

No. 778

7 June 20

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Primary Agriculture

Registered by NSB 01, Agriculture and Nature Conservation, publishes the following unit standard for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the unit standard upon which qualifications are based. The unit standards can be accessed via the SAQA web-site at www.saga.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, 659 Pienaar street, Brooklyn, Pretoria.

Comment on the unit standards should reach SAQA at the address ***below and no later than 30 June 2002***. All correspondence should be marked **Standards Setting – SGB for Primary Agriculture** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. D Mphuthing

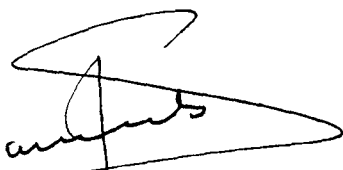
Postnet Suite 248

Private Bag X06

Waterkloof

0145

or faxed to 012 – 482 0907



pp

SAMUEL B.A. ISAACS
EXECUTIVE OFFICER

**ADDITIONAL UNIT STANDARDS DEVELOPED BY SGB FOR PRIMARY
AGRICULTURE TO BE INCLUDED AS ELECTIVES IN THE NATIONAL CERTIFICATE
IN FARMING NQF LEVEL 1**

FIELD: AGRICULTURE AND NATURE CONSERVATION

SUB-FIELD: PRIMARY AGRICULTURE (AGRONOMY)

NQF LEVEL: 1

ID	DISCRIPTION	CREDITS
	Control weeds manually	3
	Control weeds with chemicals using a knapsack sprayer	5
	Apply fertiliser manually	2
	Maintain farm buildings	15
	Identify pests in crops	5
	Identify diseases in crops	5
	Erect and maintain wire fence	4
8191	Identify, select, use and care for tools and equipment	8
	Arc-weld ferrous metals on the farm	10
	Gas-cut ferrous metals on the farm	3
	Control of nematodes manually using chemicals	5
	Irrigate crops	3
	Harvest sugarcane manually	5
	Plant sugarcane manually	5
8202	Use basic hand-skills	5
8494	Demonstrate an understanding of HIV/AIDS and its implications	4
	Identify, assess and develop entrepreneurial qualities	2
	Identify, analyse and select business opportunities	3
	Demonstrate an understanding of a general business plan and adapt it to a selected business idea	7
	Demonstrate the ability to start and run a business and adapt to a changing business environment	3
	Identify different types of business and their legal implications	4

UNIT STANDARD TITLES AND SPECIFIC OUTCOMES**1. TITLE: Control weeds manually.**

- Specific Outcome 1.1: Explain the objective(s) of effective weed control.
- Specific Outcome 1.2: Prepare to do weeding by hand.
- Specific Outcome 1.3: Weed manually.

2. TITLE: Control weeds with chemicals using a knapsack sprayer.

- Specific Outcome 2.1: Explain the objective(s) of effective weed control.
- Specific Outcome 2.2: Prepare to apply herbicides with manual sprayer.
- Specific Outcome 2.3: Apply herbicides with manual sprayer.
- Specific Outcome 2.4: Comply with safety procedures.

3. TITLE: Apply fertiliser manually.

- Specific Outcome 3.1: Explain the objective(s) of applying fertilizer to a crop.
- Specific Outcome 3.2: Prepare for applying fertiliser.
- Specific Outcome 3.3: Apply fertiliser.
- Specific Outcome 3.4: Clean and store utensils and unused fertiliser.

4. TITLE: Maintain farm buildings.

- Specific Outcome 4.1: Repair plumbing installations.
- Specific Outcome 4.2: Paint farm buildings.
- Specific Outcome 4.2: Repair leaking roofs.
- Specific Outcome 4.3: Replace defective wooden components.
- Specific Outcome 4.4: Repair and make minor alterations to walls of farm buildings.

5. TITLE: Identify pests in crops.

- Specific Outcome 5.1: Identify the evidence of pests in crops in a specific geographical area.

Specific Outcome 5.2: Explain how to control pests.

Specific Outcome 5.3: Use of chemicals to control pests.

6. TITLE: Identify diseases in crops.

Specific Outcome 6.1: Identify diseased plants.

Specific Outcome 6.2: Explain how diseases can be transmitted.

Specific Outcome 6.3: Outline principles of disease control.

7. TITLE: Erect and maintain wire fence.

Specific Outcome 7.1: Prepare to erect a fence or maintain an existing fence.

Specific Outcome 7.2: Erect wire fence and gates.

Specific Outcome 8.3: Repair existing fence.

8. TITLE: Arc-weld ferrous metals on the farm.

Specific Outcome 8.1: Conduct pre-operation checks.

Specific Outcome 8.2: Prepare welding equipment.

Specific Outcome 8.3: Conduct welding according to work requirements.

Specific Outcome 8.4: Clean and store equipment, protective clothing and unused electrodes.

9. TITLE: Gas-cut ferrous metals on the farm.

Specific Outcome 9.1: Transport and store oxygen-acetylene cylinders.

Specific Outcome 9.2: Conduct pre-operation safety checks.

Specific Outcome 9.3: Prepare oxygen-acetylene equipment to cut ferrous metal.

Specific Outcome 9.4: Cut ferrous metal.

10. TITLE: Control of nematodes manually using chemicals.

Specific Outcome 10.1: Explain what nematodes are.

Specific Outcome 10.2: Explain the benefits/disadvantages of using nematicides to control nematodes.

Specific Outcome 10.3: Apply nematicides.

Specific Outcome 10.4: Clean and store equipment, protective clothing and unused nematicides.

11. TITLE: Irrigate crops.

Specific Outcome 11.1: Explain the objective(s) of irrigation.

Specific Outcome 11.2: Explain what soil-moisture is.

Specific Outcome 11.3: Schedule irrigation.

Specific Outcome 11.4: Irrigate.

Specific Outcome 11.5: Check on effectiveness of irrigation.

12. TITLE: Harvest sugarcane manually.

Specific Outcome 12.1: Participate in burning a field of sugarcane under the guidance of a supervisor.

Specific Outcome 12.2: Explain how losses in sucrose content in sugarcane can occur.

Specific Outcome 12.3: Stack or grab-load cut trash or green sugarcane.

Specific Outcome 12.4: Stack cut sugarcane that has been burnt.

Specific Outcome 12.5: Grab-load cut sugarcane that has been burnt.

Specific Outcome 12.6: Build sugarcane stacks.

13. TITLE: Plant sugarcane manually.

Specific Outcome 13.1: Explain factors that could influence the success full establishing of a sugarcane field.

Specific Outcome 13.2: Explain what preparations to be done for planting of sugarcane.

Specific Outcome 13.3: Plant sugarcane.

14. TITLE: Identify, assess and develop entrepreneurial qualities.

Specific Outcome 14.1: Demonstrate the ability to start and run a business and adapt to a changing business environment.

Specific Outcome 14.2: Demonstrate the ability to start and run a business and adapt to a changing business environment

- Specific Outcome 14.3: Identify, assess and improve the individual entrepreneurial characteristics
- Specific Outcome 14.4: Discuss business ethics and social responsibility

15. TITLE: Identify, analyze and select business opportunities.

- Specific Outcome 15.1: Identify business ideas.
- Specific Outcome 15.2: Eliminate inappropriate business ideas.
- Specific Outcome 15.3: Analyse and select viable business opportunities.

16. TITLE: Demonstrate an understanding of a general business plan and adapt it to a selected business idea.

- Specific Outcome 16.1: Explain and discuss the purpose of a business plan.
- Specific Outcome 16.2: Outline and analyse the components of a business plan.
- Specific Outcome 16.3: Design and present a business plan relevant to the selected business idea.

17. TITLE: Demonstrate the ability to start and run a business and adapt to a changing business environment.

- Specific Outcome 17.1: Explain and discuss the purpose of a business plan.
- Specific Outcome 17.2: Show how to run a business.
- Specific Outcome 17.3: Show how to respond to a changing business environment.

18. TITLE: Identify different types of business and their legal implications.

- Specific Outcome 18.1: Discuss business types by identifying and comparing them to one another.
- Specific Outcome 18.2: Discuss procedures and essentials for starting a business.
- Specific Outcome 18.3: Demonstrate your understanding of the legal implications concerning different types of business

**ADDITIONAL UNIT STANDARDS DEVELOPED BY SGB FOR PRIMARY
AGRICULTURE TO BE INCLUDED AS ELECTIVES IN THE NATIONAL
CERTIFICATE IN FARMING NQF LEVEL 1**

FIELD: AGRICULTURE AND NATURE CONSERVATION

SUB-FIELD: PRIMARY AGRICULTURE (HORTICULTURE)

NQF LEVEL: 1

ID	NAME OF UNIT STANDARD	CREDITS
	Demonstrate the structure and the functioning of the vine	3
	Demonstrate the understanding of site selection	3
	Demonstrate an understanding of scion and rootstock cultivars	4
	Demonstrate an understanding of the properties of different soils and their preparation	5
	Demonstrate an understanding of grafting vines and the establishment of a nursery	3
	Demonstrate the understanding of establishing a vineyard	4
	Demonstrate and understand the erection of a trellis system	3
	Demonstrate an understanding of vine frame development	3
	Demonstrate an understanding of the pruning of vines	4
	Demonstrate an understanding of canopy management	3
	Demonstrate an understanding of the irrigation of vines	4
	Demonstrate an understanding of the cultivation of soil and the control of weed	4
	Demonstrate an understanding of the nutrient requirements and fertilization of vines	4
	Harvest ripe grapes	3
	Control diseases, pests and vine abnormalities	5

UNIT STANDARD TITLES AND SPECIFIC OUTCOMES**1. TITLE: Demonstrate an understanding of the structure and functioning of vine.**

- Specific Outcome 1.1: Explain the external structure of the vine.
- Specific Outcome 1.2: Explain the function of the different parts of the vine.
- Specific Outcome 1.3: Explain the internal structure of the vine.

2. TITLE: Demonstrate the understanding of site selection.

- Specific Outcome 2.1: Understand the influence of the climate on grapes.
- Specific Outcome 2.2: Understand the effect of the climate on grape growing.
- Specific Outcome 2.3: Understand the effect of soil on grape growing.
- Specific Outcome 2.4: Demonstrate an understanding of the selection of the correct location and terrain.

3. TITLE: Demonstrate an understanding of scion and rootstock cultivars.

- Specific Outcome 3.1: Understand the meaning of a cultivator and a clone.
- Specific Outcome 3.2: Demonstrate knowledge by being able to identify the most important scion cultivars.
- Specific Outcome 3.3: Demonstrate knowledge by being able to identify the most important rootstock cultivars.
- Specific Outcome 3.4: Understand the improvement of plant material.

4. TITLE: Demonstrate an understanding of the properties of different soils and their preparation.

- Specific Outcome 4.1: Understand the difference between soil structure and soil texture.
- Specific Outcome 4.2: Demonstrate an understanding of the properties of soil.
- Specific Outcome 4.3: Take a soil sample.
- Specific Outcome 4.4: Explain soil preparation.

Specific Outcome 4.5: Demonstrate an understanding of the selection of the correct implementation for soil types.

5. TITLE: Demonstrate an understanding of grafting vines and the establishment of a nursery.

Specific Outcome 5.1: Demonstrate and understand propagation of the vine.

Specific Outcome 5.2: Understand grafting as a form of propagation.

6. TITLE: Demonstrate the understanding of establishing a vineyard.

Specific Outcome 6.1: Understand the spacing of vines for wine-table and raisin grapes.

Specific Outcome 6.2: Explain and understand the layout of a vineyard.

Specific Outcome 6.3: Explain the treatment of vines before planting.

Specific Outcome 6.4: Explain and understand the principles of planting vines.

7. TITLE: Demonstrate and understand the erection of a trellis system.

Specific Outcome 7.1: Understand the advantages of trellising the vines.

Specific Outcome 7.2: Understand the disadvantages of trellising.

Specific Outcome 7.3: Understand the choices of trellis systems and erecting trellis systems.

8. TITLE: Demonstrate an understanding of vine frame development.

Specific Outcome 8.1: Understand the reasons for vine frame development.

Specific Outcome 8.2: Understand greenshoot development method.

Specific Outcome 8.3: Understand vine frame development.

Specific Outcome 8.4: Explain winter cane development method.

9. TITLE: Demonstrate an understanding of the pruning of vines.

Specific Outcome 9.1: Understand the reasons for pruning.

Specific Outcome 9.2: Understand the principles and application of pruning.

Specific Outcome 9.3: Understand why there is a best time for pruning.

Specific Outcome 9.4: Understand pruning systems.

10. TITLE: Demonstrate an understanding of canopy management.

Specific Outcome 10.1: Understand the reasons for canopy management.

Specific Outcome 10.2: Apply canopy management practices.

11. TITLE: Demonstrate an understanding of the irrigation of vines.

Specific Outcome 11.1: Demonstrate an understanding of soil relations.

Specific Outcome 11.2: Demonstrate an understanding of the water requirements for a vine.

Specific Outcome 11.3: Understand the methods of irrigation.

Specific Outcome 11.4: Schedule irrigation according to vine requirements.

12. TITLE: Demonstrate an understanding of the cultivation of soil and the control of weed.

Specific Outcome 12.1: Understand the purpose of soil tillage.

Specific Outcome 12.2: Understand typical soil cultivation/tillage.

Specific Outcome 12.3: Understand the disadvantages of weed in the vineyard.

Specific Outcome 12.4: Identify types of weed.

Specific Outcome 12.5: Understand methods of weed control.

13. TITLE: Demonstrate an understanding of the nutrient requirements and fertilization of vines.

Specific Outcome 13.1: Understand the principles of fertilization.

Specific Outcome 13.2: Identify nutrient deficiency and toxicity.

Specific Outcome 13.3: Maintain fertilization of the vine.

Specific Outcome 13.4: Understand the methods of application.

Specific Outcome 13.5: Understand organic fertilization.

14. TITLE: Harvest ripe grapes.

- Specific Outcome 14.1: Determine ripeness of grape for a specific purpose.
- Specific Outcome 14.2: Analyze grapes to determine optimum ripeness.
- Specific Outcome 14.3: Harvest grapes according to standard procedures.

15. TITLE: Control diseases, pests and vine abnormalities.

- Specific Outcome 15.1: Understand the principles of diseases and pest control.
- Specific Outcome 15.2: Understand the symptoms of fungi, bacteria and virus diseases.
- Specific Outcome 15.3: Control of diseases in vines.
- Specific Outcome 15.4: Identify different pests.
- Specific Outcome 15.5: Control of pests in vines.
- Specific Outcome 15.6: Understand and control abnormalities and damage caused by environmental conditions.

**ADDITIONAL UNIT STANDARDS DEVELOPED BY SGB FOR PRIMARY
AGRICULTURE TO BE INCLUDED AS ELECTIVES IN THE NATIONAL
CERTIFICATE IN FARMING NQF LEVEL 1**

FIELD: AGRICULTURE AND NATURE CONSERVATION

SUB-FIELD: PRIMARY AGRICULTURE (ANIMAL HUSBANDRY)

NQF LEVEL: 1

ID	NAME OF UNITS STANDARD	CREDIT
	Care of farm animals	20
	Handle and move farm animals	16
	Identify different species and breeds of farm animals	12
	Harvest of animal products	16
	Husbandry practices	20
	Recognize signs of good health and disorders in farm animals	12
	Feed farm animals	20
	Slaughter of farm animals	20
	Recognize emergency on the farm	16

UNIT STANDARD TITLES AND SPECIFIC OUTCOMES**1. TITLE: Care of farm animals.**

- Specific Outcome 1.1: Demonstrate your knowledge of the birth process.
- Specific Outcome 1.2: Demonstrate an applied competency with reference to Post-natal care of farm animals.
- Specific Outcome 1.3: Administer basic veterinary practices.
- Specific Outcome 1.4: Dip and drench farm animals.
- Specific Outcome 1.5: Take care of hooves on farm animals.

2. TITLE: Handle and move farm animals.

- Specific Outcome 2.1: Demonstrate the ability to move farm animals.
- Specific Outcome 2.2: Catching and holding of farm animals.
- Specific Outcome 2.3: Restraining of farm animals to perform certain husbandry practices.
- Specific Outcome 2.4: Use of handling facilities for farm animals.

3. TITLE: Identify the different species and breeds of farm animals.

- Specific Outcome 3.1: Identify the different species of farm animals.
- Specific Outcome 3.2: Identify the different breeds of farm animals.
- Specific Outcome 3.2: Uses of the different species and breeds of farm animals.

4. TITLE: Harvest animal products.

- Specific Outcome 4.1: The milking process in farm animals.
- Specific Outcome 4.2: The shearing process in farm animals.
- Specific Outcome 4.3: Collection of eggs.
- Specific Outcome 4.4: Storage and transport of farm animal products.

5. TITLE: Husbandry practices.

- | | |
|-----------------------|---|
| Specific Outcome 5.1: | Administer injections and inoculations of farm animals. |
| Specific Outcome 5.2: | Castrate farm animals. |
| Specific Outcome 5.3: | Dehorn farm animals. |
| Specific Outcome 5.4: | Identify the different species of farm animals. |
| Specific Outcome 5.5: | Keep records of farm animals. |

6. TITLE: Recognize signs of good health and disorders in farm animals.

- | | |
|-----------------------|--|
| Specific Outcome 6.1: | Demonstrate an ability to identify and interpret signs of good health and disease in farm animals. |
| Specific Outcome 6.2: | Demonstrate an ability to identify and interpret external signs of good health in farm animals. |
| Specific Outcome 6.3: | Demonstrate an understanding of the productive signs of good health. |

7. TITLE: Feed farm animals.

- | | |
|-----------------------|---|
| Specific Outcome 7.1: | Demonstrate your knowledge of the different types of feed for farm animals. |
| Specific Outcome 7.2: | Identify different forms of animal feed and suitability for specific species of farm animals. |
| Specific Outcome 7.3: | Identify wholesome feed for animals. |
| Specific Outcome 7.4: | Explain conditions required for storage of animal feed. |
| Specific Outcome 7.5: | Feed farm animals. |

8. TITLE: Slaughter farm animals.

- | | |
|-----------------------|--|
| Specific Outcome 8.1: | Demonstrate an understanding of the concept of Slaughtering. |
| Specific Outcome 8.2: | Identify equipment required for slaughtering of animals. |
| Specific Outcome 8.3: | Prepare animals for slaughter. |

- Specific Outcome 8.4: Demonstrate the procedure for sticking and bleeding animals.
- Specific Outcome 8.5: Demonstrate the procedure for Skinning or Singeing of farm animals.
- Specific Outcome 8.5: Demonstrate the procedure for evisceration and storage of animals after slaughter.

9. TITLE: Recognize and respond to emergency on the farm.

- Specific Outcome 9.1: Demonstrate the emergency procedures involving fire.
- Specific Outcome 9.2: Demonstrate the emergency procedures involving water.
- Specific Outcome 9.3: Demonstrate the standard procedures involving poisoning.
- Specific Outcome 9.4: Demonstrate the standard procedures involving a medical emergencies with animals.

ADDITIONAL UNIT STANDARDS DEVELOPED BY SGB FOR PRIMARY AGRICULTURE TO BE INCLUDED AS ELECTIVES IN THE NATIONAL CERTIFICATE IN FARMING NQF LEVEL 1

FIELD: AGRICULTURE AND NATURE CONSERVATION

SUB-FIELD: PRIMARY AGRICULTURE (COTTON)

NQF LEVEL: 1

ID	NAME OF UNIT STANDARD	CR
	Control pests and diseases with chemicals using a knapsack sprayer	5
	Make a crop and cultivar choice for your region	5
	Identify physiological disorders in cotton farming	1
	Harvest cotton manually	5
	Plant cotton manually	5

UNIT STANDARD TITLES AND SPECIFIC OUTCOMES**1. TITLE: Control pests and diseases with chemicals using a knapsack sprayer**

- Specific Outcome 1.1: Demonstrate your understanding effective pest control.
- Specific Outcome 1.2: Prepare equipment for control of pests and diseases.
- Specific Outcome 1.3: Apply pesticide with manual sprayer.
- Specific Outcome 1.4: Care and maintain equipment.

2. TITLE: Make a crop and cultivar choice for your region.

- Specific Outcome 2.1: Demonstrate an understanding of the climatic and soil requirements for cotton farming.
- Specific Outcome 2.2: Determine the cultivar to plant.
- Specific Outcome 2.3: Demonstrate an understanding of quality and yield.

3. TITLE: Identify physiological disorders in cotton farming.

- Specific Outcome 3.1: Demonstrate an understanding of physiological disorders.
- Specific Outcome 3.2: Demonstrate an understanding of how to rectify physiological disorders.

4. TITLE: Harvest cotton manually.

- Specific Outcome 4.1: Harvest cotton by hand.
- Specific Outcome 4.2: Stack cotton into compact bales.
- Specific Outcome 4.3: Demonstrate an understanding of organizing labour for harvesting.
- Specific Outcome: Grade the cotton.

5. TITLE: Plant cotton manually.

- Specific Outcome 5.1: Demonstrate an understanding of fully establishing cotton growth.
- Specific Outcome 5.2: Prepare for planting cotton.
- Specific Outcome 5.3: Plant cotton.
- Specific Outcome 5.4: Thin and replant cotton.