



NQF Level: 3

US No: 116264

Facilitator Guide

Primary Agriculture

Monitor plant manipulation



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:

Title: Monitor plant manipulation
US No: 116264 NQF Level: 3 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	3	120	<input type="checkbox"/>
National Certificate in Plant Production	49052	3	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:

- ◆ A learner achieving this standard will be able to execute and supervise the use of appropriate tools and other manipulation methods used for plant manipulation
- ◆ Learners will gain an understanding of sustainable agricultural practices as applied in the animal-, plant and mixed farming sub fields. This unit standard focuses on the application of manipulation methods in primary agriculture.
- ◆ They will be able to participate in, undertake and plan farming practices with knowledge of their environment. This unit standard will instil a culture of maintenance and care for both the environment as well as towards farming infrastructure and operations.

Learners will also gain basic knowledge of:

- ◆ The person is able to demonstrate a basic knowledge of:
- ◆ Correct tools and methods for vegetative manipulation.
- ◆ Monitor and supervise trellising principles and methods
- ◆ Identification and manipulation of vegetative and reproductive buds.
- ◆ Considering position and function of buds during pruning and chemical manipulation
- ◆ Identification and explaining of unwanted growth to be removed prior to pruning
- ◆ Explaining and selecting best time and methods for pruning specific crops
- ◆ Explaining and selecting best time and methods for flower and fruit manipulation
- ◆ Select the recommended chemicals for manipulating specific crops
- ◆ Record keeping
- ◆ Safety measures to be applied during manipulation
- ◆ Avoiding spreading of pests and diseases during pruning

Learning Assumed to be in Place:

- ◆ NQF 3: Demonstrate a basic understanding of the physiological functioning of the anatomical structures of the plant.
- ◆ NQF 2: Control pests and diseases and weeds on crops effectively and responsibly.
- ◆ NQF 2 Plant manipulation



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
Complete Program (including summative assessment)	28 hours	13.5 hours	14.5 hours	
Learner Orientation and "Ice Breaker"	1 hour	0.5 hour	0.5 hour	-
Purpose, Introduction and Learner Directions	1 hour	0.5 hour	0.5 hour	-
Session 1	7 hours	3 hours	4 hours	1
Session 2	6 hours	3 hours	3 hours	2
Session 3	6 hours	3 hours	3 hours	3
Session 4	6 hours	3 hours	3 hours	4
Preparation for Assessment & revision	1 hour	0.5 hour	0.5 hour	-

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 3 should develop learners who demonstrate an ability to:-

- Operate within clearly defined contexts.
- Work and learn within a managed environment.
- Actively contribute to team effectiveness.
- Take position on available information, discuss the issues and reach a resolution; produce a coherent presentation and report, providing explanations for positions taken.
- Summarise and interpret information relevant to the context from a range of sources.
- Use their knowledge to select appropriate procedures to solve problems within given parameters.
- Apply skills in measuring the environment using key instruments and equipment operational literacy and numeracy skills; use basic procedures and operations to complete complex tasks.
- Understand the organisational and operating environment as a system.
- Understand one or more fields or discipline's key concepts and knowledge, in addition to the fundamental areas of study.

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, 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 Monitor and supervise the use of appropriate tools

Learner Guide:
Page 7

After completing this session, the learner should be able to:
SO 1: Monitor and supervise the use of appropriate tools and / or equipment for plant training and manipulation.

Concept (SO 1)	Time frame	Activities related to the concept
Different kinds of tools for different kinds of operations.	3 Hours Theory 4 Hours Practical	Activity 1
The reasons for manipulating plants, using the mentioned tools		
The relationship between manipulation and yield		
The ability to recognise a wrong kind of tool or technique used during manipulation		

Tips for the facilitator



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

Monitor and supervise the use of appropriate tools and / or equipment for plant training and manipulation.

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

My Notes ...

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Please allow learners to complete Activity 1 in their Learner Guides

Type of activity	Resources
Investigate and Report	Workbook, Stationary
Instructions to give to the learners	
At your place of work write a report on the kind of tools you would require for manipulating specific crops and how to handle the tools during specific operations	
Conclusion	
Be able to identify, use, instruct and monitor the use of applicable manipulation tools and chemicals	

My Notes ...

Dotted lines for writing notes.

Session

2 Monitoring framework development as part of plant manipulation methods

**Learner
Guide:
Page 11**

After completing this session, the learner should be able to:
SO 2: Monitoring framework development as part of plant manipulation methods

Concept (SO 1)	Time frame	Activities related to the concept
Principles of training and manipulation	3 Hours Theory 3 Hours Practical	Activity 2
Crops that need training		
Application of training systems.		
Concept (SO 2)		
Monitoring development of training systems.		
Monitor procedures followed during training.		
Guide application of training.		
Concept (SO 3)		
Guide the manipulation of buds.		
Distinguish between vegetative and productive buds.		

My Notes ...

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Session

3 Flower and fruit manipulation

**Learner
Guide:
Page 16**

After completing this session, the learner should be able to:
SO 3: Flower and fruit manipulation

Concept (SO 1)	Time frame	Activities related to the concept
Identify and explain flower and fruit manipulation actions and principles.	3 Hours Theory 3 Hours Practical	Activity 2
Select correct and appropriate chemicals for spraying.		
Correct safety precautions and sanitary procedures are explained and demonstrated.		

Tips for the facilitator



After completing this session, the learner should be able to:
Monitor and supervise flower and fruit manipulation principles.

Range: Soil flower and fruit manipulation principles may include, but are not limited to, temperature, daylight length, bud dormancy breakers, thinning, shouldering, brushing, shorting, fruit enlargement, ripening, and chemical and physical quality improvement methods.

My Notes ...

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Please allow learners to complete Activity 3 in their Learner Guides

Type of activity	Resources
Investigate and Report	Workbook, Stationary
Instructions to give to the learners	
<p>At your place of work determine the following and write a to the point report providing details:</p> <p>Which major crops grown in your area? Describe whether it would be necessary to manipulate the plants and for what reason? If required, at what stage of development or time would you do thinning out of flowers and/or thinning out of fruit? Which method would you apply to thin out the flowers or fruit of a specific crop?</p>	
Conclusion	
Be able to identify, apply and monitor possible fruit manipulating methods.	

My Notes ...

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4 Pruning principles as vegetative manipulation methods

Session

Learner Guide:
Page 19

After completing this session, the learner should be able to:
SO 4: Monitor and supervise pruning principles as vegetative manipulation methods

Concept (SO 4)	Time frame	Activities related to the concept
Explain the removal of unwanted growth from your plants.	3 Hours Theory 3 Hours Practical	Activity 2
Vegetative manipulation and pruning principles are explained.		
The correct technical, safety precautions and sanitary procedures are explained and demonstrated.		

Tips for the facilitator



After completing this session, the learner should be able to:
Monitor and supervise pruning principles as vegetative plant manipulation methods appropriate to the crop.

Range: Pruning includes, but is not limited to summer and winter pruning and canopy management, etc., as is appropriate for the identified crop.

My Notes ...

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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.	