



NQF Level: 3 US No: 116274

Assessment Guide

Primary Agriculture

Farm planning for conservation and water harvesting



Assessor:

Workplace / Company:

Commodity: Date:

Before we start...

This assessment guide contains all necessary activities and instructions that will enable the assessor and learner to gather evidence of the learner's competence as required by the unit standard. This guide was designed to be used by a trained and accredited assessor whom is registered to assess this specific unit standard as per the requirements of the AgriSETA ETQA.

Prior to the delivery of the program the facilitator and assessor must familiarise themselves with content of this guide, as well as the content of the relevant Learner Workbook.

The assessor, facilitator and learner must plan the assessment process together, in order to offer the learner the maximum support, and the opportunity to reflect competence.

The policies and procedures that are required during the application of this assessment are available on the website of the AgriSETA and should be strictly adhered to. The assessor must familiarise him/herself with this document before proceeding.

This guide provides step-by-step instructions for the assessment process of:

Title:	Assist in farm planning and layout for conservation and rainwater harvesting		
US No:	116274	NQF Level:	3
		Credits:	3

This unit standard is one of the building blocks in the qualification listed below. Please mark the qualification you are currently assessing, because that will be determined by the context of application:

Title	ID Number	NQF Level	Credits	Mark
National Certificate in Animal Production		3	120	<input type="checkbox"/>
National Certificate in Mixed Farming Systems		3	120	<input type="checkbox"/>
National Certificate in Plant Production		3	120	<input type="checkbox"/>

Please mark the learning program you are enrolled in:

Are you enrolled in a:	Y	N
Learnership?	<input type="checkbox"/>	<input type="checkbox"/>
Skills Program?	<input type="checkbox"/>	<input type="checkbox"/>
Short Course?	<input type="checkbox"/>	<input type="checkbox"/>

Note to Assessor:

If you are assessing this module as part of a full qualification or learnership, please ensure that you have familiarized yourself with the content of the qualification.

1**SO 1 AC 1-3****Instructions to learner:**

Read through the following table and use the information to answer the following questions.

Learner Guide: Page 21**Facilitator Guide: Page 11**

1. What is the average annual rainfall for this area?

Model Answer(s):

904 mm

2. During which month/s does the East London area receive the most rainfall?

Model Answer(s):

March

3. Would it be appropriate for a local farmer to erect windbreaks only on the north-western boundary of his fields?

Model Answer(s):

No, because the wind comes from two different directions at different times of the year.

4. During which months can a farmer start planting seeds that need a minimum temperature of 16°C in order to germinate?

Model Answer(s):

From December to March, inclusive

5. Do you think a farmer in this area should be concerned about frost?

2

SO 1 AC 1-2

Instructions to learner:

Soil testing activity as per Learner Guide instructions

Learner Workbook: Page 23

Facilitator Guide: Page 12

The soil testing results will depend on the soil samples provided by the facilitator. S/he should compile the model answers based on the soil samples provided to the learners.

Characteristics of various types of soil structures (from Production Without Destruction)

Soil Texture	Feel (moist)	Forms a ball	Makes a ribbon	Moulded into circle	Consistency moisture
Sand	Very gritty	No	No	No	Loose
Sandy Loam	Gritty	Yes, easily deformed	Yes, dull surface, poorly formed	Yes, but breaks	Holds together
Loam	Gritty	Yes	Yes, dull surface, poorly formed	Yes, but cracks do form	Holds together
Silty Loam	Velvety	Yes	Yes, dull surface, poorly formed	Yes, few small cracks	Holds together
Clay Loam	Gritty and sticky	Yes, very stable	Yes, shiny surface, well formed	Yes	Firm
Clay	Extremely sticky with slight grittiness	Yes, very resistant to moulding	Yes, shiny surface, well formed	Yes, does not crack	Firm to extremely firm

My Notes ...

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Instructions to learner:

Read through the questions and write your answers in the space provided.

Learner Workbook: Page 26 Facilitator Guide: Page 14

1. In which biome is the farm where you are working located?

Model Answer(s):

There is no model answer for this question as it varies from context to context. **The facilitator must establish which biome the farm is situated.**

2. What are the main agricultural threats to this biome?

Model Answer(s):

There is no model answer for this question as it varies from context to context. **The facilitator must establish which biome the farm is situated.**

1. Forest: Not threatened by agriculture.
2. Fynbos: Loss of habitat, chemical pollution, alien plant encroachment.
3. Grassland: Over-grazing
4. Nama Karoo: Over-grazing
5. Savanna: Over-grazing, loss of habitat
6. Succulent Karoo: Overgrazing, loss of habitat
7. Thicket: Over-grazing, inappropriate stocking levels, loss of habitat

3. What are the key invasive plants that threaten local indigenous plants?

Model Answer(s):

There is no model answer for this question as it varies from context to context. The facilitator must either use a reference source or subject matter expert to find out.

4. Which biome covers the largest surface area of South Africa and what are the main agricultural activities of this biome?

Model Answer(s):

Savannah. Livestock farming, production of grains, oil seeds, sugar cane and vegetables, subtropical fruit orchards, game farming.

5. Which biome has the largest number of species and threatened species?
Where is this biome found?

Model Answer(s):

Fynbos. Predominantly in the Western Cape, and parts of the Eastern Cape.

6. What do you think should be done to protect the biodiversity of plants on the farm where you are working?

Model Answer(s):

The assessor should allow some latitude with the answers provided by the learners. There is no exactly right or wrong answer, but the following key indicators will show that the learner understands the concepts of conservation:

- Keeping a section of the farm unfarmed – protecting habitat.
- Identifying the key species of the vegetation type, establishing if any of these are endangered plants, and then making sure that the habitat of these plants are protected by not clearing them or allowing domestic livestock to graze there.
- Where grazing is utilised, making sure the stock levels are such that the carrying capacity of the range land is not exceeded.
- Preventing soil erosion so that the productivity levels do not decline – even in 'wild' areas.
- Protecting the other living organisms that are part of the biome or vegetation type because these may well play a role in maintaining the plant diversity.

My Notes ...

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SO 1 AC 1-2

Instructions to learner:

Read through the questions and write your answers in the space provided.

Learner Workbook: Page 28 Facilitator Guide: Page 14

There are no model answers for this activity. The model answers must be devised by the facilitator in collaboration with the assessor to make sure that key components of the natural resources of the farm are included.

SURVEY POINTS	Recording Site
A	
B	
C	
D	
E	
F	
G	
H	
I	
J	

5

SO 1 AC 1-2

Instructions to learner:

Provide a basic map for the layout of this enterprise, based on the farm where you are currently working.

Learner Workbook: Page 31 Facilitator Guide: Page 15

Based on the knowledge and skills you have gained so far, what do you think is the ideal enterprise for the farm where you are working? You may select more than one, if this is appropriate. Motivate your answer based on available natural resources and what these enterprises require from the surrounding natural resources. Provide a basic map for the layout of this enterprise, based on the farm where you are currently working. Staple the map to this page.

Model Answer(s):

There is no model answer for this question as it varies from context to context. **The facilitator and assessor must work provide a model answer based on the context, making sure the learner has taken the natural resources and enterprise needs into account.**

6

SO 2 AC 1-4

Instructions to learners:

Continuation of the survey

Learner Workbook: Page 38 Facilitator Guide: Page 16

In Activity 4, page, 28 of your Learner Guide, you conducted a survey. Select two degraded or ecologically threatened areas and devise a plan to rehabilitate them. Write your answer in the space provided.

Model Answer(s):

There is no model answer for this question as it varies from context to context. **The facilitator and assessor must provide a model answer based on the answers provided in the survey question earlier in this module, according to the individual context.**

7

SO 3 AC 1-3

Instructions to learners:

This is a practical session where the learners will be expected to demonstrate their ability to construct as per list below:

Learner Workbook: Page ? Facilitator Guide: Page ?

Construct any **four** of the following (or similar) structures:

- Bunds
- Gabions
- Contour bunds
- Mulching
- Hedgerows
- Wind power
- Solar power

At the end of this activity, write a detailed instruction sheet that could be used to tell someone else who has no experience how to make it and what its purpose is. Make sure you include:

- A list of required materials with specifications,
- A list of tools that will be required,
- How to care for the tools and equipment, and
- A detailed, step-by-step set of instructions.

Write your answer in the space provided below:

Model Answer(s):

There is no model answer for this question as it varies from context to context. **The facilitator and assessor must provide a model answer based on the context of application and the choice of the learner, according to the individual context.**

My Notes ...

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8

SO 4 AC 1-3

Instructions to learners:

There are three parts to this activity on maintenance of structures and infrastructure

Learner Workbook: Page 46 Facilitator Guide: Page 19

Part One:

Below is a list of structures and infrastructure that are parts of various farming enterprises. Select two from each category and find out what the optimum operational requirements are for each of these, according to the farm's maintenance policy.

Part Two:

Select one item from each category – one of those selected in Part One – and assess the item concerned according to the procedures required for the farm.

Part Three:

Once the monitoring and assessment data gathering is complete (Part Two), make suggestions for the repair and/or maintenance of the item concerned.

Model Answer(s):

There is no model answer for this question as it varies from context to context. **The facilitator and assessor must provide a model answer based on the context, and the policies and procedures of the farm management.**

	How often is it checked or monitored?	Who monitors it?	What is this person looking for?	Who repairs or maintains it?
Structures				
Fence				
Trellis				
Windbreak				

Infrastructure				
Road				
Irrigation system				
Pack house cooling system				
Water reservoir				
Wind pump				
Soil Conservation				
Mulch cover				
Plant cover				
Crop rotation				
Water conservation / harvesting				
Bunds				
Contour walls/mounds				
Dam				
Swales				

9

SO 5 AC 1-3

Instructions to learners:

Group practical activity – maintenance survey

Learner Workbook: Page 55 Facilitator Guide: Page 20

In your group, select one item from each category below and find out what the maintenance requirements of these items are, within the operational management of the farm where you are working.

Model Answer(s):

There are no model answers to this question – the facilitator/assessor should get the maintenance manual from the farm concerned. **The facilitator and assessor must provide a model answer based on the context, and the policies and procedures of the farm management.**

My Notes ...

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Assessment Feedback Form

Comments / Remarks	
<p>Feedback to learner on assessment:</p>	
<p>Feedback from learner to assessor:</p>	
<p>Learner's Signature:</p>	<p>Date:</p>
<p>Assessor's Signature:</p>	<p>Date:</p>

Summative Test and Attitude & Attribute Evaluation

Before the knowledge test is undertaken, the learner must be reminded of what is expected from him / her in terms of summative and reflexive competence. Read and explain to the learner, the **Preparation for Your Final Assessment** section in the learner workbook. Learners and assessor should sign off this section to acknowledge that this step was completed.

Please set up a knowledge test from the questions given as a guideline to learners and supply each learner with a test sheet.

Supply each report with the following heading:

Unit Standard:	116274	NQF Level:	3
Learner Name:			

Questions	Model Answers
Using the following criteria design and construct a simple form of prevention or infrastructure that would control the degradation.	
1. Design a conservation plan that will explain how the structure will enable the degraded area to recover.	<ul style="list-style-type: none"> The learner must be able to explain the conservation and maintenance reasons why they chose to design that particular structure and in that material. They must display the design, equipment and materials that they intend to use. The equipment must be simple but effective for the purpose it has been chosen. The end structure must be built out of appropriate materials and function in the designed manner. The learner must demonstrate the returning of equipment in such a way that is compliant with the farms policy on the use and maintenance of equipment and tools
2. Draw a design plan for the proposed structure.	
3. Display the design for the construction of the structure and the appropriate materials and simple tools required for the construction of the structure.	
4. Construct the structure.	
5. Once the structure has been completed demonstrate the ability to maintain tools and equipment.	

Assessment Feedback Form

Comments / Remarks	
<p>Feedback to learner on assessment and / or overall recommendations and action plan for competence:</p>	
<p>Feedback from learner to assessor:</p>	
<p>Assessment Judgement You have been found:</p> <p><input type="radio"/> Competent</p> <p><input type="radio"/> Not yet competent in this unit standard</p>	<p>Actions to follow:</p> <p><input type="radio"/> Assessor report to ETQA</p> <p><input type="radio"/> Learner results and attendance certification issued</p>
<p>Learner's Signature:</p>	<p>Date:</p>
<p>Assessor's Signature:</p>	<p>Date:</p>
<p>Moderator's Signature:</p>	<p>Date:</p>