

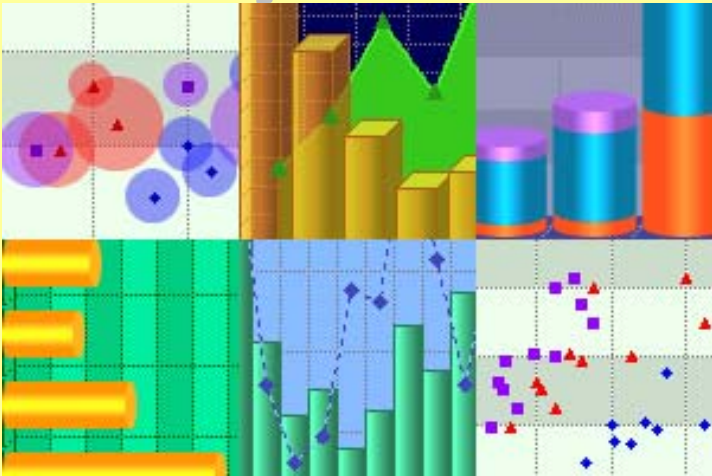


**NQF Level: 4** **US No: 116312**

# **Facilitator Guide**

## **Primary Agriculture**

# **Implement a data collection plan**



Facilitator: .....

Company: .....

Commodity: ..... Date: .....

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agriculture

Department:  
Agriculture  
REPUBLIC OF SOUTH AFRICA



# 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:

<b>Title:</b>	<b>Implement a data collection plan</b>		
<b>US No:</b>	<b>116312</b>	<b>NQF Level:</b>	<b>4</b>
		<b>Credits:</b>	<b>4</b>

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	48979	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"> <li>• Organic production,</li> <li>• Hydroponic production,</li> <li>• Perma-culture production,</li> <li>• Agronomy,</li> <li>• Horticulture,</li> <li>• Natural resources harvesting.</li> </ul>	<ul style="list-style-type: none"> <li>• Small stock production,</li> <li>• Large stock production,</li> <li>• Dairy production,</li> <li>• Pig production,</li> <li>• Poultry production,</li> <li>• Game,</li> <li>• Aqua / mari culture,</li> <li>• Commercial insects</li> <li>• Animal fibres harvesting,</li> <li>• Bee keeping,</li> </ul>	<ul style="list-style-type: none"> <li>• Natural resources harvesting,</li> <li>• Organic production,</li> <li>• Perma-culture production,</li> <li>• Eco/Agri Tourism,</li> <li>• Agro Chemicals,</li> <li>• Horse Breeding,</li> <li>• Etc.</li> </ul>

# How to use this guide ...

Throughout the guide information is given specifically aimed at you, the facilitator, to **assist** in the actual presentation of the learning material and/or facilitation of the learning process. Although this guide contains all the information required for attaining competency in this unit standard, references to additional resources, both printed and electronic, are provided for additional reference by the facilitator and further study by the learner.

Please note that the purpose of this information is merely to **guide** you, the facilitator, and is provided as a suggestion of possibilities. It remains the responsibility of every facilitator to re-assess the learner/s in each learning situation throughout the learning process in order to stay in touch with their specific learning needs. This should be the determining factor in the choice of the learning approach to follow.

Use the different boxes listed below for identification purposes:



Instructions regarding **activities**, whether group or individual activities will be described in this box.



Facilitators' Tip ...

**My Notes ...**  
You can use this box for your own notes/comments.

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# What & How will you be Facilitating?

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# The Learning Experience...

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

- ◆ Implement a data collection plan in the agricultural sector;
- ◆ Effectively analyse, interpret and evaluate agricultural data;
- ◆ Communicate findings accurately;
- ◆ Recognize, interpret and report on a range of deviations in data collection processes;
- ◆ Extend their learning and practice into other areas of information management and dissemination in the agricultural sector;
- ◆ Understand the value of accurate data collection to the agricultural sector;
- ◆ Implement best practices in the area of information gathering;

**Learners will specifically be able to:**

- ◆ Interpret a data collection plan.
- ◆ Implement a data collection plan.
- ◆ Interpret and analyse collected data.
- ◆ Present collated data coherently.

**Learners will also gain basic knowledge of:**

- ◆ Different methods of data collection.
- ◆ Selection and application of data collecting methods.
- ◆ Analysing and evaluating of collected data for problem identification and decision-making.
- ◆ Methods of analysing and interpreting data.
- ◆ Report writing.

**Learning Assumed to be in Place:**

- ◆ NQF 3: Supervise the collection of agricultural data.



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

# Learning Program Time Frames

	Total time allocated (hours)	Theoretical learning time allocated (hours)	Practical learning time allocated (hours)	Activities to be completed
<b>Complete Program (including summative assessment)</b>	40 hours	17 hours	23 hours	4
<b>Learner Orientation and "Ice Breaker"</b>	30 minutes	30 minutes	-	N/A
<b>Purpose, Introduction and Learner Directions</b>	30 minutes	30 minutes	-	N/A
<b>Session 1</b>	8 hours	4 hours	4 hours	1
<b>Session 2</b>	8 hours	3 hours	5 hours	2
<b>Session 3</b>	9 hours	4 hours	5 hours	3
<b>Session 4</b>	10 hours	4 hours	6 hours	4
<b>Preparation for Assessment &amp; revision</b>	4 hours	1 hour	3 hours	N/A

## My Notes ...

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## Tips for level of learning



Remember the following before you get started:

**Typically, a learning programme leading to the award of a qualification or unit standards at level 4 should develop learners who demonstrate an ability to:-**

- Take responsibility for their own learning within a supervised environment.
- Take decisions about and responsibility for actions.
- Evaluate their own performance against given criteria.
- Take the initiative to address any shortcomings they find.
- Communicate and present information reliably and accurately in writing and verbally.
- Gather relevant information, analysis and evaluation skills.
- Use their knowledge to solve common problems within a familiar context; adjust an application of a common solution within relevant parameters to meet the needs of small changes in the problem or operating context; motivate the change using relevant evidence.
- Apply essential methods, procedures and techniques of the field or discipline; apply and carry out actions by interpreting information from text and operational symbols or representations.
- Understand the organisation or operating environment as a system within a wider context.
- Demonstrate a fundamental knowledge base of the most important areas of one or more fields or disciplines, in addition to the fundamental areas of study an informed understanding of the key terms, rules, concepts, established principles and theories in one or more fields or disciplines.

### My Notes ...

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# Facilitator's Checklist & Training Aids

## Learner support strategies:

Learners are supplied with all resources and aids as required by the programme – including:

- Objects & devices such as equipment, protective clothing, 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
<b>Qualification Knowledge</b> – I have familiarised myself with the content of the applicable qualification		
<b>Unit Standard Knowledge</b> – I have familiarised myself with the content of all aspects of the applicable unit standard		
<b>Content Knowledge</b> – I have sufficient knowledge of the content to enable me to facilitate with ease		
<b>Application knowledge</b> – I understand the programme matrix & have prepared for programme delivery accordingly		
<b>Contextualisation</b> – I have included information which is specific to the commodity and practices related to the commodity		
<b>Ability to respond to learners background &amp; experience</b> – I have studied the learner demographics, age group, experience & circumstances & prepared for programme delivery accordingly		
<b>Enthusiasm &amp; Commitment</b> – I am passionate about my subject & have prepared my programme delivery to create a motivating environment with real commitment to success		
<b>Enterprise knowledge</b> – 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		
<b>Documentation checklist:</b>		
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"> <li>▪ Commodity specific?</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Operating procedures of the farm?</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Agricultural practices?</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Agricultural markets?</li> </ul>	

# Introduction / Revision

## ■ What is Agricultural Data?



### ***Agricultural Data Collection***

The process of gathering information, such as profit margins per cultivar, pest and disease infestations, weather and climatic information, rainfall, costs, economic conditions – and analysing it to be able to find patterns that will help us work more efficiently, sustainably and profitably on a farm.

## ■ Agricultural data could be any of these items listed below:

- ◆ Occurrence of pest and disease infestations.
- ◆ Weather and climatic information – year on year.
- ◆ Rainfall & Soil sample data
- ◆ Costs of agricultural inputs
- ◆ Yield data
- ◆ Prevailing economic conditions in the sector, country and internationally.
- ◆ Production costs per crop.
- ◆ Soil and fertilisation costs and applications.
- ◆ Pest and Weed Control application programs and statistics
- ◆ Non-target species data
- ◆ Crop quality margins
- ◆ Agronomic data
- ◆ Profit margins per cultivar / per crop / per block / per orchard / per Hectare
- ◆ Agricultural photographic data

## ■ The reasons why we would see to the accurate collection of Agricultural Data and report on it

Patterns of the environment include rainfall, climate, dry cycles, original vegetation, seasons, movement patterns of animals, etc. Processes of the biophysical environment include the interaction and the relationship between food webs, human activities, soil, climate, water, plants, animals and solar energy.

It is always useful to have detailed records and data in order to ensure that we make optimum decisions in order to maximise profits, production and quality, whilst keeping risks and problems to a minimum. Detailed records of data need to be integrated, compared and correctly and accurately reported on, in order to make data useful and applicable in an agricultural setup

Session

# 1 Interpret a data collection plan

**Learner Guide:  
Page 8**

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

**SO 1: Interpret a data collection plan**

Concept (SO 1)	Time frame	Activities related to the concept
The range of data outlined in the data collection plan is explained.	<b>8 hours</b>	<b>Activity 1</b>
A schedule for data collection is created.		
The appropriate methods for collection are identified.		
Data scheduling takes the scheduled activities of the enterprise into account.		
Possible dates that clash with other scheduled events are identified and alternative plans made.		



- ◆ Revise the different data collection methods and the types of data, and encourage the learners to think about what kind of data is required to make farming successful in their context.
- ◆ The different elementary methods of data collection in Agriculture are discussed as background information. The learner should create a data collection plan in his/her own context, by following the steps mentioned, by brainstorming an example.



Session

# 2 Implement a data collection plan

**Learner Guide:  
Page 17**

After completing this session, the learner should be able to:  
**SO 2: Implement a data collection plan.**

Concept (SO 2)	Time frame	Activities related to the concept
Data collection is done at the scheduled times.	<b>8 hours</b>	<b>Activity 2</b>
Data is collated promptly according to the data collection plan.		
Gaps and/or irregularities in data collection methods are identified and reported.		



The learner should be updated with all collection methods appropriate for specific data sets, and how to compile a schedule for implementation of a data collection plan.



**Please allow learners to complete Activity 2 in their Learner Guides**

Type of activity	Resources
<b>Individual activity</b>	Learner Guide
<b>Instructions to give to the learners</b>	
Complete the table below by describing the problems that could arise with different collection methods.	

# 3 Interpret and analyze collected data

Session

**Learner  
Guide:  
Page 25**

After completing this session, the learner should be able to:  
**SO 3: Interpret and analyse collected data.**

Concept (SO 3)	Time frame	Activities related to the concept
Methods of analysing and interpreting data are explained.	<b>9 hours</b>	<b>Activity 3</b>
Data is analysed and interpreted.		
Data is checked for accuracy and problems rectified.		



Revise the methods for data analyses. Discuss examples how you would ensure the accuracy of the data collection plan. Brainstorm in groups an example of a data sheet and a method how to present it in your own context. Explain what measures you would put into place to ensure accuracy of the data and the importance of accurate data. Suggest the use of flipcharts to present it to the class.



**Please allow learners to complete Activity 3 in their Learner Guides**

Type of activity	Resources
<b>Brainstorm in your group</b>	Learner Guide, data sheet
<b>Instructions to give to the learners</b>	
Obtain an example of a data sheet and discuss and decide on a method how to present it in your own context. Explain what measures you would put into place to ensure accuracy of the data and the importance of accurate data. Use the flipcharts to present it to the class..	



# 4 Present collated data coherently

Session

**Learner Guide:**  
**Page 28**

*After completing this session, the learner should be able to:*  
**SO 4: Present collated data coherently.**

Concept (SO 4)	Time frame	Activities related to the concept
Various methods of data presentation are explained.	<b>10 hours</b>	<b>Activity 4</b>
The most appropriate methods of data presentation are selected.		
Data is presented accurately.		
The findings of the report are clearly stated.		



**Please allow learners to complete Activity 4 in their Learner Guides**

Type of activity	Resources
<b>Brainstorm in your group</b>	Learner Guide, data sheet
<b>Instructions to give to the learners</b>	
Describe in a group in a number of points, what aspects you would consider when presenting a data sheet to ensure accuracy of the data and a statement of correct findings. The group leader should orally present his/her presentation.	

# 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.	