

TECHNICAL &  
VOCATIONAL  
EDUCATION &  
TRAINING  
AUTHORITY



## National Competency Standard for Agriculture

**Standard Code: FNAS01V1/20**

*[Endorsed by the MALDIVES QUALIFICATIONS AUTHORITY (MQA)]*



## PREFACE

Technical and Vocational Education and Training (TVET) Authority was established with the vision to develop a TVET system in the Maldives that is demand driven, accessible, beneficiary financed and quality assured, to meet the needs of society for stability and economic growth, the needs of Enterprise for a skilled and reliable workforce, the need of young people for decent jobs and the needs of workers for continuous mastery of new technology.

TVET system in the Maldives flourished with the Employment Skills Training Project (ESTP) funded by ADB with the objective of increasing the number of Maldivians, actively participating in the labor force, employed and self-employed. The Project supported expansion of demand driven employment-oriented skills training in priority occupations and to improve the capacity to develop and deliver Competency Based Skill Training (CBST). The project supported delivery of CBST programs to satisfy employer demand-driven needs.

Recognizing the importance of developing the youth sector to enable Maldives to transition from an upper-middle-income country to high-income country, the World Bank Country Partnership Framework (CPF) proposes to finance the Maldives Enhancing Employability and Resilience of Youth (MEERY) project. As part of the MEERY project is financing for skills development and entrepreneurship in priority sectors such as tourism, ICT and construction sector MEERY continues to provide support to TVET Authority to develop National Occupational Standard, instructional materials, assessment resource book and trainees log book for the National Occupational Standard for "Agriculture". As part of the MEERY Project, TVET Authority has only undertaken to review standard which were developed in the ESTP Project to increase the economic opportunities for youth's trainees and promote equitable economic & social development in the country.

The National Competency Standards (NCS) provide the base for this training. Currently CBST is offered for six key sectors in the Maldives: Tourism, Fisheries and Agriculture, Transport, Construction, Social and the Information and Technology sectors. These sectors are included as priority sectors that play a vital role in the continued economic growth of the country.

The NCS are developed in consultation with Employment Sector Councils representing employers. They are designed using a consensus format endorsed by the Maldives Qualifications Authority (MQA) to maintain uniformity of approach and the consistency of content amongst occupations. This single format also simplifies benchmarking the NCS against relevant regional and international standards. NCS specify the standards of performance of a competent worker and the various contexts in which the work may take place. NCS also describes the knowledge, skills and attitudes required in a particular occupation. They provide explicit advice to assessors and employers regarding the knowledge, skills and attitudes to be demonstrated by the candidates seeking formal recognition for the competency acquired following training or through work experience. By sharing this information, all participants in the training process have the same understanding of the training required and the standard to be reached for certification. Certification also becomes portable and can be recognized by other employers and in other countries with similar standards.

NCS are the foundation for the implementation of the TVET system in Maldives. They ensure that all skills, regardless of where or how they were developed can be assessed and recognized. They also form the foundation for certifying skills in the Maldives National Qualification Framework (MNQF).

NCS are developed by the Technical and Vocational and Education Training Authority of Ministry of Higher Education. The NCS are endorsed by the Employment Sector Councils of the respective sectors and validated by the Maldives Qualification Authority.

Mohamed Hashim  
Minister of State for Higher Education  
TVET Authority

Ahmed Nisham  
Director, Standard Development & Statistics  
TVET Authority

<b>TECHNICAL PANEL MEMBERS</b>			
<b>#</b>	<b>Name</b>	<b>Designation</b>	<b>Organization</b>
01	Mohamed Rihvan	Assistant Director	Ministry of Fisheries, Marine Resources and Agriculture
02	Khadeeja Nashwa	Scientific Officer	Maldives Food and Drug Authority
03	Rifaath Hassan	Research Assistant	Maldives National University
04	Ali Nishaman Zahir	Terrestrial Environment Consultant	CDE Consulting
05	Aminath Aroosha	Director, Business Development and PR	Alividha Maldives Pvt Ltd

<b>VERSION</b>	<b>DEVELOPER</b>	<b>DATE</b>	<b>STANDARD CODE</b>
V1	TVET Authority	2018	
V2	Maldives Institute of Technology	4th October 2020	FNAS01V1/20

**EMPLOYMENT SECTOR COUNCIL**

#	Name	Designation	Organization
01	Adnan Ali	Board Director	Horizon Fisheries PVT LTD
02	Ali Amir	Director of Agriculture Division	Ministry of Fisheries, Marine Resource and Agriculture
03	Mohamed Agleem	Treasurer	Dhivehi Masverin
04	Maizan Ahmed Manik	Chairman	Maldives Fisherman Association
05	Shafiya Naeem	Aquatic Pathologist	Maldives Marine Research Institute
06	Shiyana Mohamed	Labor Relation Officer	Ministry of Economic Development
07	Aishath Naaz	Deputy Director	Ministry of Youth, Sports and Community Empowerment
08	Ibthisam Ibrahim Mohamed Didi	Director of SIMDI	SIMDI
09	Adam Manik	Deputy Director General	Ministry of Fisheries, Marine Resource and Agriculture

**National Standard has been endorsed by:**

Adnan Ali  
Chairperson  
Fisheries and Agriculture Employment Sector Council

Ali Amir  
Vice-Chairperson  
Fisheries and Agriculture Employment Sector Council

Adam Manik  
Vice-Chairperson  
Fisheries and Agriculture Employment Sector Council

Technical and Vocational Education and Training Authority  
Ministry of Higher Education  
Handhuvaree Hingun, M. World Dream  
Male', Maldives

Date of Endorsement: 2018

Date of Revision: 4th October 2020

## **Standard Development Process**

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To begin with, agriculture occupations were profiled through study of relevant occupation across Maldivian workplaces. Referred occupational profiling process led to the development of the Draft Occupational Standard.

Referred draft occupational standard is then submitted to a team of Technical Panel (TP) selected from the Maldivian workplaces to review the Agriculture Standard. The members of the TP provided technical support by recommending changes to the Agriculture Standard through incorporation of units of competencies and editing of the already included competency units. Purpose of this process was to develop a standard that reflects authentic work practices of Agriculture across the Maldives. Technical Panel meetings continued in reviewing the Agriculture Standard until the Final Draft is developed and agreed among all the participating members.

Final Draft of Agriculture Standard is then submitted to the Fisheries and Agriculture Employment Sector Council for endorsement and validation. A brief report on how the National Occupational Standard of Agriculture was compiled is also presented to the Fisheries and Agriculture Employment Sector Council together with the standard. Council members ensured that the industry needs, including all the core and common competencies presented in the Agriculture standard reflect the work practices of Agriculture occupations across the Maldives. With further editing, Agriculture standard has been endorsed by the Council.

With the endorsement from the Fisheries and Agriculture Employment Sector Council, final document of the National Occupational Standard of Agriculture is submitted to Maldives Qualification Authority (MQA) for approval. With approval from MQA, the National Occupational Standard of Agriculture is published on TVETA website, to be used by training providers in delivering Agriculture Training programs across the Maldives.

## **Description of “Agriculture”**

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Personnel working in the agriculture sector play an important role in the cultivation of fruits and vegetables to meet the local demand across the Maldives. Besides growing of fruits and vegetables, poultry and goat keeping is also gaining momentum and can be an important area for economic livelihood as demand for poultry products and goat meat is also on rise across the Maldives.

In addition to the above two areas of agriculture, plants grown for gardening are on rise and have created significant demand among locals. Competency standard developed for agricultural sector need to consider and integrate these changes.

### **Job opportunities upon completion of “National Certificate-3 in Agriculture”**

Upon successful completion of the National certificate-3 in Agriculture, students can work in the following jobs.

1. *Assistant agricultural officer*
2. *Field Officer*
3. *Farm hand*
4. *Assistant Plant protection officers*
5. *Gardening Staff in resorts*

## KEY FOR CODING

### Coding Competency Standards and Related Materials

DESCRIPTION	REPRESENTED BY
Industry Sector as per ESC (Three letters)	Construction Sector (CON) Fisheries and Agriculture (FNA) Information, Communication and Technology (ICT) Transport Sector (TRN) Tourism Sector (TOU) Social Sector (SOC) Foundation (FOU)
Competency Standard	S
Occupation with in an industry sector	Two digits 01-99
Unit	U
Common Competency	CR
Core Competency	CM
Optional / Elective Competency	OP
Assessment Resources Materials	A
Learning Resources Materials	L
Curricular	C
Qualification	Q1, Q2 etc.
MNQF level of qualification	L1, L2, L3, L4 etc.
Version Number	V1, V2 etc.
Year of Last Review of standard, qualification	By “/” followed by two digits responding to the year of last review, example /20 for the year 2020

## 1. Endorsement Application for Qualification 01

### 2. NATIONAL CERTIFICATE III IN AGRICULTURE

#### 3. Qualification code:

FNAS01Q1L3V1/20

#### Total Number of Credits: 79

#### 4. Purpose of the qualification

Purpose of this qualification is to widen and increase number of Maldivians with knowledge and skills to undertake agricultural activities across the Maldives. It is expected that through this standard more youth can be attracted into this area and with increased youth engagement, agricultural sector shall widen with expansion of locally grown products and stimulate adoption of innovative agricultural practices across the Maldives.

It is expected that by the end of the program, participants should be aware of Maldives Good Agriculture Practice Scheme and be familiar with its key pillars

#### 5. Regulations for the qualification

National Certificate III in Agriculture will be awarded to those who are competent in units

1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16+17

#### 6. Schedule of Units

Unit No	Unit Title	Code
<b>Common Competencies</b>		
01	Apply work ethics and professionalism	FNACM02V1/20
02	Practice effective workplace communication	FNACM04V2/20
03	Provide effective customer care	FNACM05V2/20
04	Perform basic computer operations	FNACM06V2/20
<b>Core Competencies</b>		
05	Apply occupational health and safety procedures	FNAS02CR05V2/20
06	Perform handling of agricultural tools and equipment	FNAS02CR06V2/20
07	Build a small nursery shed	FNAS02CR07V2/20
08	Provide information on plants suitable for Maldives and their culture	FNAS02CR08V2/20
09	Undertake preparation of land for agriculture	FNAS02CR09V2/20
10	Perform planting, seedling and propagation	FNAS02CR10V2/20
11	Undertake proper use of fertilizers and soil ameliorant	FNAS02CR11V2/20
12	Plant vegetable, ornamental and fruit trees	FNAS02CR12V2/20
13	Perform plant care and management practices	FNAS02CR13V2/20
14	Control plant pests, diseases and disorders	FNAS02CR14V2/20
15	Carryout harvest and post-harvest activities	FNAS02CR15V2/20
16	Perform setting up a basic hydroponic system	FNAS02CR16V2/20
17	Practice other forms of Agriculture	FNAS02CR17V2/20

#### 7. Accreditation requirements

The training provider should place trainees in relevant industry or sector to provide trainees hands-on experience exposure related to this qualification.

#### 8. Recommended sequencing of units

As appearing under the section 06



## Units Details

#	Unit Title	Code	Level	No of Credits
01	Apply work ethics and professionalism	FNACM02V1/20	III	03
02	Provide effective customer care	FNACM05V2/20	III	05
03	Perform basic computer operations	FNACM06V2/20	III	03
04	Apply occupational health and safety procedures	FNAS02CR05V2/20	III	03
05	Practice effective workplace communication.	FNACM04V2/20	III	04
06	Perform handling of agricultural tools and equipment	FNAS02CR06V2/20	III	03
07	Build a small nursery shed	FNAS02CR07V2/20	III	03
08	Provide information on plants suitable for Maldives and their culture	FNAS02CR08V2/20	III	06
09	Undertake preparation of land for agriculture	FNAS02CR09V2/20	III	04
10	Perform planting, seedling and propagation	FNAS02CR10V2/20	III	04
11	Undertake proper use of fertilizers and soil ameliorant	FNAS02CR11V2/20	III	06
12	Plant vegetable, ornamental and fruit trees	FNAS02CR12V2/20	III	06
13	Perform plant care and management practices	FNAS02CR13V2/20	III	06
14	Control plant pests, diseases and disorders	FNAS02CR14V2/20	III	05
15	Carryout harvest and post-harvest activities	FNAS02CR15V2/20	III	06
16	Perform setting up a basic hydroponic system	FNAS02CR16V2/20	III	06
17	Practice others forms of Agriculture	FNAS02CR17V2/20	III	06

### **Packaging of National Qualifications:**

National Certificate III in Agriculture will be awarded to those who are competent in units 1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16+17

**Qualification Code:** FNA04SQ2L318

## Competency Standard for Agriculture

<b>UNIT TITLE</b> <b>Apply work ethics and professionalism</b>					
<b>DESCRIPTOR</b>	This module covers the knowledge, skills and attitudes required in demonstrating proper work values and professionalism while working as an Agriculturist. Besides ethical values, knowledge and skills also developed on maintaining integrity at work.				
<b>CODE</b>	FNACM02V1/20	<b>LEVEL</b>	III	<b>CREDIT</b>	03

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Define the purpose of work	<p>1.1 One's unique sense of purpose for working and the whys of work are identified, reflected on and clearly defined for one's development as a person and as a member of society.</p> <p>1.2 Personal mission is in harmony with company's values.</p>
2. Apply work values/ethics	<p>2.1 Work values/ethics/concepts are identified and classified in accordance with company's ethical standard guidelines.</p> <p>2.2 Work policies are undertaken in accordance with company's policies, guidelines on work ethical standard.</p> <p>2.3 Resources are used in accordance with company's policies and guidelines.</p> <p>2.4 Punctuality, absence from work, sick, family and annual leave is maintained alignment to the Employment Act of the Maldives</p>
3. Deal with ethical problems	<p>3.1 Company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct/behavior are followed.</p> <p>3.2 Work incidents/situations are reported according to company protocol/guidelines.</p> <p>3.3 Resolution and/or referral of ethical problems identified are reported/documented based on standard operating procedure</p>

4. Maintain integrity of conduct in the workplace	<p>4.1 Personal behavior and relationships with co-workers and/or clients are demonstrated consistent with ethical standards, policy and guidelines.</p> <p>4.2 Work practices are satisfactorily demonstrated and consistent with industry work ethical standards, organizational policy and guidelines.</p> <p>4.3 Instructions to co-workers are provided based on ethical lawful and reasonable directives</p>
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### **Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

### **Tools, equipment and material used in this unit may include:**

For the purpose of delivering the assignment, students need to be familiarized with the following.

- ✓ Employment act of Maldives

## **ASSESSMENT GUIDE**

### **Forms of assessment**

Assessment for the unit needs to be holistic and must include real or simulated workplace activities.

### **Assessment context**

Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of practices.

### **Critical aspects (for assessment)**

It is critical that the assessment undertaken for this module be holistic and involve the following.

- ✓ Group discussion
- ✓ Role play
- ✓ Self-paced learning
- ✓ Written
- ✓ Demonstration
- ✓ Observation
- ✓ Interviews/questioning

### **Assessment conditions**

Assessment must reflect both events and processes over a period of time.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"> <li>✓ Work responsibilities/job functions</li> <li>✓ Company code of conduct/values</li> <li>✓ Concept of work values/ethics</li> <li>✓ Company policies and guidelines</li> <li>✓ Work ethical standard</li> <li>✓ Company’s identified ethical problems</li> <li>✓ Work incidents/situation</li> <li>✓ Standard operating procedures</li> <li>✓ Report writing and documentation</li> <li>✓ Fundamental rights at work including gender sensitivity</li> <li>✓ Corporate social responsibilities</li> <li>✓ Human and interpersonal Relations</li> <li>✓ Value Formation</li> <li>✓ Professional Code of Conduct and Ethics</li> </ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"> <li>✓ Purpose for working and the why’s of work are identified, reflected and linked to self-development</li> <li>✓ Work values/ethics/concepts are identified and classified in accordance with company’s ethical standard</li> <li>✓ Work policies are undertaken in accordance with company’s policies.</li> <li>✓ Resources are used in accordance with company’s policies and guidelines.</li> <li>✓ Work incidents/situations are reported according to company guidelines</li> <li>✓ Personal behavior and relationships with co-workers and clients are within ethical standard</li> <li>✓ Work practices are satisfactorily demonstrated and consistent.</li> <li>✓ Instructions to co-workers are provided based on ethical lawful and reasonable directives</li> </ul>

<b>UNIT TITLE</b> Provide effective customer care					
<b>DESCRIPTOR</b>	This unit addresses the importance of caring for customers in the hospitality industry, especially while working as an Agriculturist. It is a very important unit related to providing effective customer care and will include greetings, identifying needs of, delivering quality customer care, handling of inquiries, complaints and managing angry customers.				
<b>CODE</b>	FNACM05V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	05

<b>ELEMENTS OF COMPETENCIES</b>		<b>PERFORMANCE CRITERIA</b>
1. Greet customers and colleagues	1.1. Customers and colleagues greeted according to standard procedures and social norms 1.2. Sensitivity to cultural and social differences demonstrated	
2. Identify and attend to customer needs	2.1 Appropriate interpersonal skills are used to ensure that customer needs are accurately identified 2.2 Customer needs are assessed for urgency so that priority for service delivery can be identified 2.3 Personal limitation in addressing customer needs is identified and where appropriate, assistance is sought from supervisor 2.4 Customers informed correctly 2.5 Personal limitation identified and assistance from proper sources sought when required	
3. Deliver service to customers	3.1 Customer needs are promptly attended to in line with organizational procedure 3.2 Appropriate rapport is maintained with customer to enable high quality service delivery 3.3 Opportunity to enhance the quality of service and products are taken wherever possible	
4. Handle inquiries	4.1 Customer queries handled promptly and properly 4.2 Personal limitations identified and assistance from proper sources sought when required	
5. Handle complaints	5.1 Responsibility for handling complaints taken within limit of responsibility 5.2 Personal limitations identified and assistance from proper sources sought when required 5.3 Operational procedures to handling irate or difficult customers followed correctly 5.4 Details of complaints and comments from	

	customers properly recorded
6. Handle and manage angry customers	6.1 Apply principles related to anger management 6.2 Meet with angry customers and console them accordingly 6.3 Maintain a log book for recording customer service incidents.

### Range Statement

Procedures included:

- ✓ Greeting procedure
- ✓ Complaint and comment handling procedure
- ✓ Incidence reporting procedures
- ✓ General knowledge of property
- ✓ Standard operating procedures for service deliveries
- ✓ Non-verbal and verbal communication
- ✓ Dress and accessories
- ✓ Gestures and mannerisms
- ✓ Voice tonality and volume
- ✓ Culturally specific communication customs and practices
- ✓ Cultural and social differences

Includes but are not limited to:

- ✓ Modes of greeting, fare welling and conversation
- ✓ Body language/ use of body gestures
- ✓ Formality of language

Interpersonal skills:

- ✓ Interactive communication
- ✓ Good working attitude
- ✓ Sincerity
- ✓ Pleasant disposition
- ✓ Effective communication skills
- ✓ Customer needs

Customer with limitation may include:

- ✓ Those with a disability
- ✓ Those with special cultural or language needs
- ✓ Unaccompanied children
- ✓ Parents with young children
- ✓ Pregnant women
- ✓ Single women

**Tools, equipment and materials required may include:**

- ✓ Relevant procedure manuals
- ✓ Availability of telephone, printer, computer, internet, etc.
- ✓ Availability of data on projects and services; tariff and rates, promotional activities in place etc.

## **ASSESSMENT GUIDE**

### **Form of assessment**

Assessment for the unit needs to be holistic and must include real or simulated workplace activities.

### **Assessment context**

Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of practices.

### **Critical aspects (for assessment)**

It is essential that competence is fully observed and there is ability to transfer competence to changing circumstances and to respond to unusual situations. This unit may be assessed in conjunction with all units which form part of the normal job role.

- ✓ Assessment requires evidence that the candidate:
- ✓ Complied with industry practices and procedures
- ✓ Used interactive communication with others
- ✓ Complied with occupational, health and safety practices
- ✓ Promoted public relation among others
- ✓ Complied with service manual standards
- ✓ Demonstrated familiarity with company facilities, products and services
- ✓ Applied company rules and standards
- ✓ Applied telephone ethics
- ✓ Applied correct procedure in using telephone, printer, computer, internet
- ✓ Handled customer complaints
- ✓ Depict effective communication skills

### **Assessment conditions**

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of hygienic work practices must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"> <li>✓ effective customer services principles, including requirements to meet customer service needs and expectations</li> <li>✓ workplace products and services</li> <li>✓ customer service reporting procedures</li> <li>✓ customer service problem-resolution procedures.</li> </ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"> <li>✓ promote products and services in a clear and direct manner</li> <li>✓ identify customer needs and expectations</li> <li>✓ resolve customer concerns and complaints by taking appropriate action, including:               <ul style="list-style-type: none"> <li>• handling customer needs in a courteous, discreet and sensitive manner</li> <li>• addressing customer complaints and escalating where necessary</li> </ul> </li> <li>✓ apply workplace procedures relating to customer feedback, including:               <ul style="list-style-type: none"> <li>• customer service and continuous improvement processes</li> <li>• workplace customer service practices</li> </ul> </li> </ul>



<b>UNIT TITLE</b>					
<b>Perform basic computer operations</b>					
<b>DESCRIPTOR</b>	This unit describes the performance outcomes, skills and knowledge required to start up a personal computer or business computer terminal; to correctly navigate the desktop environment; and to use a range of basic functions.				
<b>CODE</b>	FNACM06V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	03

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Start computer, system information and features	1.1. Adjust workspace, furniture and equipment to suit user ergonomic requirements 1.2. Ensure work organization meets organizational and occupational health and safety (OHS) requirements for computer operation 1.3. Start computer or log on according to user procedures 1.4. Identify basic functions and features using system information 1.5. Customize desktop configuration, if necessary, with assistance from appropriate persons 1.6. Use help functions as required
2. Organize files using basic directory and folder structures	2.1 Create folders/subfolders with suitable names 2.2 Save files with suitable names in appropriate folders 2.3 Rename and move folders/subfolders and files as required 2.4 Identify folder/subfolder and file attributes 2.5 Move folders/subfolders and files using cut and paste, and drag and drop techniques 2.6 Save folders/subfolders and files to appropriate media where necessary 2.7 Search for folders/subfolders and files using appropriate software tools 2.8 Restore deleted folder/subfolders and files as necessary
3. Print information	3.1 Print information from installed printer

	3.2 View progress of print jobs and delete as required
	3.3 Change default printer if installed and required
4. Shut down computer	4.1 Close all open applications 4.2 Shut-down computer according to user procedures
5. Basic Microsoft Word and Excel skills	5.1. Ensure data is entered, checked and amended in accordance with organizational and task requirements, to maintain consistency of design and layout 5.2. Format spreadsheet using software functions; to adjust page and cell layout to meet information requirements, in accordance with organizational style and presentation requirements 5.3. Ensure formulae are used and tested to confirm output meets task requirements, in consultation with appropriate personnel as required 5.4. Use manuals, user documentation and online help to overcome problems with spreadsheet design and production 5.5. Format document using appropriate software functions to adjust page layout to meet information requirements, in accordance with organizational style and presentation requirements 5.6. Use system features to identify and manipulate screen display options and controls 5.7. Use manuals, user documentation and online help to overcome problems with document presentation and production

**Range Statement:**

This unit covers computer hardware to include personal computers used independently or within networks, related peripherals, such as printers, scanners, keyboard and mouse, and storage media such as disk drives and other forms of storage. Software used must include but not limited to word processing, spreadsheets, database and billing software packages and Internet browsing software.

**Tools, equipment and materials required may include:**

- ✓Storage device
- ✓Different software and hardware
- ✓Personal computers system
- ✓Laptop computer
- ✓Printers
- ✓Scanner
- ✓Keyboard
- ✓Mouse

- ✓ Disk drive /CDs, DVDs, compressed storage device

## ASSESSMENT GUIDE

The assessment guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this occupational standard

### Forms of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- ✓ direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate
- ✓ demonstration of techniques
- ✓ oral or written questioning to assess knowledge of computer operations and functions
- ✓ review of shortcuts created
- ✓ review of folders/subfolders created.

### Critical aspects (for assessment)

Evidence of the following is essential:

- ✓ navigation and manipulation of the desktop environment within the range of assigned workplace tasks
- ✓ knowledge of organizational requirements for simple documents and filing conventions
- ✓ application of simple keyboard functions to produce documents with a degree of speed and accuracy relevant to the level of responsibility required.

### Assessment conditions

- ✓ Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.
- ✓ Assessment must include direct observation of tasks.
- ✓ Where assessment of competency includes third-party evidence, individuals must provide evidence
- ✓ Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
Knowledge required: <ul style="list-style-type: none"> <li>✓ Basic ergonomics of keyboard and computer use</li> <li>✓ Main types of computers and basic features</li> <li>✓ Of different operating systems</li> <li>✓ Main parts of a computer</li> <li>✓ Storage devices and basic categories of memory</li> <li>✓ Relevant software</li> <li>✓ General security and computer Viruses</li> </ul>	Skills required: <ul style="list-style-type: none"> <li>✓ communication skills to identify lines of communication, to request advice, to effectively question, to follow instructions and to receive feedback</li> <li>✓ problem-solving skills to solve routine problems in the workplace, while under direct supervision</li> <li>✓ technology skills to use equipment safely while under direction, basic keyboard and mouse skills and procedures relating to logging on and accessing a computer</li> <li>✓ basic typing techniques and strategies.</li> </ul>

<b>UNIT TITLE Apply occupational health and safety procedures</b>					
<b>DESCRIPTOR</b>	This unit defines the competency required to apply good practices related to standard occupational health and safety principles and practices while undertaking agricultural activities across the Maldives.				
<b>CODE</b>	FNAS02CR05V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	03

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine Occupational Health and Safety (OH&S) issues relating to immediate work environment	1.1 Occupational Health and Safety issues in the immediate workplace are assessed and action to rectify the problem is taken or reported to supervisor 1.2 Workplace and OH&S procedures are followed to ensure safe working environment 1.3 On farm, risk factors would include, machineries and tools, chemicals live animals and zoonotic diseases.
2. Document and disseminate Occupational Health & Safety requirements	2.1 Information relating to Occupational Health and Safety regulations and requirements are obtained 2.2 OH&S regulations impacting upon the common locations of interaction are determined and documented 2.3 Documents are submitted to supervisor for verification 2.4 Occupational Health and Safety documents are provided to all work stations, this should include a list of personal safety items based on the line of work. 2.5 Occupational Health and Safety documents relating to Agriculture are issued and updated.
3. Provide basic ergonomic advice	3.1 Ergonomic requirements of organization are assessed 3.2 Advice is provided based on organizations requirement, workplace policies 3.3 Advice is documented and passed on to supervisor
4. Apply safe transportation techniques	4.1 Safety while transporting work related items and personnel using land and maritime modes are continuously assessed, monitored and relevant actions taken. 4.2 Comply with existing regulations while using

	land and maritime transportations of goods and passengers.
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### **Range Statement**

- ✓ Organisational Variables may include, but are not limited to: Occupational Health and Safety legislation; organization safety procedures; work stations and work environment procedures; presence and impact of OH&S manager, national level policies.
- ✓ Advice on ergonomics Includes Occupational health and safety procedures; using and cleaning Visual Display Units (VDUs); advice on footrests, exercises, times for breaks, armrests, chairs, equipment cleaning and maintenance, disposal and handling guides for specific materials.
- ✓ Quality process may include quality certified and have well-documented standards for addressing quality

### **Tools, equipment and materials required may include:**

- ✓ Relevant procedure manuals

## ASSESSMENT GUIDE

### Form of assessment

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
- ✓ Any written or oral examinations may include questions related to implementing sustainable practices in the workplace.

### Assessment context

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Critical aspects

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### Assessment conditions

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of hygienic work practices must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"><li>✓ General ergonomic principles to avoid back, wrist and eye strain and other physical injuries caused by equipment and machineries used.</li><li>✓ Procedures and exercises for avoiding strain and injury</li><li>✓ Current business practices in relation to preparing reports</li><li>✓ Broad knowledge of Organizational Health and Safety requirements in relation to work safety, environmental factors and ergonomic considerations</li></ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"><li>✓ Reading and writing are at a level where basic workplace documents are understood and presented</li><li>✓ Questioning and active listening is employed to confirm information</li><li>✓ Plain English literacy and communication skills in relation to dealing with clients and team members</li><li>✓ Problem solving skills for a defined range of predictable problems</li></ul>

<b>UNIT TITLE Practice effective workplace communication</b>					
<b>DESCRIPTOR</b>	This unit addresses the need for effective communication across the workplace. It describes the ethics of communication and shows the importance of selecting the best method of communication during various situations. It also identifies the barriers to communication and explains how to overcome them. The unit also requires competency in electronic communication.				
<b>CODE</b>	FNACM04V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	04

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1.Communicate with customers and colleagues	1.1. Proper channels and methods of communication use 1.2. Workplace interactions with customers and colleagues appropriately made 1.3. Appropriate non-verbal communication used 1.4. Appropriate lines of communication followed
2.Participate in workplace meetings and discussions	2.1 Meetings and discussions attended on time 2.2 Procedures to expressing opinions and following instructions clearly followed 2.3 Questions asked and responded to effectively 2.4 Meeting and discussion outcomes interpreted and implemented correctly
3.Handle relevant work related documentation	3.1 Conditions of employment understood correctly 3.2 Relevant information accessed from appropriate sources 3.3 Relevant data on workplace forms and other documents filled correctly 3.4 Instructions and guidelines understood and followed properly 3.5 Reporting requirements completed properly
4.Follow basic bookkeeping to standard accounting process and procedures	4.1 Record keeping and expenditure should be maintained as per accounts requirements 4.2 Entry data of financial transactions purchases, sales, receipts, and payments 4.3 Monthly reports maintained as per accounts requirements.
5.Handle electronic communication	5.1 Procedures for sending emails learnt 5.2 Procedure for attaching files learnt 5.3 Basic email writes up in English demonstrated correctly

### Range Statement:

As per the range of communication protocols are involved, students need to undertake the following.

- ✓ Standard communication process and protocols with clients and colleagues
- ✓ Minute taking after formal meetings and discussions
- ✓ Reporting organizational hierarchy to colleagues
- ✓ Sending electronic communication with write up and attachment

### Tools, equipment and material used

Tools, equipment and materials used for this unit may include but not limited to the following.

- ✓ Computer or Laptop
- ✓ Note pads
- ✓ Pens/pencils
- ✓ Minute taking forms with formats

## ASSESSMENT GUIDE

### Forms of assessment

Assessment for the unit needs to be continuous and holistic and must include real or simulated workplace activities.

### Critical aspects (for assessment)

It is essential that competence is fully observed and there is ability to transfer competence to changing circumstances and to respond to unusual situations in the critical aspects of communicating effectively with others involved in or affected by the work. This unit may be assessed in conjunction with all and units which form part of the normal job role.

### Assessment conditions

It is preferable that assessment reflects a process rather than an event and occurs over a period of time to cover varying circumstances.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"><li>✓ Proper communication channels and methods</li><li>✓ Appropriate non-verbal communications</li><li>✓ Communication lines</li><li>✓ Methods and techniques in participating in meetings and group discussions</li><li>✓ Methods of taking notes and minutes</li><li>✓ Understanding employment contract</li><li>✓ Interpreting and understanding job descriptions</li><li>✓ Techniques of writing emails and attaching documents</li><li>✓ Reading of bookkeeping formats for small businesses</li></ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"><li>✓ Handling of communications among customers and colleagues</li><li>✓ Following employment contractual requirements and job-related tasks</li><li>✓ Undertake note taking and minutes</li><li>✓ Compose and Sending emails</li><li>✓ Sending attachment through emails</li><li>✓ Entry of financial transaction aligned to the principles of bookkeeping process and procedures</li></ul>



✓ Familiarize with book keeping terminologies	
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<b>UNIT TITLE</b> Perform handling of agricultural tools and equipment					
<b>DESCRIPTOR</b>	This unit covers the knowledge, skills and attitudes required to use farm tools and equipment. It includes selection, operation and preventive maintenance of farm tools and equipment.				
<b>CODE</b>	FNAS02CR06V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	03

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Select and use farm tools	1.1 Appropriate farm tools are identified according to requirement/use 1.2 Farm tools are checked for faults and defective tools reported in accordance with farm procedures 1.3 Appropriate tools and equipment are safely used according to job requirements and manufacturers conditions
2. Select and operate farm equipment	2.1 Appropriate farm equipment is identified 2.2 Instructional manual of the farm tools and equipment is carefully read prior to operation 2.3 Pre-operation check-up is conducted in line with manufacturers manual 2.4 Faults in farm equipment are identified and reported in line with farm procedures 2.5 Farm equipment is used according to its function 2.6 Safety procedures are followed
3. Safety measure while using the equipment.	3.1 Demonstrate how to safely setup and turn off farm equipment. 3.2 Identify the safety and operational procedures and service intervals based on machinery or equipment operators' manual.
4. Perform preventive maintenance	4.1 Tools and equipment are cleaned immediately after use in line with farm procedures 4.2 Routine check-up and maintenance are performed 4.3 Tools and equipment are stored in designated areas in line with farm procedures

## **Range Statement**

The Range of Variables statement contextualizes the unit of competence and provides a focus for assessment. The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in a given workplace.

- ✓ Materials and equipment: Variables may include but are not limited to personal preference or market availability.
- ✓ Document (Drawings and item specifications): Variables may include but are not limited to: software used for the document preparations and market availability of items.
- ✓ Organisational Variables may include but are not limited to: Procurement of items as per organization guidelines
- ✓ Workplace environment: May involve two entirely different working environments. This in case would require different set of guidelines and procedures.
- ✓ Documentation and Reporting: Documentation for quality control may follow national standards which are handles by related authorities. (Building codes of Housing ministry). Building standards, quality control, project management and report writing styles will vary according to organisational approach, information gathering processes may have associated templates.
- ✓ Standards and Procedures: Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates.

### **Tools, equipment and materials required may include:**

- ✓ Farm equipment
  - Engine
  - Pumps
  - Generators
  - Sprayers
  
- ✓ Farm tools
  - Digging tools
  - Propagation tools
  - Harvesting tools
  - Measuring tools Sickle
  - Cutters
  - Weighing scales
  - Hand tools
  - Measuring tools
  - Garden tools

## ASSESSMENT GUIDE

### Form of assessment

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
- ✓ Any written or oral examinations may include questions related to implementing sustainable practices in the workplace.

### Assessment context

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Critical aspects

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### Assessment conditions

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of basic agricultural mechanics must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"><li>✓ Knowledge in Safety standards during operation of farm equipment</li><li>✓ Identify and detail functions of various tools used in farms</li><li>✓ calibrating and use of equipment</li><li>✓ Safety keeping of equipment after every use</li><li>✓ Regular upkeep of equipment</li><li>✓ Knowledge in preventive maintenance</li></ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"><li>✓ Correctly identified appropriate farm tools and equipment</li><li>✓ Operated farm equipment according to manual specification</li><li>✓ Machinery and equipment operation maintenance skill</li><li>✓ Ability to recognized defective farm equipment</li><li>✓ Perform proper management practices of safety measures</li><li>✓ Performed preventive maintenance</li></ul>



<b>UNIT TITLE Build a small nursery shed</b>					
<b>DESCRIPTOR</b>	This unit defines the competency required to correctly setup a shade house, doing basic construction and plumbing work				
<b>CODE</b>	FNAS02CR07V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	03

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Create a structural drawing of the shade house.	1.1 Identify the following from a technical drawing of a structure <ul style="list-style-type: none"> <li>✓ Square feet of the building</li> <li>✓ Height of the building</li> <li>✓ Number of rafter/trusses used or required</li> <li>✓ Scale of the drawing</li> </ul> 1.2 Preparing a basic drawing with measurements indicated. 1.3 Identifying the common building materials used based on requirement.
2. Materials and tools used according to design and requirement.	2.1 Identify and explain the uses of the following tools <ul style="list-style-type: none"> <li>✓ Saw/table saw/jig saw</li> <li>✓ Cutoff</li> <li>✓ General tools (screw drivers, wrench etc.)</li> <li>✓ Petrol/electrical pumps and small generators</li> <li>✓ Shade nets of different shade levels</li> <li>✓ Polythene and other roofing materials</li> <li>✓ GI sheets</li> <li>✓ Farming tools (spade, shovel, wheel burrow etc.)</li> </ul>
3. Safety measure while using the equipment.	3.1 Identify the safety and operational procedures and service intervals based on machinery or equipment operators' manual.
4. Plumbing and concreting	4.1 Demonstrate the following skills: <ul style="list-style-type: none"> <li>✓ Soldering/sweating a copper joint</li> <li>✓ Cementing PVC fittings</li> <li>✓ Threading black pipe</li> <li>✓ Preparing concrete for "foundation" base</li> <li>✓ Constructing forms</li> <li>✓ Pouring concrete, finishing and curing.</li> </ul>

## **Range Statement**

The Range of Variables statement contextualizes the unit of competence and provides a focus for assessment. The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in a given workplace.

- ✓Materials and equipment: Variables may include but are not limited to personal preference or market availability.
- ✓Document (Drawings and item specifications): Variables may include but are not limited to: software used for the document preparations and market availability of items.
- ✓Organisational Variables may include but are not limited to: Procurement of items as per organization guidelines
- ✓Workplace environment: May involve two entirely different working environments. This in case would require different set of guidelines and procedures.
- ✓Documentation and Reporting: Documentation for quality control may follow national standards which are handles by related authorities. (Building codes of Housing ministry). Building standards, quality control, project management and report writing styles will vary according to organisational approach, information gathering processes may have associated templates.
- ✓Standards and Procedures: Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates.

### **Tools, equipment and materials required may include:**

- ✓Tools and equipment required for smooth delivery of the contents outlined in the module.

## ASSESSMENT GUIDE

### Form of assessment

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
- ✓ Any written or oral examinations may include questions related to implementing sustainable practices in the workplace.

### Assessment context

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Critical aspects

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### Assessment conditions

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of Build a small farm shed must be constantly evaluated

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"><li>✓ Preparing simple illustrations</li><li>✓ Use or purpose of different equipment, tools, machineries and materials.</li><li>✓ Taking precautionary safety measures</li><li>✓ Creating small plumbing networks and doing basic construction.</li><li>✓ Build nursery shed using wood works and carpentry practices</li></ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"><li>• Familiarizing with illustration-based computer software and basic methodologies involved in preparing structural drawings.</li><li>• Low level decision making in relation to a limited range of specific areas like material selection.</li><li>• Machinery and equipment operation maintenance skill</li><li>• Masonry and plumbing skills</li></ul>



<b>UNIT TITLE Provide information on plants suitable for Maldives and their culture</b>					
<b>DESCRIPTOR</b>	This unit of competency describes the skills and knowledge required to provide information to clients and others about plants and their cultural requirements. It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.				
<b>CODE</b>	FNAS02CR08V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	06

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify the issue	1.1 Initiate contact with the client when appropriate 1.2 Assist the client in explaining the issue by using attentive listening and questioning techniques 1.3 Clarify the nature of the issue by gathering all relevant information from the client 1.4 Define the issue as closely as possible according to the amount of information gathered 1.5 Advise the client that expert advice may be required to assist them further with their issue 1.6 Perform plant identification techniques 1.7 Develop knowledge on plant culture
2. Decide on preferred solution	2.1 Identify and develop options and strategies using available in-house and online reference material, product information, own experiences and sharing collective workplace knowledge 2.2 Examine and evaluate options and strategies using sound problem-solving techniques 2.3 Determine the optimal solution based on reasoned argument, appropriate evidence and sound cultural principles
3. Provide the preferred solution	3.1 Explain the recommended solution, method of application and probable outcomes to the client 3.2 Refer to the original source of the plant and its cultural requirements where necessary

	3.3 Respond to client requests for clarification or expansion by the use of attentive listening and questioning techniques
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**Range Statement**

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- ✓ Materials and equipment: Variables may include but are not limited to personal preference or market availability but are subject to crop selection and growing conditions.
- ✓ Document (preparing a layout design of the farm): Variables may include but are not limited to: software used for the document preparations
- ✓ Organisational: Variables may include but are not limited to: Procurement of items and standards in land preparation methods as per organization guidelines.
- ✓ Workplace environment: May involve two entirely different working environments. This in case would require different set of guidelines and procedures.
- ✓ Documentation and Reporting: Documentation for quality control may follow national standards, which are handles by related authorities. (council regulations on land). Standards, quality control, project management and report writing styles will vary according to organisational approach, information gathering processes may have associated templates.
- ✓ OH & S Standards: As per company, statutory and organization requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.
- ✓ Standards and Procedures: Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates

## ASSESSMENT GUIDE

### Form of assessment

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
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### Assessment context

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Critical aspects

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### Assessment conditions

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of information on plants and their culture must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"><li>✓ principles of plant culture</li><li>✓ broad range of plant species and their cultural requirements</li><li>✓ duty of care in provision of advice and recommendations to retail, commercial and private clients</li><li>✓ local plant suppliers, consultants, services, products and contractors</li><li>✓ pest and disease symptoms, basic physiology and life cycle of pests and diseases, vulnerable plant growth stages, treatment thresholds, treatment products, effective application procedures and environmental implications</li><li>✓ plant identification techniques, plant selection, plant physiology, habit and growth characteristics of the plants</li><li>✓ soil characteristics particularly in relation to the local region</li><li>✓ weed species, growth stages, treatment thresholds, treatment products, effective application procedures and environmental implications</li></ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"><li>✓ develop product knowledge through research and access to in-house and online information</li><li>✓ interpret information sheets, labels, horticultural literature, specifications and design symbols</li><li>✓ investigate requests for information, identify and evaluate options, decide on a solution, and deliver recommendation and information to the client</li><li>✓ select plants from a range of available stock lists</li><li>✓ communicate with clients, work team members, supervisors, suppliers, contractors and consultants</li></ul>

<b>UNIT TITLE Undertake preparation of land for agriculture</b>					
<b>DESCRIPTOR</b>	This unit defines the competency required to decide good soils for planting, common methods used in doing field agriculture.				
<b>CODE</b>	FNAS02CR09V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	04

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Choose land with appropriate soil for setting up the nursery	1.1 Knowing the importance of a good structure for a productive soil. 1.2 Explain the importance of pH in relation to nutrient uptake. 1.3 Explain the importance of soil organisms. 1.4 Explain well all the important characteristics of a soil.
2. Preparing soil for cultivation	2.1 Identify and explain the uses of the following in land preparation <ul style="list-style-type: none"> <li>✓ Soil</li> <li>✓ Compost</li> <li>✓ Shovel</li> <li>✓ Spade</li> <li>✓ Water</li> <li>✓ Measuring tape</li> </ul>
3. Cultivate soil	3.1 Carry out removal of previous crop or land clearance debris and incorporate or burn appropriately 3.2 Follow the cultivation plan and complete for each paddock 3.3 Select, use and maintain appropriate personal protective equipment 3.4 Apply technology to ensure most efficient performance of operations 3.5 Confirm the timelines, resource and quality requirements of the planting plan
4. Setting up a bed and pit method for planting.	4.1 List down the steps involved in site selection 4.2 Identify and explain the type of crops suitable for this method. 4.3 Demonstrate the steps involved in preparing a pit and bed to grow a given set of crops.
5. Container selection and preparation	5.1 Demonstrate how to setup a container to grow plants. 5.2 Identify the procedures and preparation of the potting mix to be used.

## **Range Statement**

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- ✓ Document (preparing a layout design of the farm): Variables may include but are not limited to: software used for the document preparations
- ✓ Organisational: Variables may include but are not limited to: Procurement of items and standards in land preparation methods as per organization guidelines.
- ✓ Workplace environment: May involve two entirely different working environments. This in case would require different set of guidelines and procedures.
- ✓ Documentation and Reporting: Documentation for quality control may follow national standards, which are handles by related authorities. (council regulations on land). Standards, quality control, project management and report writing styles will vary according to organisational approach, information gathering processes may have associated templates.
- ✓ OH & S Standards: As per company, statutory and organization requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.
- ✓ Standards and Procedures: Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates

### **Tools, equipment and materials required may include:**

- ✓ Relevant procedure manuals

## **ASSESSMENT GUIDE**

### **Form of assessment**

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
- ✓ Any written or oral examinations may include questions related to implementing sustainable practices in the workplace.

### **Assessment context**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### **Critical aspects**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### **Assessment conditions**

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of preparation of land for agriculture must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"><li>✓ Selection of suitable land for agriculture.</li><li>✓ Soil analysis</li><li>✓ Soil preparation and conditioning.</li><li>✓ Knowledge of preparing own potting mixes for planting.</li><li>✓ Standards involved in setting up beds and pit for field growing.</li><li>✓ Strategic farm designing to maximize available space.</li></ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"><li>✓ Improving the skill of visual observation in determining soil types and condition.</li><li>✓ Deducing how much of what is required to start cultivation in an area thus helping in cost reduction.</li><li>✓ Devising plans to attain maximum yield from a given area of space for a crop.</li><li>✓ Familiarizing with use of farm tools and equipment.</li></ul>

<b>UNIT TITLE Perform planting, seedling and propagation</b>					
<b>DESCRIPTOR</b>	This unit describes the outcomes required to propagate plants by both sexual and asexual methods.				
<b>CODE</b>	FNAS02CR10V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	04

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Handle seeds/planting material	1.1 Planting materials are determined according to kinds and varieties. 1.2 Quality seeds are selected according to prescribed characteristics. 1.3 Seed testing is conducted to determine the percentage germination of the seedstock in accordance with the standard procedures 1.4 Planting materials are treated following standard protocol. 1.5 Seed scarification is performed for germination purposes based on type of crop.
2. Prepare for propagation	2.1 The most effective propagation method for the selected plant is determined. 2.2 Tools and equipment suitable selected 2.3 Propagation material is collected using the appropriate method for the species. 2.4 Propagation material is maintained and stored to ensure maximum viability.
3. Propagate plants	3.1. Propagating pre-treatments are applied appropriate to the plant and propagation method. 3.2. Propagation techniques are carried out and propagating media prepared according to plant requirements. 3.3. Propagation material is handled in a way that minimises damage and maximizes viability. 3.4. Water and nutrients are applied to suit the media specifications, plant requirements and propagation techniques employed. 3.5. Labels are applied according to workplace guidelines. 3.6. Plant health is monitored and remedial action is taken according to work guidelines
4. Complete propagation activities	4.1 Work site is cleaned and waste is safely disposed of, or recycled, in accordance with workplace guidelines. 4.2 Propagation records are entered accurately, according

	to workplace guidelines.
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### **Range Statement**

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- ✓ OH & S Standards: As per company, statutory and organization requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.
- ✓ Standards and Procedures: Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates

### **Tools, equipment and material used in this unit may include:**

- Autoclave
  - Boxes
  - Knives, scalpel and other cutting instruments
  - Linear measure
  - Plastic containers and trays
  - Secateurs
  - Shovel
  - Trolley
  - Vermiculite
  - Water spray container
  - Wheelbarrow
- ✓ Propagation methods may include:
- Cuttings
  - Division or splitting
  - Layering
  - Seeds
  - Spores
  - Plantlet
  - Rhizomes



- Rootling's
- Seeds Separations/divisions
- ✓ Propagating pre- treatments may include:
  - Breaking seed coat
  - Cleaning
  - Division
  - Fungicides
  - Grading
  - Heat or chemical disinfestation
  - Hormones
  - Hot-water treatment of cuttings

## ASSESSMENT GUIDE

### Form of assessment

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
- ✓ Any written or oral examinations may include questions related to implementing sustainable practices in the workplace.

### Assessment context

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Critical aspects

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### Assessment conditions

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of preparation of land for agriculture must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
Knowledge to be developed: <ul style="list-style-type: none"> <li>✓ Basic plant nutrition</li> <li>✓ Characteristics of a range of parent plants and propagation materials</li> <li>✓ Propagation methods required for a range of plant species.</li> </ul>	Skills to be developed: <ul style="list-style-type: none"> <li>✓ carry out a variety of propagation techniques</li> <li>✓ collect propagation material</li> <li>✓ read, interpret and follow instructions and safety material; and</li> <li>✓ select and apply appropriate pre and post treatments</li> </ul>

<b>UNIT TITLE</b> Undertake proper use of fertilizers and soil ameliorant					
<b>DESCRIPTOR</b>	This unit describes the outcomes required to spread fertilizer and soil ameliorant according to specifications and clean and store vehicles and equipment.				
<b>CODE</b>	FNAS02CR11V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	06

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for soil improvement	1.1 Soil type and condition is visually assessed or advice is sought from the supervisor. 1.2 Location and boundaries of the area to be treated are identified and recorded for reference. 1.3 Features that may present a hazard to the operation are identified and appropriate action is taken.
2. Perform pre-fertilizer checks	2.1 Rate of spreading is determined and fertilizer or soil improvement products are obtained. 2.2 Clean and prepare spreading vehicles, machinery and equipment according to workplace procedures and manufacturers' instructions to ensure they are serviceable and are correctly set up and calibrated.
3. Spread/spray fertilizer	3.1 Personal protective equipment is selected and used. 3.2 Spreading of fertilizer or soil improvement complies with guidelines on buffer zones, to minimize run-off into waterways and drains. 3.3 Spreaders are checked to ensure calibrations achieve standard coefficients of variation for proposed product and spread width. 3.4 Vehicles are used in line with safety standards and specifications for use. 3.5 Weather conditions are monitored during the spreading and operations adjusted accordingly.
4. Manage nutrients of soil	4.1 Undertake regular soil analysis of the nursery 4.2 Manage type and quantities of nutrients to be added
5. Prepare compost and use for agricultural activities	5.1 Familiarize with making process and the materials 5.2 Undertake compost making 5.3 Use compost for the ongoing agriculture activities

### **Range Statement**

The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in a given workplace.

- ✓ Materials and equipment: Variables may include but are not limited to personal preference or market availability but are subject to crop selection and growing conditions.
- ✓ Document (preparing a layout design of the farm): Variables may include but are not limited to: software used for the document preparations
- ✓ Organisational: Variables may include but are not limited to: Procurement of items and standards in land preparation methods as per organization guidelines.
- ✓ Workplace environment: May involve two entirely different working environments. This in case would require different set of guidelines and procedures.
- ✓ Documentation and Reporting: Documentation for quality control may follow national standards, which are handles by related authorities. (council regulations on land). Standards, quality control, project management and report writing styles will vary according to organisational approach, information gathering processes may have associated templates.
- ✓ OH & S Standards: As per company, statutory and organization requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.
- ✓ Standards and Procedures: Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates

### **Tools, equipment and material used in this unit may include:**

- ✓ Soil improvement products to be spread may include:
  - Chemical and organic fertilizers
  - Composts
  - Dolomite
  - Lime
- ✓ Vehicles, machinery and equipment for spreading may include:
  - Product bins
  - Spreading mechanisms
  - Tractor - mounted or trailed
  - Truck - mounted or trailed

## ASSESSMENT GUIDE

### Form of assessment

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
- ✓ Any written or oral examinations may include questions related to implementing sustainable practices in the workplace.

### Assessment context

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Critical aspects

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### Assessment conditions

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of preparation of land for agriculture must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"><li>✓ Spreading characteristics of different fertilizer and soil improvement products</li><li>✓ Safety measure and equipment</li><li>✓ Fertilizer requirements by different crops at different growing stages.</li></ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"><li>✓ monitor and record activities performed; and</li><li>✓ Operate equipment according to manufacturer recommendations.</li></ul>

<b>UNIT TITLE Plant vegetable, ornamental and fruit trees</b>					
<b>DESCRIPTOR</b>	This unit describes the outcomes required to prepare a planting site; estimate planting numbers and growing space required; prepare and plant trees and shrubs and provide aftercare.				
<b>CODE</b>	FNAS02CR12V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	06

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for planting	<ul style="list-style-type: none"> <li>1.1 The planting site is marked out according to the planting plan and/or supervisor's instructions.</li> <li>1.2 Competing plants are controlled as required.</li> <li>1.3 The soil is prepared and modified according to the cultural requirements of the trees to be planted.</li> <li>1.4 Tools and equipment are prepared and used according to specifications.</li> </ul>
2. Plant vegetable, ornamentals and fruit trees	<ul style="list-style-type: none"> <li>2.1 Planting holes are dug to a size sufficient to ensure the roots can grow outwards and downwards according to the needs of the species and size of the plant's root system.</li> <li>2.2 Sides of planting holes are gouged to remove the glazing of the side-walls and allow for root penetration into surrounding soil.</li> <li>2.3 Depth of planting holes sufficient to ensure that planting is no deeper than the junction of the roots and the stem.</li> <li>2.4 Trees and shrubs are watered prior to planting, ensuring the entire root ball is damp.</li> <li>2.5 Plants are removed from containers without damage.</li> <li>2.6 Roots are treated for binding or breakage, according to the needs of the species and standard horticulture practice, prior to placement in the hole.</li> </ul>
3. After planting care	<ul style="list-style-type: none"> <li>3.1 Plant hole is backfilled with soil that is free from large lumps and consolidated lightly, with a shallow basin formed for water retention.</li> <li>3.2 Plants are watered with sufficient volume to eliminate air pockets.</li> <li>3.3 Mulch material is applied evenly to the depth specified in the workplace guidelines.</li> </ul>

	<p>3.4 Trees and shrubs are secured by the appropriate method for the plant and conditions.</p> <p>3.5 Formative pruning and removal of damaged or dead materials is performed.</p> <p>3.6 Canopy reduction, thinning and lifting is undertaken as required.</p> <p>3.7 Fertilizer is applied according to the supervisor's instructions and manufacturers' guidelines.</p> <p>3.8 Necessary aftercare is applied.</p>
4. Perform follow up and clean-up	<p>4.1 Waste is removed and disposed of.</p> <p>4.2 Tools and equipment used are cleaned, maintained and stored according to workplace specifications.</p> <p>4.3 Records of activities, data and observations are completed according to required work procedures.</p>

### Range Statement

The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in a given workplace.

- ✓ Tools and equipment may include:
  - Auger
  - Rake
  - Secateurs
  - Shovel
  - Spade
  - Spray equipment
  
- ✓ Trees and shrubs may include:
  - Bare-rooted
  - Container-grown
  - Plants that do not require mechanized lifting devices for planting
  - Tube-grown
  
- ✓ Plant securing may be done by:
  - Anchoring or guying
  - Bracing
  - Installing tree guards and protective materials
  - Staking
  - Tying
  
- ✓ Aftercare may include:
  - Fertilizing

- Mulching
  - Ongoing protection through staking and tying
  - Pruning
  - Watering
  - Weed and disease control
- ✓ Materials and equipment: Variables may include but are not limited to personal preference or market availability but are subject to crop selection and growing conditions.
  - ✓ Document (preparing a layout design of the farm): Variables may include but are not limited to: software used for the document preparations
  - ✓ Organisational: Variables may include but are not limited to: Procurement of items and standards in land preparation methods as per organization guidelines.
  - ✓ Workplace environment: May involve two entirely different working environments. This in case would require different set of guidelines and procedures.
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  - ✓ OH & S Standards: As per company, statutory and organization requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.
  - ✓ Standards and Procedures: Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates

## **ASSESSMENT GUIDE**

### **Form of assessment**

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
- ✓ Any written or oral examinations may include questions related to implementing sustainable practices in the workplace.

### **Assessment context**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### **Critical aspects**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### **Assessment conditions**

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of preparation of land for agriculture must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"><li>✓ Basic plant physiology</li><li>✓ Basic preparation of soil and growing media</li><li>✓ Importance of field hygiene in regard to crop planting</li><li>✓ Nutritional, water and other requirements of the crop</li><li>✓ Principles of pest, weed and disease control</li><li>✓ Range of pre-planting soil and plant treatments and their importance</li><li>✓ Soil structure and health</li><li>✓ The importance of correct timing and procedures for planting</li><li>✓ Calculate land area</li><li>✓ Cropping density</li><li>✓ Proper plants according to climate</li></ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"><li>✓ Apply agricultural chemicals under supervision</li><li>✓ Estimate spacing and planting patterns;</li><li>✓ Measure quantities of plant materials and treatments;</li><li>✓ Select planting material</li><li>✓ Use and maintain planting equipment.</li><li>✓ Calculate land area</li><li>✓ Cropping density</li></ul>



<b>UNIT TITLE Perform plant care and management practices</b>					
<b>DESCRIPTOR</b>	This unit covers the competencies required to weed, hoe, plant fertilization, irrigate, prune, and train and to control pest and disease.				
<b>CODE</b>	FNAS02CR13V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	06

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Manage Weed and hoe	1.1 Select and use required tools and equipment as per the job requirement 1.2 Identify different species of weed and hoe 1.3 Identify the level of weed infestation as per the standard practices. 1.4 Carry out weeding work as per the job requirement. 1.5 Carry out hoeing work as per the job requirement.
2. Apply Plant fertilization	2.1 Select and use PPE as per the job requirement. 2.2 Carry out dressing as per the plant stages following standard practices. 2.3 Apply right amount of fertilizer as per the standard practices.
3. Undertake Irrigation	3.1 Identify and select irrigation methods as per the job requirement. 3.2 Identify water stress stage as per the standard procedures. 3.3 Irrigate as per the job requirement and environmental conditions.
4. Prune and train	4.1 Carry out pruning as per the job requirement. 4.2 Carry out training as per the job requirement.
5. Control pest and disease	5.1 Identify common pest and diseases 5.2 Select and use PPE as per the job requirement. 5.3 Implement effective control measures as per the job requirement. 5.4 Report to the concerned authority about the new emergence and outbreak of pest and disease.

	5.5 Plan and apply pest control measures in accordance with pest life cycle.
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### **Range Statement**

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- ✓ Document (preparing a layout design of the farm): Variables may include but are not limited to: software used for the document preparations
- ✓ Organisational: Variables may include but are not limited to: Procurement of items and standards in land preparation methods as per organization guidelines.
- ✓ Workplace environment: May involve two entirely different working environments. This in case would require different set of guidelines and procedures.
- ✓ Documentation and Reporting: Documentation for quality control may follow national standards, which are handles by related authorities. (council regulations on land). Standards, quality control, project management and report writing styles will vary according to organisational approach, information gathering processes may have associated templates.
- ✓ OH & S Standards: As per company, statutory and organization requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.
- ✓ Standards and Procedures: Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates

### **Tools, equipment and material used in this unit may include:**

- ✓ Spade
- ✓ Hoe
- ✓ Hand rack

## ASSESSMENT GUIDE

### Form of assessment

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
- ✓ Any written or oral examinations may include questions related to implementing sustainable practices in the workplace.

### Assessment context

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Critical aspects

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### Assessment conditions

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of preparation of land for agriculture must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"><li>✓ Spreading characteristics of different fertilizer and soil improvement products</li><li>✓ Safety measure and equipment</li><li>✓ Fertilizer requirements by different crops at different growing stages.</li></ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"><li>✓ monitor and record activities performed; and</li><li>✓ Operate equipment according to manufacturer recommendations.</li></ul>

<b>UNIT TITLE Control plant pests, diseases and disorders</b>					
<b>DESCRIPTOR</b>	This unit of competency describes the skills and knowledge required to identify and assess the effect to plants of plant pests, diseases and disorders and plan and coordinate control measures. The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.				
<b>CODE</b>	FNAS02CR14V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	05

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess pests, disease and disorders	1.1 Identify and record plant pests, diseases, disorders and beneficial organisms in target area 1.2 Assess the scope, stage and size of the pests, diseases or disorders 1.3 Determine tolerable threshold of pests, diseases or disorders according to workplace requirements 1.4 Identification of basic animal pest
2. Familiarize with relevant laws and regulations	2.1 Identify existing pesticide acts and regulations 2.2 Comprehend pesticide acts and regulations 2.3 Follow pesticide acts and regulations
3. Plan the implementation of plant pests, diseases and disorder control measures	3.1 Identify and select control options according to workplace requirements and environmental procedures 3.2 Select tools, equipment and machinery for control measure according to workplace procedures 3.3 Identify and assess health and safety in the workplace hazards, risks and implement controls according to workplace procedures 3.4 Select, fit, use and maintain personal protective equipment according to manufacturer instructions and health and safety in the workplace procedures 3.5 Ensure control measures comply with health and safety in the workplace policies and environmental regulations
4. Implement plant pests, diseases and disorder control measures	4.1 Coordinate control measures with work team, contractors and suppliers according to sequence and timing in consultation with supervisor 4.2 Implement control measures according to workplace procedures and industry best practice 4.3 Maintain records according to workplace

	procedures and legislative and regulatory requirements
5. Apply pesticides to eliminate pests	5.1 Identification of pesticides 5.2 Familiarize with their applications 5.3 Apply pesticides to eliminate any biological organism deemed to be a pest
6. Monitor plant pests, diseases and disorder control methods	6.1 Monitor control measures to identify off-target effects 6.2 Assess effectiveness of management measures against planned outcomes according to workplace procedures 6.3 Adjust control methods where effectiveness has been below expectations 6.4 Good agricultural practice according to relevant standards and regulation

### Range Statement

- ✓ physical conditions: skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- ✓ resources, equipment and materials:
  - pests, diseases and disorders
  - tools and equipment for control program
  - personal protective equipment
  - Animal Pest
- ✓ specifications:
  - workplace documents including policies, procedures, processes and forms for record keeping
  - manufacturers' operating instructions for specific equipment and machinery
  - safety data sheets
  - workplace instructions and client briefs
  - specific legislation/codes of practice

## **ASSESSMENT GUIDE**

### **Form of assessment**

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
- ✓ Any written or oral examinations may include questions related to implementing sustainable practices in the workplace.

### **Assessment context**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### **Critical aspects**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### **Assessment conditions**

Assessment of skills must take place under the following conditions:

- ✓ physical conditions:
  - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- ✓ resources, equipment and materials:
  - pests, diseases and disorders
  - tools and equipment for control program
  - personal protective equipment
- ✓ specifications:
  - workplace documents including policies, procedures, processes and forms for record keeping
  - manufacturers' operating instructions for specific equipment and machinery
  - safety data sheets
  - workplace instructions and client briefs
  - specific legislation/codes of practice
  - Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
  - Assessment of preparation of land for agriculture must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> <li>✓ pest, disease and disorder and symptom recognition of host stress</li> <li>✓ economic, aesthetic or environmental thresholds for a range of plant pests, diseases and disorders</li> <li>✓ control strategies for pests' diseases and disorders, including:               <ul style="list-style-type: none"> <li>○ chemical</li> <li>○ biological</li> <li>○ cultural methods</li> <li>○ treatments available</li> <li>○ Integrated Pest Management</li> <li>○ industry best practice</li> </ul> </li> <li>✓ tools, equipment and machinery for implementing the control strategies and the importance of calibration</li> <li>✓ site monitoring and analysis techniques used to implement a control strategy</li> <li>✓ implications of control strategies for:               <ul style="list-style-type: none"> <li>○ target and off-target</li> <li>○ site limitations</li> <li>○ environmental implications</li> <li>○ end market and production</li> <li>○ environmental objectives</li> </ul> </li> <li>✓ health and safety in the workplace responsibilities for employees and employers</li> <li>✓ correct use, maintenance and storage of personal protective equipment</li> <li>✓ health and safety in the workplace and environmental regulatory requirements including hazardous substances regulations</li> <li>✓ basic communications skills</li> <li>✓ workplace and mandatory record keeping requirements</li> <li>✓ basic knowledge regarding animal pest</li> </ul>	<ul style="list-style-type: none"> <li>✓ identified and recorded pests, diseases and disorders, beneficial organisms on host plants in target area</li> <li>✓ assessed damage, threat and threshold of pests' diseases or disorders on host plants according to client, market or environment requirements</li> <li>✓ selected and implemented pest, disease and disorder control measures according to workplace, environmental and safe work practices</li> <li>✓ identified and selected tools equipment and resources necessary to implement the control measure</li> <li>✓ identified and assessed health and safety hazards and risks and incorporate and implemented in controls strategies according to health and safety procedures</li> <li>✓ identified, fitted and used personal protective equipment according to workplace procedures</li> <li>✓ monitored the effectiveness of pest and disease control</li> <li>✓ adjusted control measure on crop and off-target entities where outcomes were below expectation</li> <li>✓ maintained records of pest and disease control activities according to regulatory and workplace requirements</li> <li>✓ Coordinated the control strategy with others according planned outcomes.</li> <li>✓ Control of the animal pest</li> </ul>

<b>UNIT TITLE Carryout harvest and post-harvest activities</b>					
<b>DESCRIPTOR</b>	This unit covers the knowledge and skills required to perform harvest and postharvest operations including maintaining quality of produce for distribution.				
<b>CODE</b>	FNAS02CR15V2/20	<b>Level</b>	III	<b>CREDIT</b>	06

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Perform pre – harvest operations	<ul style="list-style-type: none"> <li>1.1. Crop maturity is identified according to parameters affecting physiological growth and physical indicators.</li> <li>1.2. Records of crop agronomic history is verified and referenced for maturity.</li> <li>1.3. Obstructions from the field are removed for efficient harvesting</li> <li>1.4. Harvesting tools and materials, and temporary shed are readied</li> <li>1.5. Records regarding crops to be harvested are checked</li> </ul>
2. Perform harvesting activity	<ul style="list-style-type: none"> <li>2.1. Appropriate harvesting methods are implemented based on best cultural practices for each crop using suitable tools</li> <li>2.2. Crops are handled according to the postharvest treatment.</li> <li>2.3. Crops are harvested based on maturity indices and characteristics affecting harvest quality</li> <li>2.4. Harvesting is performed while observing GAP principles</li> </ul>
3. Perform post-harvest operation	<ul style="list-style-type: none"> <li>3.1. Postharvest operations are employed based on standard are followed.</li> <li>3.2. Use of postharvest equipment is monitored avoiding damage to crop in line with manufacturer/enterprise procedures.</li> <li>3.3. Handling and packaging are done according to variety and destination.</li> <li>3.4. Crops are stored and stacked in cool dry place prior to distribution in line with enterprise procedures</li> </ul>
4. Manage and monitor storage facilities for pest and diseases	<ul style="list-style-type: none"> <li>4.1. Manage and maintain storage facilities to accommodate healthy storage of post-harvested products</li> <li>4.2. Pest are identified based on references for storage pest and diseases</li> </ul>



	4.3. Identified storage pest and diseases are logged and reported.
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### **Range Statement**

The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in a given workplace.

- ✓ Physiological growth: Days after flower induction, Days after fruit setting
- ✓ Physical indicators: Change in color, change in size, Change in texture
- ✓ Agronomic history: Nursery source, Variety of plant, planting calendar, Days after planting, Days at flowering and Days at fruit set
- ✓ Obstructions May include but not limited to: Weeds, Dead branches, Stakes and wedges,
- ✓ Harvesting tools and materials: Picking poles, Scythes, Scissors, Shears, Shovels, collecting baskets with liners, Harvesting crates with liner, Container with clean water with preservative, Sacks, Twines, Labels and markers
- ✓ Records: Crop history, Farm calendar and Farm records
- ✓ Postharvest treatments: Hot water treatment, Vapor heat treatment, Chemical treatment, Best practices in drying and Pre-cooling treatment
- ✓ Characteristics affecting harvest: Continued occurrence of physiological changes, High in water content, Susceptible to attack by pathogens and insects
- ✓ Postharvest operation: Washing, Cleaning, Sorting, Trimming, Chemical Treatment, Grading, Fermenting, Drying, Blanching
- ✓ Postharvest equipment: Hot water treatment machine, Sorter, Weighing scale

## ASSESSMENT GUIDE

### Form of assessment

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### Assessment context

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Critical aspects

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### Assessment conditions

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of information on plants and their culture must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"> <li>✓ develop product knowledge through research and access to in-house and online information</li> <li>✓ interpret information sheets, labels, horticultural literature, specifications and design symbols</li> <li>✓ investigate requests for information, identify and evaluate options, decide on a solution, and deliver recommendation and information to the client</li> <li>✓ select plants from a range of available stock lists</li> <li>✓ communicate with clients, work team members, supervisors, suppliers, contractors and consultants</li> </ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"> <li>✓ principles of plant culture</li> <li>✓ broad range of plant species and their cultural requirements</li> <li>✓ duty of care in provision of advice and recommendations to retail, commercial and private clients</li> <li>✓ local plant suppliers, consultants, services, products and contractors</li> <li>✓ pest and disease symptoms, basic physiology and life cycle of pests and diseases, vulnerable plant growth stages, treatment thresholds, treatment products, effective application procedures and environmental implications</li> <li>✓ plant identification techniques, plant selection, plant physiology, habit and growth characteristics of the plants</li> </ul>

<b>UNIT TITLE</b> Perform setting up a basic hydroponic system					
<b>DESCRIPTOR</b>	This unit defines the competency required in preparing design for basic hydroponic system and understanding the principle involved.				
<b>CODE</b>	FNAS02CR16V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	06

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1- Preparing a hydroponic solution	1.1 Knowing the mixing ratios 1.2 Explain the importance of pH in relation to nutrient uptake. 1.3 Realize the importance of water quality 1.4 Explain well all the different characteristics of rain water and ground water
2- Preparing a pipe system	2.1 Identify and explain the uses of the following used in system preparation <ul style="list-style-type: none"> <li>✓ PVC Pipes, joints adhesives.</li> <li>✓ Cutting equipment</li> <li>✓ Sponge / growing media</li> <li>✓ Nutrient solution</li> <li>✓ EC and PH meters</li> <li>✓ Pumps and water tank</li> <li>✓ Related crops</li> </ul>
3- Stand and shade	3.1 Demonstrate how to setup a stand to support the system. 3.2 Design a small shade with a list of suitable materials required.

### Range Statement

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- ✓ Document (preparing a layout design of the farm): Variables may include but are not limited to: software used for the document preparations
- ✓ Organisational: Variables may include but are not limited to: Procurement of items and standards in land preparation methods as per organization guidelines.
- ✓ Workplace environment: May involve two entirely different working environments. This in case would require different set of guidelines and procedures.
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- ✓ Standards and Procedures: Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates

## ASSESSMENT GUIDE

### Form of assessment

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### Assessment context

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### Critical aspects

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### Assessment conditions

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of Setting up a basic hydroponic system must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"> <li>✓ Selection of suitable hydroponic systems based on requirement.</li> <li>✓ Nutrient solution preparation</li> <li>✓ Standards involved in setting up hydroponic systems</li> <li>✓ Strategic designing to maximize available space.</li> <li>✓ Understanding of the key aspects PH and EC</li> <li>✓ Effect of rain water in hydroponics.</li> </ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"> <li>✓ Preparation of the nutrient solution. (according to manufacture manual)</li> <li>✓ Deducing what is required to start cultivation in a system that is feasible.</li> <li>✓ Devising plans to attain maximum yield from a given area of space for a crop.</li> <li>✓ Familiarizing with use tools and equipment.</li> <li>✓ Maintaining EC and PH in favorable range.</li> <li>✓ Water harvesting and storage.</li> </ul>

<b>UNIT TITLE Practice others forms of Agriculture</b>					
<b>DESCRIPTOR</b>	This unit defines the competency required in preparing designs for livestock keeping models. The unit will emphasize on the practices involved in preparing poultry and goat keeping sheds and the type of purpose and suitable breeds.				
<b>CODE</b>	FNAS02CR17V2/20	<b>LEVEL</b>	III	<b>CREDIT</b>	06

<b>ELEMENTS OF COMPETENCIES</b>		<b>PERFORMANCE CRITERIA</b>
1- Land/location selection		1.1 Understanding the resting patterns and shade require for the target animals. 1.2 Providing the minimum required amount of land per animal. 1.3 Follow relevant regulations if any.
2- Shed designing		2.1 Specify a suitable method for a model site. 2.2 List down the steps involved in site selection for shed. 2.3 Identify and explain the type of raw materials suitable for the selected method. 2.4 Preparing an illustration for a goat and poultry shed.
3- Breed selection		3.1 Identify and explain the following <ul style="list-style-type: none"> <li>✓ Broilers</li> <li>✓ Layers</li> <li>✓ Dairy</li> <li>✓ Meat</li> <li>✓ Highline brown</li> </ul>
4- Fodder selection		4.1 Demonstrate the selection of fodder plants and material for goats and poultry. 4.2 Explain the reasons involved in the selection process mentioned for 3.1
5- Undertake goat rearing		5.1 Proper feed is selected 5.2 Maintain health care of goats 5.3 Identify common diseases and symptoms associated with goat
6- Carryout poultry production		6.1 Proper feed is selected 6.2 Maintain health care of poultry 6.3 Identify common diseases and symptoms associated with poultry

## **Range Statement**

The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in a given workplace.

- ✓ Materials and equipment: Variables may include but are not limited to personal preference or market availability but are subject to crop selection and growing conditions.
- ✓ Document (preparing a layout design of the farm): Variables may include but are not limited to: software used for the document preparations
- ✓ Organisational: Variables may include but are not limited to: Procurement of items and standards in land preparation methods as per organization guidelines.
- ✓ Workplace environment: May involve two entirely different working environments. This in case would require different set of guidelines and procedures.
- ✓ Documentation and Reporting: Documentation for quality control may follow national standards, which are handles by related authorities. (Council regulations on land). Standards, quality control, project management and report writing styles will vary according to organisational approach, information gathering processes may have associated templates.
- ✓ OH & S Standards: As per company, statutory and organization requirements. Ergonomic and environmental factors must be considered during the demonstration of this competency.
- ✓ Standards and Procedures: Will vary from formal procedures that must be adhered to with check points and sign offs with documented procedures and templates

## **ASSESSMENT GUIDE**

### **Form of assessment**

- ✓ Assessment for the unit needs to be holistic and observed during assessment of other units of competency which forms the qualification.
- ✓ Any written or oral examinations may include questions related to implementing sustainable practices in the workplace.

### **Assessment context**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### **Critical aspects**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge

### **Assessment conditions**

- ✓ Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- ✓ Assessment of Designing suitable models' goat and poultry keeping must be constantly evaluated.

## UNDERPINNING KNOWLEDGE AND SKILLS

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<p>Knowledge to be developed:</p> <ul style="list-style-type: none"><li>✓ Selection of suitable land for livestock keeping.</li><li>✓ Fodder selection</li><li>✓ Knowledge of preparing potting mixes for planting.</li><li>✓ Standards involved in setting up sheds in habited islands.</li><li>✓ Strategic farm designing to maximize available space.</li></ul>	<p>Skills to be developed:</p> <ul style="list-style-type: none"><li>✓ Create awareness to the importance of accessibility to water, feed and shade.</li><li>✓ Selection of suitable fodder plants and materials to enhance production.</li><li>✓ The use of feed according to the life stage of animals.</li><li>✓ Devising suitable models according to the available area of land.</li><li>✓ Familiarizing with use of farm tools and equipment.</li></ul>