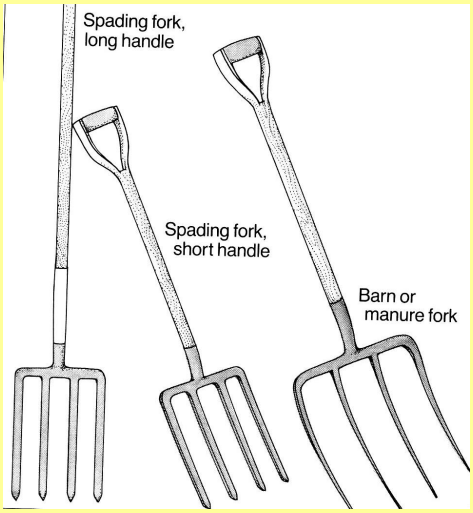
NQF Level: 1 **US No: 116200**

Assessment Guide

Primary Agriculture

Plant crops under supervision



Assessor: . . . . . .

Workplace / Company: . . . . . .

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

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Department:
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AgriSETA

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.

Please Note:

This Unit Standard 116200 Assessment Guide must be read in conjunction with the generic Assessor Guide as prescribed and published by the AgriSETA.

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:	Plant crops under supervision				
US No:	**116200**	**NQF Level:**	1	**Credits:**	4

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 Mixed Farming Systems	48971	1	120	❑
National Certificate in Plant Production	48972	1	120	❑

Please mark the learning program the learners are enrolled in:

Are you facilitating a:	Y	N
Learnership?	❑	❑
Skills Program?	❑	❑
Short Course?	❑	❑

Note to Assessor:
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.

1

SO1 AC 1-3

Brainstorm with your group

Brainstorm with your group and answer the following questions.

Learner Workbook: Page 3 **Facilitator Guide: Page 10**

Name 4 different hand tools you would use during soil preparation prior to the planting of crops.

Model Answer(s):

- Garden fork.
- Sade.
- Rake.
- Hand shovel.

Write down some reminders that you would relay to a team of farm workers regarding the safe use of hand tools.

Model Answer(s):

- Tools to be in good condition – handles not to hurt you.
- Tools to be clean not to contaminate planting material.
- Know how to use tool safely.

My Notes ...

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SO1 AC 1-3

Divide into groups and decide...

Which tools you are going to use for the specific crop you are going to plant.

Learner Workbook: Page 4 **Facilitator Guide: Page 10**

Model Answer(s):

Tools to be suitable for specific crop.

My Notes ...

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Activity Answers

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SO 3 AC 1-4

Brainstorm with your group

Brainstorm with your group and answer the following questions.

Learner Workbook: Page 5 **Facilitator Guide: Page 12**

Name 4 **advantages** of effective soil preparation and provide their effect on plant roots.

Model Answer(s):

1. Fertilise according to soil analysis - improved growth and production.
2. Ripping and tilling – improved root penetration.
3. Correct soil pH – improved nutrient absorption.
4. Improve soil structure – improved root growth.

Name 4 **disadvantages** of ineffective soil preparation explain their effects on plant roots.

Disadvantages	Effects on the plant roots
1. Poor fertilisation	Poor growth and production
2. Poor tilling	Poor root penetration
3. Too high or too low pH	Poor nutrient absorption
4. Poor soil structure	Poor root penetration

My Notes ...

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Activity Answers

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SO 3 AC 1-4

Research

Complete the following research & observation sheet.

Learner Workbook: Page 6 **Facilitator Guide: Page 12**

Choose a type of Crop that you produce on your farm. What is it?	Write down choice
For this type of crop – answer the following questions:	
What types of soils are most appropriate?	Example: Tree crops Most soil types provided it is well prepared
Name 5 steps you would take prior to planting any one plant of this type.	1. Choose best site based on soil quality and environment
	2. Take soil sample s for analysis
	3. Till soil
	4. Apply nutrients according to recommendations from soil analysis
	5. Prepare beds or rows for planting
What types of nutrients would be necessary for optimum growth of this crop?	Those recommended by soil analyses
If any nutrient/s are short, how would you know how much of that nutrient to add?	Follow recommendations by soil analysis
Tick off which of the following has been added to your farm's crop in the last 6-12 months	lime, liquid fertiliser, chemical fertilisers single chemical fertilizer mixtures organic compost potassium nitrogen
What symptoms could you expect to see in your type of crop if too much fertilizer was applied.	Look for discolouration of leaves other abnormalities also on fruit.

5

SO 3 AC 1-4

Discuss the factors on your farm that might affect the performance of your crop.

Learner Workbook: Page 7 **Facilitator Guide: Page 12**

Write down what you discussed.

Model Answer(s):

- Temperature.
- Water supply – irrigation system.
- Light supply – consider slopes and direction of rows.
- Plant spacing.
- Fertilization.

My Notes ...

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SO 4 AC 1-4

Perform the following tasks set out below

Learner Workbook: Page 8 **Facilitator Guide: Page 14**

Prepare two beds of 1m wide x 5m for long. (use lines and pegs for making straight beds and also make sure that you have applied your knowledge on fertilization and soil preparation). One bed has to be planted with cabbage seedlings and the other with beetroot seed.

The spacing of the cabbage must be 50 cm between the two rows and 40 cm between plants in the row – calculate how many seedlings to obtain for the bed and get them.

The spacing of the beetroot must be 10 cm between the four rows in the bed and 6cm between plants in the row – calculate how many seeds you require and get them.

Mark the rows with pegs and lines. Ask your facilitator to show you how deep to plant the seedlings and seed. (For seedlings, just cover the root ball; for seed, about 1cm deep).

Do the actual planting and irrigate after planting.

My Notes ...

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Activity Answers

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SO 4 AC 1-4

Research

Have a group discussion with your facilitator and let him explain to you:

Learner Workbook: Page 9 **Facilitator Guide: Page 14**

- How to lay out a tree orchard?
- How to plant a grain crop?
- How to plant cuttings?
- How to plant trees and shrubs?

Write down what you found out.

Model Answer(s):

- Tree crop – mark out rectangular block, determine space between rows and space between plants in rows, mark tree positions with pegs.
- Grain crop – Commercial scale – use planter suitable for crop, fill seed containers with seed and fertilizer containers with appropriate fertilizer. Start planting.

  Small scale – Prepare rows and plant seed by hand in rows and cover with soil.
- Cuttings – Prepare beds or rows, determine spacing, use hand shovel to make small holes and plant cuttings in holes.
- Trees and shrubs – In well-prepared soil – dig small holes to accommodate root ball and plant without further fertilizing.
- On unprepared soil – Dig holes large enough to apply compost and fertilizer. Mix compost and fertilizer in bottom of hole apply water and plant.

My Notes ...

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Perform Practical Preparing & Planting of Crop

Before the practical planting of crops and the preparation of a practical report 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.

- The format is as reflected in the Assessment guide for learners. Please read it and familiarise yourself with its content.
- Learners should be supplied with tools, site, planting material needed for planting of the crops at the appropriate time of year.
- Use the points as described to explain to the learners what will be expected from them and to help you collect evidence for foundational and embedded knowledge as prescribed by the outcomes of the unit standards.
- Offer learners an opportunity to as questions as per the listed criteria for the physical activity.
- Remind learners of the format for reporting. This is an opportunity for integrated assessment together with the Communication unit standards.
- Ensure that you apply the exact same methodology for each learner in order to ensure that VACS principles are adhered to.
- Evidence must be found of practical attendance and evidence should be found in the report according to the questionnaire supplied to learners.
- A suitably qualified and registered assessor who is ALSO a subject matter expert in this specific field can only mark this assessment tool for learner assessment.
- If no such a person can be found to assess the learner, then it is advised that a qualified assessor consults with the appropriate subject matter expert prior to the assessment in order to establish key points for competence and/or uses model answers as supplied by a subject matter expert to allocate marks. The subject matter expert should be consulted for any answers that the assessor might have queries on.
- Supply learners with required stationary to design the report.
- Supply each report with the following heading:

Unit Standard:	116200	**NQF Level:**	1
Learner Name:			

Participate in planting a crop and write a report about the process that you followed carefully considering all the factors that you have learnt:

Model Procedure: Planting of Crop	Competent / NYC	Comments
♦ Dig a profile pit of 1 x 1 x 3m (deep) in various parts of the field you want to cultivate. ♦Look at the soil depth. ♦Check for rock layers. ♦Look at the visible differences in soil layers. ♦Collect soil samples and have the soil chemistry analysed so that you know what soil type you are dealing with and also know the fertility of the soil. ♦The analyses will also inform you as to the challenges you might be up against. ♦In addition, have the soil analysed for soil pathogens and nematodes. ♦Look at what types of weeds or other plants are growing on the specific area you want to cultivate. ♦Look at the types of pests or insects that may be prominent in the area. ♦Look at the crops being cultivated in the surrounds, and for how long they have been there. This will give you an indication of possible pest pressures.		
♦Remove all the shrubs, trees, rocks etc. from the sight. ♦Dig trees and shrubs out and make sure that no roots are left behind. ♦Some trees are protected by law and cannot be removed without permission from Government.		

Model Procedure: Planting of Crop	Competent / NYC	Comments
♦Rip or plough the soil. This means that you have to loosen all the soil in the area up to a depth of 30 to 60 cm.		
♦Till the topsoil i.e. ensure that the soil is fine and even and that there are no lumps in between. This is especially important when establishing seeds. In such cases a proper seedbed needs to be prepared in order to get the best germination. ♦This can be done manually with a pitchfork or mechanically with a plough and a disc. ♦Treat the soil against weed and nematodes.		
♦If you have your soil analysed to see how fertile it is, the expert Soil Scientists will also draw-up a list of actions you can take to improve your soil. ♦This is often done by adding Chemical fertilisers or ameliorants		
♦Determine the maximum planting density prescribed or allowed for the specific crop.		
♦When planting seedlings, rooted cuttings or trees, a general rule is to plant the plants at the same depth as they were growing in the seed trays, beds or bags. The planting holes must be large enough to accommodate the root ball. No compost of fertiliser is required in the holes if the soil is well prepared. Once the plant has been placed in the hole, the hole is filled with soil. Once completed, the soil must be slightly compacted around the plant. Irrigate well after planting.		
♦Do the actual planting and irrigate after planting.		

Assessment Feedback Form

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