



Level 1

Occupational Standard for National Vocational Qualification Aquaponics

The National Training Agency
Belmont Rd.
St. George's
GRENADA

Phone: 1 -473 -435-9092/9093
Fax: 1-473-435-9094
E-mail: executive@grenadanta.gd
Website: www.grenadanta.gd



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The Grenada National Training Agency would like to thank the following for their contribution in vetting this document.

Members of the Aquaponics Level 1 lead body.

<u>Name</u>	<u>Profession/Organisation</u>
Kelvin Dottin	Principal, Grace Lutheran Church and School
Christopher Stroude	Social Worker, Her Majesty's Prison
Ryan Hellpap	Development Specialist, Kingdom Workers
Dunstan Campbell	Consultant, Gouyave Urban Gardeners
Dave Marancik	Director of Animal Medicine, Saint George's University, School of Veterinary Medicine
Kelvin La Touche	Grace Lutheran Church and School
Donessa George	Community Youth Officer, MAREP
Kenny George	Entrepreneur, Grenstart
Benny Languigne	Social Worker, GRENCODA
Akarda Ventour	Consultant, SADO
Malarchy Dottin	Biotechnologist, Ministry of Agriculture
Lex Mc Bain	Retired Public Officer
Evans Gooding	President, North East Farmers Organization
Leslie Roche	Farmer, Gouyave Urban Gardener
Ted Charles	Aquaponics Farmer
Aaron Sylvester	Aquaponics Farmer
Ib Meyer	Director, Grace Lutheran Church and School
Augustine David	Feed Sales Manager, Caribbean Agro Industries
Josh Nelson	Teacher/expert in Aquaponics, St. Peter's School
Bob Anderson	Marine Biology, WLC (Wisconsin Lutheran College)



INTRODUCTION

The Grenada National Training Agency (GNTA) as empowered by the GCTVET Act of 2009 is the agency mandated to co-ordinate, facilitate and enable the development and growth of Technical and Vocational Education and Training in Grenada, Carriacou and Petite Martinique.

The Agency through modes of training intervention intends to help in ensuring that there exists a supply of trained and skilled workers to service labour market needs and thereby contribute to higher levels of productivity in the Grenadian economy. The organisation by way of policy seeks to have developed and approved occupational standards derived from industry specifications and to guide the training, assessment and certification within the Grenada TVET System.

The Grenada Council for Technical Vocational Education and Training (GCTVET) created by an ACT of parliament in 2009 is empowered to approve standards for the award certification leading to Caribbean Vocational Qualification (CVQ's) and National Vocational Qualification (NVQ's).

The GNTA has established industry lead groups responsible for vetting standards as well as specifying and recommending standards to be approved.

ABOUT THIS STANDARD

This is a National Vocational Qualification (NVQ) that has been approved for training and certification in Grenada.

This standard was adapted and approved by the Grenada Council for Technical Vocational Education and Training (GCTVET) on 6th September 2018.

There are some minor modifications made to accommodate the local context; however, the overall content of the document is unchanged.



QUALIFICATION OVERVIEW

The NVQ Level 1 in Aquaponics is for individuals whose role in the Agriculture sector requires well developed behavioural competencies but whose scope for independent decision making and for bringing about change is limited. Each unit of study is accompanied by a “Hands on” completion project. Persons who attain this qualification will operate under supervision.

They are likely to be in roles where they are required:

- Establish and maintain the hydroponic part of the system
- Establish and maintain the aquaculture part of the system
- General maintenance of the system
- Maintain a safe aquaponics working environment

Normally persons working at Level 1 should be able to competently carry out simple and routine work activities and to collaborate with others through groups and teams. The qualification covers competencies by providing services in Aquaponics Level 1 such as being able to understand and apply components of Aquaponics as indicated in the competency standard.

Relevant occupations include:

- Grower’s Assistant
- Naturalist

The holders of this qualification will demonstrate a range of personal presentations and demonstrations of team work skills and literacy skills. To achieve this qualification all core units must be achieved. The nominal training hours are a guide for planning the delivery of training programmes.

Please note that certification can be gained through formal training or on the job experience by scheduling assessments with the Grenada National Training Agency (GNTA) certified assessors.



Occupational Standards for National Vocational Qualification (NVQ)

NVQ Level 1 – Aquaponics

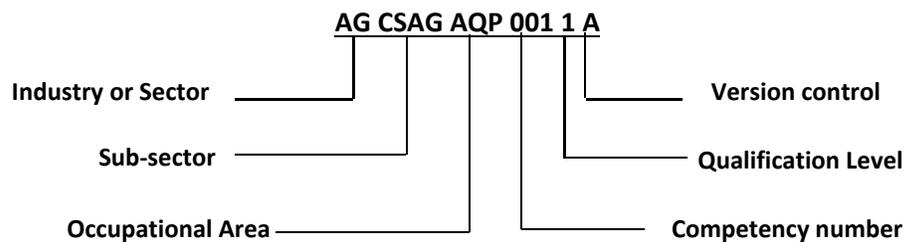
AGCSAGAQP1001

Unit Number	Unit Title	Requirement
AGCSAGAQP0011A	Understand the parts of your aquaponics system	Mandatory
AGCSAGAQP0021A	Establish and maintain the aquaculture part of the system	Mandatory
AGCSAGAQP0031A	Establish and maintain the hydroponic part of the system	Mandatory
AGCSAGAQP0041A	General maintenance of the system	Mandatory
AGGCOR0021A	Observe workplace health and safety requirement	Mandatory
AGCSAGAQP0051A	Maintain a safe aquaponics working environment	Mandatory
MEMCOR0093A	Plan and organize work	Mandatory
THHCOR0061A	Work in a Culturally Diverse Environment	Mandatory

To obtain a National Vocational Qualification (NVQ) all Mandatory Units must be achieved.

Legend to Unit Code

Example: AGCSAGAQP0011A



Sector -Agriculture (AG), Sub-Sector – Climate Smart Agriculture (CSAG), Occupational Area - Aquaponics (AQP)

AGCSAGAQP0011A:**Understanding the parts of your aquaponics system**

Competency Descriptor:

This unit deals with the skills and knowledge required by persons working in the aquaponics sector and involves the use of agricultural, budgeting and production system analyzing skills. It includes the ability to learn new processes, identify needed materials and execute food safety policy and national nutrition policy.

Elements of Competency	Performance Criteria
1. Explain why aquaponics is valuable	1.1 Describe the monetary benefit of aquaponics 1.2 Describe the benefits of aquaponics over traditional farming 1.3 Explain how aquaponics reduces dependency on imported goods 1.4 Describe the positive impact on the environment from use of aquaponics
2. Describe the different types of systems	2.1 Describe parts of each system 2.2 Explain the relationship between system components 2.3 Describe the benefits of each systems
3. Describe how the system produces food.	3.1 Describe how the fish are fed and their general lifecycle 3.2 Describe how the plants receive nutrients and their general lifecycle
4. Evaluate the benefits of different types of systems for individual people and communities.	4.1 Describe how a smaller less expensive system can benefit a household 4.2 Explain how commercial level system can be used to start a business

Range Statement

This unit may include but not limited to:

1. Personal protective equipment includes:

- Coveralls
- Boots/closed shoes
- Gloves
- Face mask
- Respirator

2. Equipment and tools include:

- Relevant tools
- Water testing kit
- General office equipment e.g. notebooks/computer, calculator

Underpinning Knowledge and Skills

Candidates must know and understand:

1. Training & education
2. Understanding cultural agricultural practices
3. Availability of materials
4. Budgeting
5. National policy on Agriculture
6. Food safety policy
7. National nutrition policy

Evidence Guide

1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

- a. Effectively repeat learned skills in aquaponics regarding the following:
 1. Identifying the different types of aquaponics systems
 2. aspects of fish health and maintenance of an aquaculture environment
 3. Executing all aspects of plant health and maintenance of a hydroponic environment
- b. Describe and identify the different expenses and benefits of operating an aquaponics system
- c. Follow all safety regulations when working
- d. Use personal protective equipment effectively at all times
- e. Check all tools and equipment to ensure they are in good working order
- f. Use/operate tools, equipment and materials according to manufacturer's instructions and workplace procedures
- g. Store tools, equipment and materials according to workplace procedures
- h. Dispose of waste according to workplace procedures
- i. Report, communicate and cooperate with others according to workplace procedures

2) Method of assessment

Assessors should gather a range of evidences that is valid, sufficient, current and authentic. Evidence may be gathered through a variety of ways including direct observation oral and written questioning. Questioning techniques should not require language, literacy and numeric skills beyond those required in this unit of competency. The candidates must have access to a suitable venue and all materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes an, standards, manuals and reference materials.

3) Context of assessment

This unit may be assessed on the job. The competencies covered by the unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

AGCSAGAQP0021A: Establishing and maintaining the aquaculture part of the system

Competency Descriptor:

This unit deals with the skills and knowledge required by persons working in the aquaponics sector and involves the use of agricultural and animal care skills. It includes the ability to handle fish, food preparation and storage and understand simple biology concepts.

Elements of Competency	Performance Criteria
1. Understand the parts of a fish	1.1 Identify the basic parts of a fish 1.2 Describe the function of each fish part
2. Select the best fish species to be used for your aquaponics system	2.1 Describe the benefits of different species 2.2 Describe the challenges of different species 2.3 Illustrate the selection process for the best species for your system location
3. Understand the proper technique for adding and removal of fish to and from your system	3.1 Describe system and site preparation activities prior to adding fish 3.2 Demonstrate proper use of fish handling equipment 3.3 Demonstrate proper technique while adding fish to the system 3.4 Describe system and site preparation activities prior to removing fish 3.5 Demonstrate proper technique while removing fish from the system and their storage
4. Describe fish life cycle including fish health maintenance practices	4.1 Illustrate the different stages of the life of a fish 4.2 Summarize signs of fish health including disease recognition 4.3 Describe fish maintenance practices
5. Understand proper fish feeding practices	5.1 Calculate the ideal density (number of fish) of fish for your system 5.2 Calculate the appropriate amount of food and determine best feeding practices 5.3 Evaluate the pros and cons of different food options

Range Statement

This unit may include but not limited to:

1 Personal protective equipment includes:

- Coveralls
- Boots/closed shoes
- Gloves
- Face mask
- Respirator

2. Equipment and tools include:

- Relevant tools
- Water testing kit
- Fish handling equipment e.g., seines, dip nets

Underpinning Knowledge and Skills

Candidates must know and understand:

1. Introducing fish to water tanks
2. Fish diseases and parasites
3. Proper types of fish food
4. Fish habitat
5. Tank cleaning
6. Pump cleaning
7. Fish harvesting practices
8. Fish handling techniques

Evidence Guide

1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

- a. Effectively repeat learned skills in aquaponics regarding the following:
 1. Identifying the different types of aquaponics systems
 2. aspects of fish health and maintenance of an aquaculture environment
 3. Executing all aspects of plant health and maintenance of a hydroponic environment
- b. Describe and identify the different expenses and benefits of operating an aquaponics system
- c. Follow all safety regulations when working
- d. Use personal protective equipment effectively at all times
- e. Check all tools and equipment to ensure they are in good working order
- f. Use/operate tools, equipment and materials according to manufacturer's instructions and workplace procedures
- g. Store tools, equipment and materials according to workplace procedures
- h. Dispose of waste according to workplace procedures

- i. Report, communicate and cooperate with others according to workplace procedures

2) Method of assessment

Assessors should gather a range of evidences that is valid, sufficient, current and authentic. Evidence may be gathered through a variety of ways including direct observation oral and written questioning. Questioning techniques should not require language, literacy and numeric skills beyond those required in this unit of competency. The candidates must have access to a suitable venue and all materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes an, standards, manuals and reference materials.

3) Context of assessment

This unit may be assessed on the job. The competencies covered by the unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

AGCSAGAQP0031A: Establishing and maintaining the horticulture (hydroponic) part of the system

Competency Descriptor:

This unit deals with the skills and knowledge required by persons working in the aquaponics sector and involves the use of agricultural and plant care skills. It includes the ability to handle plants, food preparation and storage and understand simple biology concepts.

Elements of Competency	Performance Criteria
1. Understand the basic parts of edible plants and their functions	1.1 Identify the basic parts shared by most plants 1.2 Describe the function of each plant part 1.3 Explain how plants turn water and light into food
2. Choose the best plants to use for your aquaponics system	2.1 Describe the benefits of different plants 2.2 Describe the challenges of different plants Select the best grow medium for different situations 2.3 Illustrate the selection process for the best plants for your system location
3. Understand the proper technique for adding and removal of plants to and from your system	3.1 Calculate the ideal density (number of plants) of plants for your system 3.2 Describe system and site preparation activities prior to adding plants 3.3 Demonstrate proper use of plant handling equipment 3.4 Demonstrate proper technique while adding plants to the system 3.5 Describe system and site preparation activities prior to removing plants 3.6 Demonstrate proper technique while removing plants from the system and their storage
4. Describe plant life cycle including fish health maintenance practices	4.4 Illustrate the different stages of the life common to most plants 4.5 Summarize signs of plant health including disease recognition 4.6 Describe plant maintenance practices 4.7 Create an outline for plant health maintenance practices

Range Statement

This unit may include but not limited to:

1 Personal protective equipment includes:

- Coveralls
- Boots/closed shoes
- Gloves
- Face mask
- Respirator

2. Tools and equipment

- Pruning shears
- Spray bottle

Underpinning Knowledge and Skills

Candidates must know and understand:

1. Transplanting of seedlings in to hydroponic system
2. Harvesting desired plant organ (leaf, root or whole plant) from the system
3. Removal of infected or dead or decay plant material from the system
4. Pruning
5. Administering plant nutrients
6. Proper sanitation techniques to minimize transferal of pest or diseases between plants
7. Observation of plant leave and structure to assess health and possible nutrient deficiencies
8. Observation of plants to determine possible infestation of pests or diseases

Evidence Guide

1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

- a. Effectively repeat learned skills in aquaponics regarding the following:
 1. Identifying the different types of aquaponics systems
 2. aspects of fish health and maintenance of an aquaculture environment
 3. Executing all aspects of plant health and maintenance of a hydroponic environment
- b. Describe and identify the different expenses and benefits of operating an aquaponics system
- c. Follow all safety regulations when working
- d. Use personal protective equipment effectively at all times
- e. Check all tools and equipment to ensure they are in good working order
- f. Use/operate tools, equipment and materials according to manufacturer's instructions and workplace procedures
- g. Store tools, equipment and materials according to workplace procedures
- h. Dispose of waste according to workplace procedures
- i. Report, communicate and cooperate with others according to workplace procedures

2) Method of assessment

Assessors should gather a range of evidences that is valid, sufficient, current and authentic. Evidence may be gathered through a variety of ways including direct observation oral and written questioning. Questioning techniques should not require language, literacy and numeric skills beyond those required in this unit of competency. The candidates must have access to a suitable venue and all materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes an, standards, manuals and reference materials.

3) Context of assessment

This unit may be assessed on the job. The competencies covered by the unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

AGCSAGAQP0041A:**General aquaponics system maintenance**

Competency Descriptor:

This unit deals with the skills and knowledge required by persons working in the aquaponics sector and involves the use of agricultural and general equipment maintenance skills. It includes the ability to use small hand tools, conduct simple liquid tests and understand simple concepts.

Elements of Competency	Performance Criteria
1. Demonstrate system cleaning practices	1.4 Identify proper cleaning equipment 1.5 Identify each section requiring regular cleaning 1.6 Demonstrate proper cleaning technique of each section
2. Understand common expected and emergency repairs	2.1 Identify proper repair equipment 2.2 Identify each section requiring regular repairs 2.3 Demonstrate proper repair technique of each section 2.4 Outline potential foreseeable emergency system issues 2.5 Outline emergency system solutions including necessary equipment
3. Demonstrate proper water testing procedures	3.1 Demonstrate chemical testing for ammonia, nitrate and nitrite in fish water 3.2 Demonstrate water temperature testing 3.3 Demonstrate proper data recording practices

Range Statement

This unit may include but not limited to:

1 Personal protective equipment includes:

- Coveralls
- Boots/closed shoes
- Gloves
- Face mask
- Respirator

2. Equipment and tools include:

- Relevant tools
- Water testing kit

Underpinning Knowledge and Skills

Candidates must know and understand:

1. Simple data collection & management skills
2. Personal hygiene
3. System hygiene

Evidence Guide

1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

- a. Effectively repeat learned skills in aquaponics regarding the following:
 1. Identifying the different types of aquaponics systems
 2. aspects of fish health and maintenance of an aquaculture environment
 3. Executing all aspects of plant health and maintenance of a hydroponic environment
- b. Describe and identify the different expenses and benefits of operating an aquaponics system
- c. Follow all safety regulations when working
- d. Use personal protective equipment effectively at all times
- e. Check all tools and equipment to ensure they are in good working order
- f. Use/operate tools, equipment and materials according to manufacturer's instructions and workplace procedures
- g. Store tools, equipment and materials according to workplace procedures
- h. Dispose of waste according to workplace procedures
- i. Report, communicate and cooperate with others according to workplace procedures

2) Method of assessment

Assessors should gather a range of evidences that is valid, sufficient, current and authentic. Evidence may be gathered through a variety of ways including direct observation oral and written questioning. Questioning techniques should not require language, literacy and numeric skills beyond those required in this unit of competency. The candidates must have access to a suitable venue and all materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes an, standards, manuals and reference materials.

3) Context of assessment

This unit may be assessed on the job. The competencies covered by the unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

AGGCOR0021A

Observe workplace health and safety requirement

Competency Descriptor:

This unit deals with the skills and knowledge required by workers to meet workplace occupational health and safety requirements.

Competency Field: Agriculture

Elements of Competency	Performance Criteria
1. Maintain a clean and efficient workplace	<ul style="list-style-type: none">1.1 Basic safety checks are undertaken before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor1.2 Work for which protective clothing or equipment is required is identified and the appropriate protective clothing or equipment is used in performing these duties in accordance with workplace policy.1.3 Prior to performing manual handling jobs, risk is assessed and work is carried out according to currently recommended safe practice.1.4 Risks to bystanders are recognized and action is taken to reduce risk associated with jobs in the workplace1.5 All procedures and work instructions for controlling risk are followed closely.
2. Render appropriate emergency procedures	<ul style="list-style-type: none">2.1 Individuals maintain the necessary knowledge of and ability to follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency.2.2 Emergency procedures are followed to company standards and workplace requirements.2.3 Emergency equipment is used in accordance with manufacturers' specifications and workplace requirements.
3. Participate in arrangements for maintaining health and safety of all people in the workplace	<ul style="list-style-type: none">3.1 Appropriate authorities are notified according to company policy. Contributions are made to the on going monitoring and reporting of all aspects of (OHS).

Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables may be present for this particular unit.

This unit of competency should be demonstrated:

- in accordance with the enterprise’s policies and procedures for maintaining health and safety at the workplace

Legislation, codes and national standards relevant to the workplace may include:

- Labour laws of Grenada

- Pesticide control authority regulations
- Occupational Health & Safety (OHS)
- Hygiene requirements
- First Aid regulations/requirements

Hazardous manual handling tasks include:

- moving
- lifting
- carrying bags, drums, cartons
- shoveling
- loading materials
- pulling
- pushing
- up-ending materials
- chipping weeds
- picking fruit or vegetables

This unit of competency should be demonstrated in accordance with the enterprise's:

Hazards in the workplace include:

- plant and machinery operation and maintenance
- vehicles including motorcycles
- noise
- chemicals
- manual handling
- dust
- solar radiation
- natural hazards in trees (thorns and spines)
- electricity
- waterways

Protective clothing or equipment is required for:

- noise associated with plant and machinery
- pesticides
- dust
- work in the sun

Risk to bystanders include:

- run-over and injury associated with vehicles and machinery
- exposure to noise

Workplace procedures will include:

- hazard policies and procedures
- emergency policies and procedures
- procedures for use of personal protective clothing and equipment
- hazard identification and issue resolution procedures
- job procedures and work instructions

OHS emergencies in the workplace may include:

- electrocution
- fire
- flood
- chemical spills
- serious injury associated with tractors
- machines
- vehicles

Workers may include:

- permanently employed workers
- casual workers
- seasonal workers
- people visiting the workplace.
- contract workers

Other individuals may include:

- people visiting the workplace

Evidence Guide

Competency is to be demonstrated by the ability to apply of knowledge and skills to a limited range maintenance tasks and roles.

(1) Critical Aspects of Evidence

- Evidence should include a demonstrated ability to consistently follow supervisor's instructions and use methods and procedures that are predictable to perform a limited range of maintenance roles in the appropriate context and to the level acceptable by the enterprise.
- The work is likely to be under direct supervision with regular checking. Reporting and recording is undertaken within established routines using methods and

procedures that are predictable. There is a specified range of duties and contexts where the choice of actions required will be made quite clear by the supervisor.

(2) Pre-requisite Relationship of Units

- Nil

(3) Underpinning Knowledge and Skills

(4) Knowledge

Knowledge of:

- significant hazards in the workplace
- local emergency services
- personal hygiene and fitness requirements

Skills

The ability to:

- follow workplace procedure for hazard identification and risk control
- act in an emergency
- maintain health and fitness
- render first aid

(5) Resource Implications

The following resources should be made available:

(4) Method of Assessment

Competency shall be assessed while work is undertaken under direct supervision and when the student/ apprentice is able to successfully perform all the required Performance Criteria relevant to the Unit in a workplace or simulated farm environment, within commercially acceptable timeframes.

Competencies in this unit may be demonstrated concurrently.

(6) Context of Assessment

This unit must be assessed through practical demonstration on-the-job or in a simulated workplace environment requiring until competency is achieved./*
The underpinning knowledge may be assessed off-the-job with the use of written or verbal items inclusive of short answer, extended essay items project or portfolio.

AGCSAGAQP0051A:**Maintaining a safe aquaponics working environment**

Competency Descriptor:

This unit deals with the skills and knowledge required by persons working in the aquaponics sector to maintain health and safety in an aquaponics environment.

Elements of Competency	Performance Criteria
1. Identify and determine how to follow health and safety regulations when attending to electrical equipment around water	1.1 Identify the proper location for electrical equipment relative to location of any standing water 1.2 Identify proper safeguards or shields to prevent water encountering electrical current 1.3 Describe use of safeguards in your system to prevent property damage from water
2. Design proper mosquito proofing of system	2.1 Identify the areas of an aquaponics system prone to standing or slow-moving water 2.2 Demonstrate the proper use of mosquito screens in standing water locations
3. Discuss proper disposal of waste materials from systems	3.4 Describe the various waste materials produced by the plants and fish in the system 3.5 Demonstrate the proper disposal or use of plants or plant byproducts 3.6 Demonstrate the proper disposal or use of fish or fish byproducts 3.7 Demonstrate the proper disposal of cleaning residue or byproduct 3.8 Describe the proper disposal of possible damaged equipment
4. Discuss proper storage and cleaning of equipment and clothing	4.1 Demonstrate the proper cleaning and removal of personal protective clothing 4.2 Demonstrate the proper cleaning equipment 4.3 Demonstrate proper storage of clothing and equipment
5. Describe measures to be taken to reduce theft	5.1 Outline possible threats to the system in your area 5.2 Describe safeguards needed to protect the system in your area

Range Statement

This unit may include but not limited to:

1 Personal protective equipment includes:

- Coveralls
- Boots/closed shoes
- Gloves
- Face mask
- Respirator

2. Equipment and tools include:

- Basic farming tools
- Fish handling equipment eg, seines, dip nets

Underpinning Knowledge and Skills

Candidates must know and understand:

1. What are the risks to health and safety and the measures to be taken to control those risks in your area of work
2. What are the health and safety regulations/legislation and organizational policies and procedures
3. What personal protective gears and clothing should be used
4. What is the importance of using safe lifting techniques
5. What are the correct and safe ways to use materials, tools and equipment required for your work
6. Where are the safe areas for storage of equipment, tools and materials
7. Why are permissions required for equipment usage
8. What are the safe disposal methods for waste
9. How to minimize environmental damage during work
10. How to deal with minor disruptions at work
11. Why working relationships are important and how to work effectively with others
12. What are the reasons why effective communication is important
13. What are the limits of responsibility in the workplace
14. What are the principles of accidental incident prevention and reporting
15. What are the dangers associated with working alone and how they can be minimized
16. What communication hazards are associated with working in an aquaculture and horticulture environment

Evidence Guide

1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

- a. Effectively repeat learned skills in aquaponics regarding the following:
 1. Identifying the different types of aquaponics systems

2. Aspects of fish health and maintenance of an aquaculture environment
 3. Executing all aspects of plant health and maintenance of a hydroponic environment
- b. Describe and identify the different expenses and benefits of operating an aquaponics system
 - c. Follow all safety regulations when working
 - d. Use personal protective equipment effectively at all times
 - e. Check all tools and equipment to ensure they are in good working order
 - f. Use/operate tools, equipment and materials according to manufacturer's instructions and workplace procedures
 - g. Store tools, equipment and materials according to workplace procedures
 - h. Dispose of waste according to workplace procedures
 - i. Report, communicate and cooperate with others according to workplace procedures

2) Method of assessment

Assessors should gather a ranges of evidences that is valid, sufficient, current and authentic. Evidence may be gathered through a variety of ways including direct observation oral and written questioning. Questioning techniques should no require language, literacy and numeric skills beyond those required in this unit of competency. The candidates must have access to a suitable venue and all materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes an, standards, manuals and reference materials.

3) Context of assessment

This unit may be assessed on the job. The competencies covered by the unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

MEMCOR0093A: Plan and organise work

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively plan and organise work assignments, and applies to all individuals working in the aquaponics sector

Elements of Competency	Performance Criteria
1. Identify work requirements	1.1 Work schedule and performance and quality assurance requirements are understood and clarification sought where necessary
2. Plan process to complete work	2.1 Tasks are identified, prioritised and sequenced to achieve effective completion of work
3. Select tools and equipment	3.1 Personal protective equipment is correctly identified and selected to suit job requirements 3.2 Appropriate tools and equipment are identified and selected for required service
4. Demonstrate safe and efficient sequence of work	4.1 Service is provided safely in a logical and efficient sequence. Demonstrate the proper cleaning equipment 4.2 Tools, supplies and equipment are safely stored when not in immediate use 4.3 Unused materials are safely stored at appropriate area 4.4 Empty containers and waste material are removed from service area 4.5 Work area is left clean, safe and secure on completion 4.6 Tools and equipment are cleaned, maintained and stored
5. Report outcomes	5.1 Verbal report is given to system owner or appropriate person on completion of service and if needed relevant client details entered in record books or database

Range Statement

This unit may include but not limited to:

Work organisation sequence may range from receiving instructions, to carrying out task, to cleaning up task.

Work plan may be either written or verbal and may include the following:

- Preparation of work area
- Selections of tools and equipment
- Handling of materials, tools and equipment
- Housekeeping requirements

Work schedule may be carried out in a singular application or in a team situation.

Work schedule and performance may have to adhere to quality assurance policy and procedures.

Underpinning Knowledge and Skills

Candidates must know and understand:

1. Policies and procedures in regard to planning and organising allocated duties
2. Care facility and equipment safety requirements
3. Equipment
4. Materials appropriate to the task products handling
5. Quality assurance
6. Follow instructions
7. Perform tasks according to care facility procedures
8. Plan and prioritise tasks
9. Use equipment correctly
10. Prepare and maintain work area
11. Select and use products according to manufacturer's instructions
12. Apply quality assurance

Evidence Guide

1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

- a. Indicate compliance with Occupational Health and Safety regulations applicable to care facility indicate compliance with organisational policies and procedures including quality assurance requirements
- b. Carry out correct procedures prior to and during the provision of service to clients/patients communicate to enable efficient individual/organisational planning of work

2) Method of assessment

Evidence may be collected in a variety of ways including:

- direct observation
- oral questioning
- written test
- supporting statement from supervisor or previous employer case study

3) Context of assessment

This unit must be assessed through practical demonstration on -the-job or in a simulated workplace environment dealing with a variety of services and a range of communication processes with clients result until competency is achieved.

The underpinning knowledge may be assessed off -the-job with the use of written or verbal items inclusive of short answer or case studies.

THHCOR0061A:**Work in a culturally diverse environment**

Competency Descriptor:

This unit deals with the skills and knowledge required by persons working in the aquaponics sector and involves the use of interpersonal, communication and customer service skills. It includes the cultural awareness required for working with customers, and if needed colleagues, from culturally diverse backgrounds.

Elements of Competency	Performance Criteria
1. Maintain personal presentation	1.1 Observe appropriate dress code, presentation and demeanor according to workplace policy or industry standards 1.2 Follow personal hygiene procedures according to workplace policy or industry standards and Infection Prevention and Control guidelines
2. Work with customers and colleagues from diverse backgrounds	2.1 Conduct communications with customers and if necessary, colleagues in an open, professional and friendly manner, taking into account cultural differences 2.2 Use appropriate language and tone according to workplace guidelines or industry standards 2.3 Communicate through use of gestures or simple words in the other person's language where language barriers exist 2.4 Convey messages considering effect of personal body language according to workplace guidelines or industry standards 2.5 Use active listening and questioning techniques to ensure effective two-way communication according to workplace guidelines or industry standards 2.6 Identify potential and existing conflicts and seek solutions and assistance from customers, colleagues or supervisor, where required
3. Handle cross cultural misunderstandings	3.1 Identify and handle challenging or difficult behaviour and manage appropriately according to workplace procedures and with the assistance of the supervisor 3.2 Make efforts to resolve misunderstandings, taking into account cultural considerations 3.3 Refer issues and problems to the supervisor or appropriate personnel for follow up 3.4 Maintain professional integrity at all times according to workplace policy or industry standards

4. Work in a team

- 4.4 Identify work team goals with other team members
- 4.5 Identify, prioritise and complete individual tasks within designated time frames
- 4.6 Seek assistance from supervisor or appropriate personnel when required
- 4.7 Offer assistance to colleagues to ensure designated work goals are met according to workplace guidelines
- 4.8 Acknowledge feedback and information from supervisor or appropriate personnel

Range Statement

This unit may include but not limited to:

1. Customers include:

- Supervisors
- Home owners
- System managers
- System owners
- Community partners

2. Manage appropriately includes:

- Managing emotions
- Defusing anger
- Clarifying the issue
- Attending to client needs
- Maintaining composure and
- Professional attitude
- Providing support
- Seeking assistance

3. Cultural and social differences include:

- Language spoken
- Non-verbal behaviour
- Work ethics
- Personal grooming
- Customs
- Religious practices
- Special needs
- Income
- Race language disabilities family structure gender
- Age
- Levels of formality/informality

4. Workplace guidelines include:

- Guidelines and procedures
- Mission statements
- Codes of practice

Underpinning Knowledge and Skills

Candidates must know and understand:

1. What are the organisations policies, procedures and guidelines
2. What are the principles that underpin cultural awareness
3. What are various communication styles
4. Who are internal and external customers
5. What is the importance of teamwork principles
6. What are effective communication strategies
7. What are the various modes of communication appropriate to aquaponics service
8. Where to seek assistance if necessary
9. How to communicate effectively including:
 - Active listening
 - Clarify and ascertain correct meanings from communication
 - Clear, concise and correct written and verbal communication
 - Communicate on a one-to-one and group basis
 - Correct presentation of correspondence
 - Establish rapport
 - Passing on verbal and written messages
 - Use correct grammar, spelling and punctuation
10. How to respond appropriately to a range of clients in a range of situations and of various cultural backgrounds

11. How to use listening skills and questioning techniques
12. How to use various styles of communication (technical or non-technical/ verbal or non-verbal)
13. How to handle difficult situations
14. How to respond appropriately to special needs

Evidence Guide

1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

- a. Communicate effectively with customers and colleagues of various cultural groups carry out correct procedures prior to and during the provision of service to clients/patients communicate to enable efficient individual/organisational planning of work
- b. Work in a team
- c. Respond effectively to a range of different customer service situations

2) Method of assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, portfolio, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

3) Context of assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.