



NQF Level: 4 **US No: 116288**

Facilitator Guide

Primary Agriculture

Sustainable resource use & quality control



Facilitator:

Company:

Commodity: Date:

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 **agriculture**
Department:
Agriculture
REPUBLIC OF SOUTH AFRICA

 **AgriSETA**

Before you get started...

Dear Facilitator,

This Facilitator Guide (together with the relevant Learner Guide) is aimed at facilitators who will be assisting learners wishing to complete the following unit standard:

Title: Execute sustainable resource use and quality control.
US No: 116288 NQF Level: 4 Credits: 3

This guide contains all necessary facilitation instructions to ensure that learners will attain the expected competencies required by the above-mentioned unit standard. This guide is designed to be used during the presentation of a learning session based on this unit standard. The full unit standard is attached at the end of the relevant Learner Guide. Learners are advised to read the unit standard at their time. Please discuss the unit standard with the learners to ensure that they understand what is expected from them to achieve the outcomes of the unit standard.

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

Title	ID Number	NQF Level	Credits	Mark
National Certificate in Animal Production	49048	4	120	<input type="checkbox"/>
National Certificate in Plant Production	49009	4	120	<input type="checkbox"/>

Please mark the learning program the learners 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 Facilitator:

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

Please explain the above concepts to the learner.

There are three guides, namely the Learner Guide (with activities), Assessor Guide and the Facilitator Guide.

These guides have been developed to address specific aspects of the learning experience. You therefore need to use these guides complementally to one another.

Make this an enjoyable learning experience!

Context of Application ...

Primary Agriculture is a diverse sector and a wide range of commodities is being produced for both national and international market. Each commodity has its own production requirements and practices. You will be facilitating the learning process within a specific context where a specific agricultural commodity is being produced. The learning material has been written in a **generic** manner, as it is aimed to be available on national level and should be relevant to be applied within a variety of commodities. It is therefore inclusive of all agricultural commodities and crop in this field. Therefore, the examples that are being used in the materials may not always be applicable to your specific community, commodity, environment or region.

This presents you, the facilitator, with the challenge to **contextualise** the learning material. It is imperative that you, the Facilitator and Assessor interpret and present activities, case studies and projects related to the material in such a way that learners can easily identify and apply their knowledge within their own context. This will require from you to add examples of crop, which are applicable to the community or farm. Learners must be guided with examples from their own communities, commodities, environment or regions. This should be done by complementing the learning material with:

- Examples relevant to the commodity,
- Including commodity specific requirements,
- Including operating procedures of the farm,
- Including agricultural practice specific requirements,
- Agricultural markets,
- Guiding learners to write these specifics down in the learning guide, etc.

The contextualisation of the learning material is a very important step in preparing for and facilitating the learning experience and enough time and effort should be put into this exercise.

According to the qualifications mentioned on page 2, this module could be contextualised to fit the following groups of commodities:

Plant Production	Animal Production	
<ul style="list-style-type: none"> • Organic production, • Hydroponic production, • Perma-culture production, • Agronomy, • Horticulture, • Natural resources harvesting. 	<ul style="list-style-type: none"> • Small stock production, • Large stock production, • Dairy production, • Pig production, • Poultry production, • Game, • Aqua / mari culture, • Commercial insects • Animal fibres harvesting, • Bee keeping, 	<ul style="list-style-type: none"> • Natural resources harvesting, • Organic production, • Perma-culture production, • Eco/Agri Tourism, • Agro Chemicals, • Horse Breeding, • Etc.

What & How will you be Facilitating?

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The Learning Experience...

On completion of this module, the learners will be able to:

- ◆ Understand efficient resource allocation, determining the size of the business and carry out efficient quality control methods.
- ◆ Understand the importance of the application of business principles in agricultural production with specific reference to production/conversion.
- ◆ Operate farming practices as businesses and will gain the knowledge and skills to move from a subsistence orientation to an economic orientation in agriculture

Learners will specifically be able to:

- ◆ Determine availability of resources and maintain sustainable resource use.
- ◆ Determine the scope of the enterprise / production unit.
- ◆ Apply the principles of quality management systems.
- ◆ Integrate the concept of quality control into the production process.

Learners will also gain basic knowledge of:

- ◆ Sustainable resource allocation.
- ◆ Legal requirements effecting production.
- ◆ Economy of scale.
- ◆ Optimisation.
- ◆ Quality management methods and systems.
- ◆ Reporting skills.
- ◆ The purpose of learning about product ion and conversion.
- ◆ Basic systems management.
- ◆ Application of theoretical knowledge.
- ◆ Business management.

Learning Assumed to be in Place:

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

- ◆ NQF 3: Explain the planning and scheduling of tasks in a production environment.
- ◆ NQF 3: Explain Store Inputs, Categories, Labelling And Storage Methods.
- ◆ NQF 3: Explain Costing and the Viability of an Agricultural Business.



Remember to do a diagnostic assessment of the learner's prior learning and ensure that they are starting at the correct level.

My Notes ...

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Revision of Level 3

■ Different Levels of Planning

- ◆ The level of planning is determined by the level of goal-setting.
- ◆ Reaching strategic goals requires strategic planning, reaching production goals requires a production plan, and reaching pest and disease control goals requires a pest and disease control plan.
- ◆ Product selection depends mostly on environmental factors (climate, soil, water availability, etc.) and on market opportunities.
- ◆ Planning has to be flexible, allowing changing circumstances to guide their relevance and validity.
- ◆ A budget is a financial expression of a plan.
- ◆ Income is money generated from the sale of a product.
- ◆ Expenditure is the cost associated with generating income.
- ◆ Costing means determining the actual cost of producing a specific product or delivering a specific service.

■ Scheduling

- ◆ Scheduling is about putting plans to a timeframe.
- ◆ Scheduling indicates who will perform the work, where will the work be performed, what resources are required, how progress will be measured against the scheduled work, and how progress will be reported on
- ◆ Scheduling techniques are tools used to facilitate the scheduling process.
- ◆ The most commonly used scheduling techniques are flow, milestone, CPM, PERT and Gantt charts.
- ◆ Schedules can be created forwards, meaning from a certain date onwards with an estimated completion date, or backwards, meaning from a predetermined completion date back to the date on which the task will begin.
- ◆ Schedules must be displayed prominently and communicated well.

■ Production Optimisation Techniques

- ◆ Production optimisation techniques are about making accurate, early prediction relating to the crop, and manipulating the tree and its environment to produce the best possible quality and quantity crop.
- ◆ Decisions on production interventions are made on the basis of accurate information, which is obtained from records.
- ◆ Records must be kept of inputs made and their costs.
- ◆ Output records that must be kept include yield and fruit size distribution, percentage to each market segment, cull factor analysis, maturity indexing data, and actual versus budgeted income.
- ◆ Statistical analysis is used to evaluate the validity or significance of the results from data collected, and to determine the extent to which two variables are proportional or linearly related to each other.

◆ The steps required to manage a production unit are:

- Decide the objective or goal.
- Set the required standards.
- Decide on the implementation plan.
- Schedule the activities.
- Allocate responsibilities and resources, or inputs.
- Measure progress and results.
- Evaluate by comparing the results with the goals and targets set.
- Adapt the goals and/or targets.
- Adapt the inputs, and go back to step 5.

■ **Assessing Planning and Scheduling**

- ◆ Production activities are varied, often overlap, and should follow a logical sequence.
- ◆ Goal-setting is followed by planning, which is followed by scheduling, which is followed by implementation, of which records are kept, which are used to evaluate the implementation of the plan and the achievement of the goals, which allows for optimisation.



Budgeting : Budgeting is the process that provides a detailed breakdown of what is planned to be spent and earned for each item of income and expenditure by month for the financial year.

Income : Income is money generated from the sale of the product and may include other minor sources, such as interest received.

Expenditure : Expenditure is the cost associated with generating the income and supporting the business over the longer term.

Costing : Costing is a process for determining the actual cost of producing a particular product or providing a particular service.

My Notes ...

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Facilitator's Checklist & Training Aids

Learner support strategies:
<p>Learners are supplied with all resources and aids as required by the programme – including:</p> <ul style="list-style-type: none"> ▪ Objects & devices such as equipment, protective clothing, and safety gear, etc. ▪ Learner Guides and Learner Workbook ▪ Visual aids, etc.

Use this checklist below during your preparation to ensure that you have all the equipment, documents and training aids for a successful session.

Preparation:	Yes	No
Qualification Knowledge – I have familiarised myself with the content of the applicable qualification		
Unit Standard Knowledge – I have familiarised myself with the content of all aspects of the applicable unit standard		
Content Knowledge – I have sufficient knowledge of the content to enable me to facilitate with ease		
Application knowledge – I understand the programme matrix & have prepared for programme delivery accordingly		
Contextualisation – I have included information which is specific to the commodity and practices related to the commodity		
Ability to respond to learners background & experience – I have studied the learner demographics, age group, experience & circumstances & prepared for programme delivery accordingly		
Enthusiasm & Commitment – I am passionate about my subject & have prepared my programme delivery to create a motivating environment with real commitment to success		
Enterprise knowledge – I know & understand the values, ethics, vision & mission of the workplace & have prepared my programme delivery, reporting & administrative tasks accordingly.		
Equipment check:		
Learner guides x 1 per learner		
Assessment guides x 1 per learner		
Writing materials & stationary (facilitator & learner)		
White board & pens		
Flip chart paper		
Proxima projector & screen		
Laptop & programme disk		

Sample Hand-outs and examples of laws and other relevant documents		
Safety gear as prescribed by unit standard and applicable legislation		
Documentation checklist:		
Attendance Register		
Course Evaluation		
Learner Course Evaluation		
Portfolios of evidence		

Contextualisation of Content!

Go through this module and indicate what specific **information** / **activities** / **examples** should be included in this module?

Contextualisation	
<ul style="list-style-type: none"> Commodity specific? 	
<ul style="list-style-type: none"> Operating procedures of the farm? 	
<ul style="list-style-type: none"> Agricultural practices? 	
<ul style="list-style-type: none"> Agricultural markets? 	

Session

1 Maintain sustainable resource use

Learner Guide:
Page 9

After completing this session, the learner should be able to:
SO 1: Determine availability of resources and maintain sustainable resource use.

Concept (SO 1)	Time frame	Activities related to the concept
Resource planning is performed by identifying the status and availability of the required resources.	6 hours	1 – 2
The essence of sustainable usage is defined and explained in order to describe the sustainable usage of resources.		
Required and available resources are compared and a production plan incorporating all the available resources and information to produce the desired output at sustainable levels is developed.		
Applicable legal requirements and the boundaries it puts on the agricultural processing activities are applied.		



Please allow learners to complete Activity 1 & 2 in their Learner Guides

Type of activity	Resources
1. Complete the table. 2. Make a list.	Learner guide.
Instructions to give to the learners	
Activity 1:	
Complete the table with reference to your own farm of learning in order to determine the availability and sources of resources available to you.	
Activity 2:	
Make a list of the legislation pertaining to the production of your relevant commodity in South Africa and explain next to each listing where you might go to find additional assistance, explanations or resources pertaining to it.	

Session

2 Scope of enterprise / production unit

Learner Guide:
Page 20

After completing this session, the learner should be able to:
SO 2: Determine the scope of the enterprise / production unit.

Concept (SO 2)	Time frame	Activities related to the concept
The concept: Economies of scale is explained.	7 hours	3 – 4
The effect of the factors that determine the size of an enterprise / production unit are identified and explained.		
The factors that influence the size of the enterprise and determine on the level on which the business will be able to operate are identified and evaluated.		



Please allow learners to complete Activity 3 & 4 in their Learner Guides

Type of activity	Resources
3. Individual exercise, write a paragraph	Learner guide.
4. Individual exercise, write a report	
Instructions to give to the learners	
Activity 3:	
Choose a crop that you are familiar with and write a short paragraph with statistical information regarding the theoretical breakeven input quantities compared to actual input quantities per hectare for production.	
Activity 4:	
Write a report on how one would determine the scope of a classic South African enterprise and/or production unit. Discuss the following points:	
<ul style="list-style-type: none"> • Financial requirements. • Resources required. • Inputs vs. Outputs. • Physical terms. 	

Session

3 Principles of quality management systems

Learner Guide:
Page 25

After completing this session, the learner should be able to:
SO 3: Apply the principles of quality management systems.

Concept (SO 3)	Time frame	Activities related to the concept
The concept of quality is defined.	6 hours	5
An understanding of quality management is demonstrated by explaining the principles and components of systems.		
Various quality management methods that can be followed and develop / select a relevant quality control method for the enterprise / production unit are identified and selected.		



Please allow learners to complete Activity 5 in their Learner Guides

Type of activity	Resources
5. Draft a plan.	Learner guide.
Instructions to give to the learners	
<p>Draft the basic outline of a plan according to the principles of a Quality Management System. You may choose between:</p> <ul style="list-style-type: none"> • EUREGAP • ISO • HACCP • TQM • QES <p>Explain in supplementary paragraphs how one would:</p> <ul style="list-style-type: none"> • Apply the principles of quality management systems. • Describe the various Quality Management methods that can be followed. • Why one would identify and develop specific quality control methods for specific enterprises and/or production units? 	

Session

4 Quality control in the production process

Learner Guide:
Page 30

After completing this session, the learner should be able to:

SO 4: Integrate the concept of quality control into the production process.

Concept (SO 4)	Time frame	Activities related to the concept
Data gleaned off production and processing systems related to product quality is gathered and processed.	8 hours	6 – 7
Attributes of the production process that relate to the product's quality are investigated and reported on.		
The impact of various procedures, systems and methodologies on the quality of products are evaluated.		
Cost/benefit analysis regarding the effect of such processes and procedures is developed.		



Please allow learners to complete Activity 6 & 7 in their Learner Guides

Type of activity	Resources
6. Develop a quality management plan. 7. Provide and explanation.	Learner guide.
Instructions to give to the learners	
Activity 6: Detail your plan and criteria step-by-step.	
Activity 7: Explain in detail how one would monitor the quality control process on a farm. Make a list of possible remedial actions that one could apply should the quality control process be unsatisfactory	

What will I do differently next time?

Take some time to **reflect** on your own activities as facilitator of this Unit Standard. Then write down five of the most important lessons you have learnt and include a motivation:

What will I do differently next time?	Motivate how or why (Give examples, reasons, etc.)
1.	
2.	
3.	
4.	
5.	

As facilitator, you have hands on experience in the application of the unit standard. And you might experience difficulties with the unit standard that the developers did not anticipate. Also, the unit standard will be revised at the end of the registration period. Your comments below can be an important contribution in the revision process and should be brought to the attention of either the AgriSETA ETQA manager or the SGB chairperson.

Please take some time to reflect on your experience and list a few of the difficulties you had to address.

Difficulties I had with the Unit Standard	Recommended Changes to Address the Difficulty
6.	
7.	
8.	
9.	
10.	