



NQF Level: 4

US No: 116318

Facilitator Guide

Primary Agriculture

Plan & maintain breeding systems



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: Plan and maintain breeding systems
US No: 116318 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	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"> • 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 basic genetic principles, planning and maintaining breeding systems, methods and management of farm animals.
- ◆ Gain specific knowledge and skills in animal production field, specifically in the area of breeding management and will be able to operate in an animal production environment implementing sustainable and economically viable production principles.

Learners will specifically be able to:

- ◆ Explain and understand the basic genetic principles pertaining to farm animals.
- ◆ Plan and maintain breeding systems for farm animals.
- ◆ Compare and understand the different breeding methods that can be applied to farm animals.
- ◆ Explain and maintain a breeding management programme for farm animals.

Learners will also gain basic knowledge of:

- ◆ Farm practices
- ◆ Basic planning principles
- ◆ Basic knowledge of nutrition
- ◆ Knowledge of genetics and reproduction
- ◆ Application of breeding methods in a management programme
- ◆ Management skills
- ◆ Interpersonal skills
- ◆ Purpose of this learning is to understand basic genetics and the integration of breeding methods into a breeding management programme
- ◆ Communication and reporting skills
- ◆ Understand the events, effects and implications of a breeding programme.

Learning Assumed to be in Place:

It is expected of the learner attempting this unit standard to demonstrate competence, towards the unit standard:

- ◆ NQF 3: Apply advanced breeding practices for farm animals.
- ◆ NQF 3: Explain the prevention and treatment of animal health.
- ◆ NQF 4: Explain functional animal anatomy and physiology.
- ◆ NQF 4: Apply procedures to manage damage control in animals and victims.
- ◆ NQF 4: Explain animal classification and natural history.



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)	20 hours	14 hours	6 hours	5 Activities
Learner Orientation and "Ice Breaker"	1 hour	30 minutes	30 minutes	N/A
Purpose, Introduction and Learner Directions	1 hour	30 minutes	30 minutes	N/A
Session 1	6 hours	5 hours	1 hours	1a & 1b
Session 2	5 hours	3 hours	2 hours	2
Session 3	3 hours	2 hours	1 hours	3a & 3b
Preparation for Assessment & revision	4 hours	3 hours	1 hours	

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.

Tips for the Facilitator



- Remember the following before you get started:
- This unit standard is aimed at level 4 learners.
- The level 4 learners might have been exposed to many of the concepts covered in this unit standard in previous levels and also on level 4. Try to let them integrate the knowledge.
- Explain new concepts and new words to them in context of the breeding program.
- Take special care to facilitate all learners. Allow them opportunities to share experiences, prior knowledge, translate into their mother tongue for each other and enjoy the learning process.
- At the end of the hints a few resources are given to assist the learners in their activities. Get the material from the addresses mentioned. They will run into difficulties to get the material in libraries.
Make sure that the learners understand mitoses and meiosis. Here are simple explanations of meiosis that can be explained to them if they do not understand it.
- To get information on the national beef cattle, pig and other animal improvement schemes, contact
- The ARC, Private Bag X2, Irene, 0062. Tel 012 - 672 9111
- Or SA Studbook and Animal Improvement Association, P O box 270, Bloemfontein, 9300. Tel: 051 - 448 9347

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
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 The basic generic principles – farm animals

**Learner Guide:
Page 7**

After completing this session, the learner should be able to:
SO 1: Explain and understand the basic genetic principles pertaining to farm animals.

Concept (SO 1)	Time frame	Activities related to the concept
An understanding of the concept of heritability, repeatability and fertility of farm animals is explained.	6 hours	Activity 1(a) and 1(b)
The differences between genotype and phenotype is explained and understood.		
The basic genetic principles relating to farm animals in the breeding programme are distinguished and explained.		

Tips for the Facilitator



- Make sure that the learners understand mitosis. There is an example of mitosis in the Learner guide that can be used to explain the concept. The time limit to put in all the relevant background is limited.
- Make sure that the learners understand meiosis. There is an example of meiosis in the Learner guide that can be used to explain the concept. The time limit to put in all the relevant background is limited.



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

Type of activity	Resources
1a. Individual work and group discussion	Oral instruction and Learner guide.
Instructions to give to the learners	
As per instructions in Learner Guide.	
Type of activity	Resources
1b. Individual work and group discussion.	Learner guide.
Instructions to give to the learners	
As per instructions in Learner Guide.	

Session

2 Breeding systems for farm animals

Learner Guide:
Page 22

After completing this session, the learner should be able to:
SO 2: Plan and maintain breeding systems for farm animals.

Concept (SO 2)	Time frame	Activities related to the concept
The breeding system is interpreted and maintained as part of the production cycle.	5 Hours	Activity 2
The differences between breeding systems for farm animals is classified and explained.		
Knowledge of breeding is integrated into a breeding system and breeding programme for farm animals.		
The differences in breeding seasons amongst farm animals are explained.		
The differences in breeding season with regard to planning of a breeding programme are explained.		

Tips for the Facilitator



- To get information on the national beef cattle, pig and other animal improvement schemes, contact: The ARC, Private Bag X2, Irene, 0062. Tel: 012 - 672 9111.
- Or SA Studbook and Animal Improvement Association, P O box 270, Bloemfontein, 9300. Tel: 051 - 448 9347.
- A good publication is also available: Title: South African Livestock Breeding 2004 - Rina Greenway at (021) 4621023.
- This publication can also be obtained from S A Studbook.
- Assist learners to have excess to resources.

Session

3 Different breeding methods for farm animals

Learner Guide:
Page 29

After completing this session, the learner should be able to:
SO 3 & 4: Compare and understand the different breeding methods that can be applied to farm animals. Explain and maintain a breeding management programme for farm animals.

Concept (SO 3)	Time frame	Activities related to the concept
The various types of breeding methods are compared and understood.	3 hours	Activity 3a & 3b
Applicability of breeding methods is explained and integrated into a breeding programme		
Advantages and disadvantages of a breeding method are identified and explained.		
Management of non-pregnant farm animals is explained according to nutrition, health, environment and other factors		
The management of early pregnant farm animals is understood according to nutrition, health, environment and other factors		
Management of late pregnant farm animals is explained according to nutrition, health, environment and other factors.		
The management of post partum farm animals is explained according to nutrition, health, environment and other factors		
Oestrus animals are separated out for breeding and also to monitor the overall fertility status of the herd/flock		
Management of the male animals for the breeding season is explained.		
Pregnancy diagnosis methods are identified and described.		

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.	