opportunities
* Financial management
* Business planning

The individual needs to demonstrate the following skills:

* Numeracy skills
* Technical Report writing
* Observation
* Analytics
* Digital literacy

**EVIDENCE GUIDE**

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

|  |  |
| --- | --- |
| 1. Critical aspects of competency | Assessment requires evidence that the candidate:   * 1. Carried out Agri-enterprise design as per work requirement   2. Designed an Agri-enterprise market plan as per work requirement   3. Designed an agri-enterprise organization plan as per work requirement   4. Established Agri-enterprise production plan as per work procedure   5. Carried out Agri-enterprise financial planning as per work requirement |
| 1. Resource implications | The following resources should be provided:   1. Appropriately simulated environment where assessment can take place. 2. Access to relevant work environments where assessment can take place. 3. Resources relevant to the proposed activities or task. |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical   2. Project   3. Third party report   4. Portfolio of evidence   5. Written tests   6. Oral questioning |
| 1. Context of Assessment | 4.1 This competency may be assessed in a work place or in a simulated work place. |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector and workplace job role is recommended. |

# PERFORM AGRI-ENTERPRISE FARM BUDGETING

**UNIT CODE: 0811 551 13**

**UNIT DESCRIPTION**

This unit specifies the competencies required perform Agric-marketing farm budgeting. It involves Carryout agri-enterprise cost estimation; Carry out revenue forecasting, Manage cash-flow.

**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. Carryout agri-enterprise cost estimation | 1. ***Agri-enterprise costs*** are categorized as per work requirement 2. Agri-enterprise production quantities are established as per work requirement 3. Agri-enterprise unit costs are established as per work requirement 4. Agri-enterprise total costs are established as per work requirement 5. Agri –enterprise costs review and adjustment is performed as per work requirement |
| 1. Carry out revenue forecasting | 1. ***Agri-enterprise budgets*** are prepared as per work requirement 2. ***Agri-enterprise income levels*** are established as per work requirements 3. Agri enterprise reviews and adjustments is performed as per work procedure |
| 1. Manage cash-flow | 1. ***Agri-enterprise financial statements*** are prepared as per work requirement 2. ***Agri-enterprise profitability ratios*** are established as per work requirement 3. Reviews and adjustments are carried out as per work requirement. |

**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. Agri-enterprise costs | * Average costs * Direct costs * Capital costs * Operating costs * Indirect costs * Semi-variable costs * Sunk costs * Marginal costs * Fixed costs * Variable costs * Product costs * Total costs |
| * + - 1. Agri-enterprise budgets | * Enterprise budgets * Partial budgets * Cash flow budgets * Gross margin budgets * Break even budgets * Linear programming |
| * + - 1. Agri-enterprise income | * Sales revenue * Service revenue * Interest income * Dividend income * Rental income * Royalty income * Capital gains * Commission income * Franchise income * Subscription income * Grants and subsidies |
| * + - 1. Agri-enterprise financial statements | * Working capital estimates * Balance sheets * Trading, Profit and loss accounts * Break even analysis * Cash flow projections * Desired financing |
| * + - 1. Agri-enterprise profitability ratios | * Liquidity ratios * Returns on investment * Gross profit margins * Net profit margins * Operating profit margins * Return on assets * Return on equity |

**REQUIRED SKILLS AND KNOWLEDGE**

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

**Required skills**

The individual needs to demonstrate knowledge of the following:

* Market management
* Production management
* Financial management
* Policy and regulation management
* Technology management
* Environmental management
* Human capital management

**Required skills**

The individual needs to demonstrate the following skills:

* Accountancy
* Production planning
* Analytics
* Records keeping
* Report Writing
* Financial management
* Digital literacy
* Numeracy
* Negotiation

**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. Established Agri-enterprise production quantities as per work requirement 2. Established Agri-enterprise costs as per work requirement 3. Prepared Agri-enterprise budgets as per work requirement 4. Established Agri-enterprise income levels as per work requirements 5. Prepared Agri-enterprise financial statements as per work requirement 6. Established Agri-enterprise profitability ratios as per work requirement |
| 1. Resource implications for competence certification | The following resources must be provided during assessment:   1. Appropriately simulated environment where assessment can take place. 2. Access to relevant work environments where assessment can take place. 3. Resources relevant to the proposed activities or task. |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical   2. Project   3. Third party report   4. Portfolio of evidence   5. Written tests   6. Oral questioning |
| 1. Context of Assessment | 4.1 This competency may be assessed in a work place or in a simulated work place. |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended. |

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# PREPARE AGRI-ENTERPRISE WORK PLAN

**UNIT CODE: 0811 551 14**

**UNIT DESCRIPTION**

This unit specifies the competencies required to implement Agri-enterprise workplan. It involves Executing agri-enterprise work plan, Market agri-enterprise produce, Monitor and evaluate agri-enterprise work plan.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace functions | **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 execute agri-enterprise work plan | * 1. Agri-enterprise plan is ***communicated*** as per work requirement   2. ***Agri-enterprise tasks*** and responsibilities are assigned as per work requirement   3. Agri -enterprise ***implementation resources*** are assembled as per work requirement |
| * + - 1. Establish agri-enterprise goals | * 1. ***Agri-enterprise goals*** are set as per work requirement   2. Agri-enterprise goals are assigned as per work requirement   3. Agri-enterprise goals are reviewed as per work procedure |
| * + - 1. Carry out agri-enterprise activities | * 1. Agri- enterprise activities time frames are assigned as per work requirement   2. ***Agri-enterprise physical resources*** are allocated as per work schedule   3.3Agri -enterprise physical resources are applied as per work requirement |
| 1. Mitigate agri-enterprise risks & uncertainties | * 1. ***Agri-enterprise risks and uncertainties*** identification is carried out as per work requirement   2. Agri-enterprise risk management strategy is selected as per work requirement   3. Agri-enterprise risk management strategy is applied as per work procedure   4.4 Agri-enterprise risk management strategy is monitored as per work requirement |
| 5.Market agri-enterprise produce | * 1. Agri-enterprise produce is assembled as per work requirement   2. Agri-enterprise produce is stored as per work requirement   3. Agri-enterprise produce is sorted as per work requirement   4. Agri-enterprise produce is graded as per work requirement   5. Agri-enterprise value addition is carried out as per work requirement   6. Agri-enterprise produce is packaged as per work requirement   7. ***Agri-enterprise produce is distributed*** as per work requirement   8. Agri-enterprise produce is promoted and advertised as per work requirement |
| * + - 1. Monitor and evaluate agri-enterprise work plan | * 1. ***Agri-enterprise performance indicators*** are established as per work requirement   2. Agri-enterprise actual and planned performance is compared as per work requirement   3. Review and adjustments are carried out as per work 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.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Agri-enterprise communication include but not limited to: | * Letters * mails * audio-verbal * reports * minutes |
| 1. Agri-enterprise tasksinclude but not limited to: | * Research * Production * Management * Marketing * Documentation and reporting * Monitoring and reviews |
| 1. 2.1 Agri-enterprise goals | * Short term goals * Medium term goals * Long term goals |
| 1. Agri-enterprise implementation resources include but not limited to: | * Human capital * Physical infrastructure * Production Inputs * Financial resources * Support systems |
| 1. Agri-enterprise produce distribution include but not limited to: | * Direct distribution * Wholesale distribution * Retail distribution * Online distribution * Agents distribution * Partnership distribution * Direct mail distribution |
| 1. Agri-enterprise performance indicatorsincludes but not limited to: | * Revenue growth * Profitability ratios * Crop yields * Quality standards * Cost of production * Sustainability metrics * Compliance regulations * Customer satisfaction * Supply chain efficiency * Market share * Innovation and technology adoption |
| 1. Agri-enterprise risks and uncertaintiesinclude but not limited to: | * Market risks * Production risks * Financial risks * Policy and regulation risks * Technology risks * Environmental risks * Human capital risk * Health and safety risk |

**REQUIRED KNOWLEDGE AND SKILLS**

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

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Communication
* Assembling
* Storage
* Sorting
* Grading
* Processing
* Packaging
* Distribution
* Monitoring And Review

**Required skills**

* Quality standards
* Sustainability metrics
* Compliance regulations
* Customer satisfaction
* Supply chain efficiency
* Market share
* Innovation and technology adoption

**EVIDENCE GUIDE**

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

|  |  |
| --- | --- |
| 1. Critical aspects of competency | Assessment requires evidence that the candidate:   1. Carried out Agri -enterprise evaluation as per work procedure 2. Assembled Agri-enterprise produce as per work requirement 3. Stored Agri-enterprise produce as per work requirement 4. Sorted Agri-enterprise produce as per work requirement 5. Graded Agri-enterprise produce as per work requirement 6. Processed Agri-enterprise produce as per work requirement 7. Packaged Agri-enterprise produce as per work requirement 8. Distributed Agri-enterprise produce as per work requirement 9. Advertised Agri-enterprise produce as per work requirement |
| 1. Resource implications | The following resources should be provided:   1. Appropriately simulated environment where assessment can take place. 2. Access to relevant work environments where assessment can take place. 3. Resources relevant to the proposed activities or task. |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical   2. Project   3. Third party report   4. Portfolio of evidence   5. Written tests   6. Oral questioning |
| 1. Context of Assessment | This competency may be assessed in a work place or in a simulated work place. |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector and workplace job role is recommended. |

# DEVELOP AGRI-ENTERPRISE RECORDS

**UNIT CODE: 0811 551 15**

**UNIT DESCRIPTION**

This unit specifies the competencies required to develop agri-enterprise records. It involves establish agri-enterprise record system; establish record keeping procedures, record agri-enterprise data, store agri-enterprise records

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace functions | **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. Establish agri-enterprise record system | * 1. Agri-enterprise record systems are established as per work requirement   2. Agri-enterprise record system is applied as per work requirement   3. Review and adjustments are carried out as per work requirement |
| * + - 1. Establish record keeping procedures | * 1. Agri-enterprise record keeping procedures are established as per work requirement   2. Agri-enterprise record keeping procedures are applied as per work requirement   3. Review and adjustments are carried out as per work requirement |
| * + - 1. Record agri-enterprise data | * 1. Agri-enterprise data is collected as per work requirement   2. Agri-enterprise is recorded as per work requirement   3. Review and updates are carried out as per work requirement |
| * + - 1. Store agri-enterprise records | * 1. ***Agri-enterprise data storage*** is established as per work requirement   2. Agri-enterprise data storage is applied as per work requirement   3. Review and adjustments are carried out as per work 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.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Agri-enterprise record systemsincludes but not limited to: | * Manual record keeping * Spread sheet based system * Farm management soft ware * Cloud based systems * Precision system * Customized systems |
| 1. Agri-enterprise record keeping proceduresinclude but not limited to | * Administrative procedures * Data entry and capture procedures * Storage and organizational procedures * Retention and disposal procedures * Security and control procedures * Quality assurance procedures * Monitoring and reviewing * Communication and collaboration procedures |
| 1. Agri-enterprise data storageinclude but not limited to: | * Digital * Manual * Cloud storage service * Farm management soft wares * Data backup redundancy * Scaling and flexibility * Disaster recovery planning * Data security measures |

**REQUIRED KNOWLEDGE AND SKILLS**

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

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Administrative procedures
* Data entry and capture procedures
* Storage and organizational procedures
* Retention and disposal procedures
* Security and control procedures
* Quality assurance procedures
* Monitoring and reviewing
* Communication and collaboration procedures
* Waste Management practices
* Occupational Safety and Health Procedures

**Required skills**

The individual needs to demonstrate the following skills:

* Technical Report writing
* Information processing and sharing
* Record keeping
* Data security management
* Digital literacy
* Basic accounts

**EVIDENCE GUIDE**

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

|  |  |
| --- | --- |
| 1. Critical aspects of competency | Assessment requires evidence that the candidate:   * 1. Established agri-enterprise record systems as per work requirement   2. Applied agri-enterprise record system as per work requirement   3. Applied agri-enterprise record keeping procedures as per work requirement   4. Collected agri-enterprise data as per work requirement   5. Recorded agri-enterprise as per work requirement   6. Applied agri-enterprise data storage as per work requirement |
| 1. Resource implications | The following resources should be provided:   1. Appropriately simulated environment where assessment can take place. 2. Access to relevant work environments where assessment can take place. 3. Resources relevant to the proposed activities or task. |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Practical   2. Project   3. Third party report   4. Portfolio of evidence   5. Written tests   6. Oral questioning |
| 1. Context of Assessment | This competency may be assessed in a work place or in a simulated work place. |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector and workplace job role is recommended. |

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