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

**Manage plant manipulation methods of an agricultural crop**

SAQA US ID		UNIT STANDARD TITLE		
116305		Manage plant manipulation methods of an agricultural crop		
ORIGINATOR		ORIGINATING PROVIDER		
SGB Primary Agriculture				
QUALITY ASSURING BODY				
-				
FIELD			SUBFIELD	
Field 01 - Agriculture and Nature Conservation			Primary Agriculture	
ABET BAND	UNIT STANDARD TYPE	OLD NQF LEVEL	NEW NQF LEVEL	CREDITS
Undefined	Regular	Level 4	NQF Level 04	3
REGISTRATION STATUS		REGISTRATION START DATE	REGISTRATION END DATE	SAQA DECISION NUMBER
Reregistered		2009-07-01	2012-06-30	SAQA 0480/09
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT		
2013-06-30		2016-06-30		

*In all of the tables in this document, both the old and the new NQF Levels are shown. In the text (purpose statements, qualification rules, etc), any reference to NQF Levels are to the old 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 learner achieving this unit standard will be able to implement a plant manipulation management plan using a broad range of techniques. Learners achieving this unit standard will be able to apply their skills and capacity in a variety of production environments and be able to contribute towards to overall productivity of a production enterprise by maximizing growth and yield and maintaining high standards of practice.

Learners will gain specific knowledge and skills in plant manipulation processes and will be able to operate in a plant production environment implementing sustainable and economically viable production principles.

They will be capacitated to gain access to the mainstream agricultural sector, in plant production,

impacting directly on the sustainability of the sub-sector. The improvement in production technology will also have a direct impact on the improvement of agricultural productivity of the sector.

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

It is assumed that a learner attempting this unit standard will show competence against the following unit standards or equivalent:

- NQF 3: Monitor and supervise plant manipulation methods of an agricultural crop plant
- NQF 4: Demonstrate a basic understanding of the physiological processes in plant growth and development
- NQF 3: Explain the planning and scheduling of tasks in a production environment

### **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**

Interpret a plant manipulation management plan.

#### **OUTCOME RANGE**

- Manipulation methods include, but are not limited to framework development, flower and fruit manipulation and pruning, etc.
- Tools include, but are not limited to pruning shears, tie-back material, trellising and spraying equipment etc.

### **ASSESSMENT CRITERIA**

#### **ASSESSMENT CRITERION 1**

Problems in the use of tools, material appropriate to pre-determined manipulation method on appropriate crop independently are managed and solved.

#### **ASSESSMENT CRITERION 2**

Plant growth is at the correct growth stage according to pre-determined manipulation method under a variety of familiar and unfamiliar contexts.

#### **ASSESSMENT CRITERION 3**

The caring and maintaining of equipment is managed.

### **SPECIFIC OUTCOME 2**

Create and implement a plant manipulation schedule.

#### **OUTCOME RANGE**

Trellising methods include, but are not limited to Central leader system, Tatura system, two wire system, slanted cap, factory-cap, Façade system, etc.

### **ASSESSMENT CRITERIA**

#### **ASSESSMENT CRITERION 1**

The manipulation and trellising system is erected appropriate to the crop according to a considerable choice of procedures.

#### **ASSESSMENT CRITERION 2**

Problems related to the manipulation and framework development of the plant are solved according to a considerable range of procedures.

#### **ASSESSMENT CRITERION 3**

The manipulation of, growing points and bearing units appropriate to the crop and the manipulation method under familiar and unfamiliar conditions is managed.

#### **ASSESSMENT CRITERION 4**

The shaping of the plant, under a wide range of conditions, appropriate to the crop and trellising system is managed.

#### **SPECIFIC OUTCOME 3**

Supervise the implementation of a plant manipulation schedule.

#### **OUTCOME RANGE**

Flower and fruit manipulation principles include, but are not limited to temperature, daylight length, Bud dormancy breakers, thinning, fruit enlargement, ripening, and preparation quality improvement methods etc - Chemically and physically.

#### **ASSESSMENT CRITERIA**

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

The fruit and flower manipulation is managed.

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

A spraying program for chemically flower/fruit manipulation is established.

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

A program for the physical manipulation on the fruit and flowers is established.

##### **ASSESSMENT CRITERION RANGE**

Physical manipulation includes, but is not limited to thinning, shouldering, brushing, shortening, etc.

#### **SPECIFIC OUTCOME 4**

Maintain appropriate hygiene and health standards.

#### **OUTCOME RANGE**

Pruning includes, but is not limited to summer and winter pruning, canopy management etc. appropriate to the crop.

#### **ASSESSMENT CRITERIA**

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

The pruning of plants and the removal of unwanted growth under a variety of familiar and unfamiliar contexts are ensured.

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

The vegetative manipulation and pruning actions are ensured.

##### **ASSESSMENT CRITERION RANGE**

Vegetative manipulation includes but is not limited to winter pruning, summer pruning, canopy management, trellising of shoots, etc.

### **ASSESSMENT CRITERION 3**

The vegetative manipulation program and actions are established and ensured.

### **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:

- Tools for manipulation of plants.
- Trellising methods.
- Flower manipulation and fruit manipulation methods.
- Pruning methods.
- The principles of manipulation of a plant.
- Names and functions of tools and materials.
- Safe handling procedures of tools and material.
- Maintaining hygienic procedures of tools and material as to prevent spreading of diseases.
- Plant physiology and anatomy.

**UNIT STANDARD DEVELOPMENTAL OUTCOME**

N/A

**UNIT STANDARD LINKAGES**

N/A

**Critical Cross-field Outcomes (CCFO):****UNIT STANDARD CCFO IDENTIFYING**

Problem Solving: Relates to all outcomes.

**UNIT STANDARD CCFO WORKING**

Teamwork: Relates to all outcomes.

**UNIT STANDARD CCFO ORGANISING**

Self-Management: Relates to all outcomes.

**UNIT STANDARD CCFO COLLECTING**

Interpreting Information: Relates to all outcomes.

**UNIT STANDARD CCFO COMMUNICATING**

Communication: Relates to all outcomes.

**UNIT STANDARD CCFO SCIENCE**

Use Science and Technology: Relates to all outcomes.

**UNIT STANDARD CCFO DEMONSTRATING**

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

**UNIT STANDARD CCFO CONTRIBUTING**

Self-development: Relates to all outcomes.

**QUALIFICATIONS UTILISING THIS UNIT STANDARD:**

	ID	QUALIFICATION TITLE	OLD LEVEL	NEW LEVEL	STATUS	END DATE	QUALITY ASSURING BODY
Core	<a href="#">49009</a>	National Certificate: Plant Production	Level 4	New Level Assignment Pend.	Reregistered	2012- 06-30	AgriSETA

**PROVIDERS CURRENTLY ACCREDITED TO OFFER THIS UNIT STANDARD:**

*This information shows the current accreditations (i.e. those not past their accreditation end dates), and is the most complete record available to SAQA as of today. Some Quality Assuring Bodies have a lag in their recording systems for provider accreditation, in turn leading to a lag in notifying SAQA of all the providers that they have accredited to offer qualifications and unit standards, as well as any extensions to accreditation end dates. The relevant Quality Assuring Body should be notified if a record appears to be missing from here.*

**NONE**