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**SOUTH AFRICAN QUALIFICATIONS AUTHORITY  
REGISTERED UNIT STANDARD:**

**Perform basic routine operations in a defined hydroponic context**

<b>SAQA US ID</b>	<b>UNIT STANDARD TITLE</b>			
116148	Perform basic routine operations in a defined hydroponic context			
<b>ORIGINATOR</b>		<b>ORIGINATING PROVIDER</b>		
SGB Primary Agriculture				
<b>QUALITY ASSURING BODY</b>				
-				
<b>FIELD</b>			<b>SUBFIELD</b>	
Field 01 - Agriculture and Nature Conservation			Primary Agriculture	
<b>ABET BAND</b>	<b>UNIT STANDARD TYPE</b>	<b>PRE-2009 NQF LEVEL</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Undefined	Regular	Level 1	NQF Level 01	5
<b>REGISTRATION STATUS</b>		<b>REGISTRATION START DATE</b>	<b>REGISTRATION END DATE</b>	<b>SAQA DECISION NUMBER</b>
Reregistered		2012-07-01	2015-06-30	SAQA 0695/12
<b>LAST DATE FOR ENROLMENT</b>		<b>LAST DATE FOR ACHIEVEMENT</b>		
2016-06-30		2019-06-30		

*In all of the tables in this document, both the pre-2009 NQF Level and the NQF Level is shown. In the text (purpose statements, qualification rules, etc), any references to NQF Levels are to the pre-2009 levels unless specifically stated otherwise.*

This unit standard does not replace any other unit standard and is not replaced by any other unit standard.

**PURPOSE OF THE UNIT STANDARD**

A person achieving this unit standard will be able to perform basic routine operations in a defined hydroponic context under close supervision.

**LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING**

No previous learning is assumed to be in place.

**UNIT STANDARD RANGE**

Whilst range statements have been defined generically to include as wide a set of alternatives as possible, all range statements should be interpreted within the specific context of application.

Range statements are neither comprehensive nor necessarily appropriate to all contexts. Alternatives must however be comparable in scope and complexity. These are only as a general guide to scope and complexity of what is required.

## **Specific Outcomes and Assessment Criteria:**

### **SPECIFIC OUTCOME 1**

Prepare a production area for crop establishment.

#### **OUTCOME RANGE**

Activities / tasks to be performed for preparation include but are not limited to sanitation of the production environment, i.e. cleaning, removing weeds, sterilizing the beds/gullies/bags, etc. Preparation would also entail the laying of plastic to gravel/media in gullies, filling of bags with media and placing them in the production area

#### **ASSESSMENT CRITERIA**

##### **ASSESSMENT CRITERION 1**

The cleanliness of the production environment is evaluated.

##### **ASSESSMENT CRITERION 2**

The ability to prepare the bags/beds with media is demonstrated.

### **SPECIFIC OUTCOME 2**

Establish a hydroponic crop.

#### **OUTCOME RANGE**

Establishing the crop includes removing seedlings/cuttings from seedbeds/trays, transplanting the seedlings/cuttings, appropriate placement of the irrigation into the bags/beds. The fertilization includes but is not limited to spaghetti tubes and leader pipes for beds and drippers. Seedlings and cuttings = propapules.

#### **ASSESSMENT CRITERIA**

##### **ASSESSMENT CRITERION 1**

The ability to successfully remove propapules (without damaging the roots) is demonstrated.

##### **ASSESSMENT CRITERION 2**

The ability to transplant propapules into beds/bags at predetermined spacing is demonstrated.

##### **ASSESSMENT CRITERION 3**

The ability to appropriately place irrigation in bags/beds is demonstrated.

### **SPECIFIC OUTCOME 3**

Identify the basic differences i.e. hydroponic and conventional (soil) production.

#### **OUTCOME RANGE**

Differences are limited to soil versus growth media, open air versus protective structures.

#### **ASSESSMENT CRITERIA**

##### **ASSESSMENT CRITERION 1**

The ability to distinguish between soil and an artificial growing media is demonstrated.

##### **ASSESSMENT CRITERION 2**

The ability to distinguish between protected and unprotected production environments is demonstrated.

## **UNIT STANDARD ACCREDITATION AND MODERATION OPTIONS**

The assessment of qualifying learners against this standard should meet the requirements of established assessment principles.

It will be necessary to develop assessment activities and tools, which are appropriate to the contexts in which the qualifying learners are working. These activities and tools may include an appropriate combination of self-assessment and peer assessment, formative and summative assessment, portfolios and observations etc.

The assessment should ensure that all the specific outcomes; critical cross-field outcomes and essential embedded knowledge are assessed.

The specific outcomes must be assessed through observation of performance. Supporting evidence should be used to prove competence of specific outcomes only when they are not clearly seen in the actual performance.

Essential embedded knowledge must be assessed in its own right, through oral or written evidence and cannot be assessed only by being observed.

The specific outcomes and essential embedded knowledge must be assessed in relation to each other. If a qualifying learner is able to explain the essential embedded knowledge but is unable to perform the specific outcomes, they should not be assessed as competent. Similarly, if a qualifying learner is able to perform the specific outcomes but is unable to explain or justify their performance in terms of the essential embedded knowledge, then they should not be assessed as competent.

Evidence of the specified critical cross-field outcomes should be found both in performance and in the essential embedded knowledge.

Performance of specific outcomes must actively affirm target groups of qualifying learners, not unfairly discriminate against them. Qualifying learners should be able to justify their performance in terms of these values.

- Anyone assessing a learner against this unit standard must be registered as an assessor with the relevant ETQA.
- Any institution offering learning that will enable achievement of this unit standard or assessing this unit standard must be accredited as a provider with the relevant ETQA.
- Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

## **UNIT STANDARD ESSENTIAL EMBEDDED KNOWLEDGE**

The person is able to demonstrate a basic knowledge of:

- Basic literacy and numeracy at NQF1

## **UNIT STANDARD DEVELOPMENTAL OUTCOME**

N/A

## **UNIT STANDARD LINKAGES**

N/A

## **Critical Cross-field Outcomes (CCFO):**

### **UNIT STANDARD CCFO IDENTIFYING**

Problem Solving: relates to specific outcomes:

- Prepare a production area for crop establishment.
- Establish a hydroponic crop.

### **UNIT STANDARD CCFO WORKING**

Teamwork: relates to all specific outcomes.

**UNIT STANDARD CCFO ORGANISING**

Self-management: relates to all specific outcomes.

**UNIT STANDARD CCFO COLLECTING**

Interpreting Information: relates to all specific outcomes.

**UNIT STANDARD CCFO COMMUNICATING**

Communication: relates to specific all specific outcomes.

**UNIT STANDARD CCFO SCIENCE**

Science and Technology: relates to all specific outcomes.

**UNIT STANDARD CCFO DEMONSTRATING**

The world as a set of related systems: relates to all specific outcomes.

**UNIT STANDARD CCFO CONTRIBUTING**

Self-development: relates to specific all specific outcomes.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD:**

	<b>ID</b>	<b>QUALIFICATION TITLE</b>	<b>PRE-2009 NQF LEVEL</b>	<b>NQF LEVEL</b>	<b>STATUS</b>	<b>END DATE</b>	<b>QUALITY ASSURING BODY</b>
Elective	<a href="#">48971</a>	National Certificate: Mixed Farming Systems	Level 1	NQF Level 01	Reregistered	2015-06-30	AgriSETA
Elective	<a href="#">48972</a>	National Certificate: Plant Production	Level 1	NQF Level 01	Reregistered	2015-06-30	AgriSETA

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