



NOF Level: 1 US No: 116167

# Assessment Guide

## Primary Agriculture

# Select, Use and Care for Hand Tools and Basic Equipment and Infrastructure



Assessor: .....

Workplace / Company: .....

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

## 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.

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:

<b>Title:</b>	Select, use and care for hand tools and basic equipment and infrastructure
<b>US No:</b>	116167
<b>NQF Level:</b>	1
<b>Credits:</b>	4

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

Title	ID Number	NQF Level	Credits	Mark
National Certificate in Animal Production	48970	1	120	<input type="checkbox"/>
National Certificate in Mixed Farming Systems	48971	1	120	<input type="checkbox"/>
National Certificate in Plant Production	48972	1	120	<input type="checkbox"/>

Please mark the learning program you 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 Assessor:

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

# 1

SO 1, AC 1

## Brainstorm:

Think of the following tasks on a farm and say what type of equipment you might use for the task.

Learner Workbook: Page 3-4

Facilitator Guide: Page 11

Dig a hole for a tree.

Model Answer(s):

Spade / Fork / Pickaxe.

Chop down and dig out weeds.

Model Answer(s):

Pickaxe/ Mattock/ Garden Fork/ Spade.

Dig trenches for irrigation pipe.

Model Answer(s):

Pickaxe / Mattock / Spade.

Maintain the irrigation system by fitting new t-joints.

Model Answer(s):

Pliers / Spanners / Binding wire.

Erect a new fence.

Model Answer(s):

Pliers / Hammer / Spanners.

Spray against pest & disease.

**Model Answer(s):**

Knapsack / Spray-pump.

Apply manure/ compost to the crop.

**Model Answer(s):**

Garden fork / Spade / Rake.

Fix the tractor.

**Model Answer(s):**

Power tools / wrenches / Spanners / battery charger.

Place nails along the trellis system for bullhorns.

**Model Answer(s):**

Hammer.

**My Notes ...**

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**Do a presentation:**

Here follows an article.

Learner Workbook: Page 5-8

Facilitator Guide: Page 11

Read it carefully and in your groups discuss what implication this might have for the concept of "selection, use and care of hand tools".

Make a 5-minute presentation in ENGLISH to the rest of the class on your findings.

- ◆ Your facilitator will grade your group on:
- ◆ Participation of all group members
- ◆ Use of English language
- ◆ Comprehension of article
- ◆ Correct assumptions
- ◆ Presentation skills

**Model Answer(s): Not supplied due to varied learner opinion; main concepts highlighted in Bold**

"**Agrochemical users** must make every effort to use those products that **minimise the risk to themselves and others**. In the choice of agrochemicals they may often be guided by advertisements in the mass media. It is therefore important that **users seek advice from agricultural extension workers and several independent suppliers**.

Similarly, **choice of safe technology is important**. For example, there may be several types of spray equipment on the market, but the cheapest ones are often not the best for safety. They may be of poor quality and might start to leak. The same may be true of the choice of personal protective equipment. Again, users should remember to seek advice.

The **adoption of safe working systems and practices** will minimise risk. Some of these have already been discussed in sections 2.3.6 and 2.3.7. The arrangement of working time, particularly in hot climates, would be relevant here. For example, agrochemical spraying could be undertaken in the early hours of the morning.

**Engineering control measures, personal hygiene and other measures, the use of personal protective equipment as a last line of defence and the alternatives to agrochemicals** will be discussed in the following subsections.

## 1. Engineering control measures

### Model Answer(s):

A basic principle of user protection is that **all possible measures should first be taken to reduce exposure at the source**. Routine maintenance should ensure that **agrochemical application equipment is in good condition and without any potential to leak or spill**. Particular attention should be given to knapsack sprayers where leakage could seriously contaminate the user.

New developments in engineering controls go much further by introducing improved design features, which automate agrochemical handling or make some tasks easier or safer. Examples of **engineering control measures** include:

- ◆ Closed systems. The container is opened and the contents are automatically released through a measuring or weighing device into the spray tank.
- ◆ Filling probe. This transfers agrochemicals by suction from an opened container on the ground into the spray tank.
- ◆ *Pre-mix bowl*. This is a low-level bowl into which the agrochemical is poured. It is then automatically transferred to the spray tank.
- ◆ Anti-siphoning device. This prevents back siphoning of spray tank contents into the water supply used for dilution or mixing.
- ◆ Easy access sprayer. Here the user can reach all parts of the sprayer for manual filling or maintenance.
- ◆ Automatic boom. In this operation the spray boom opens and folds automatically.
- ◆ Sprayer controls. These controls fitted on to the tractor are readily accessible from the driver's seat.
- ◆ Quick-change nozzles. Devices used for rapid nozzle changing and cleaning.
- ◆ *Storage*. Areas in the tractor designed for clean water, protective clothing, pesticide containers and spare nozzles.

## 2. Use of personal protective equipment

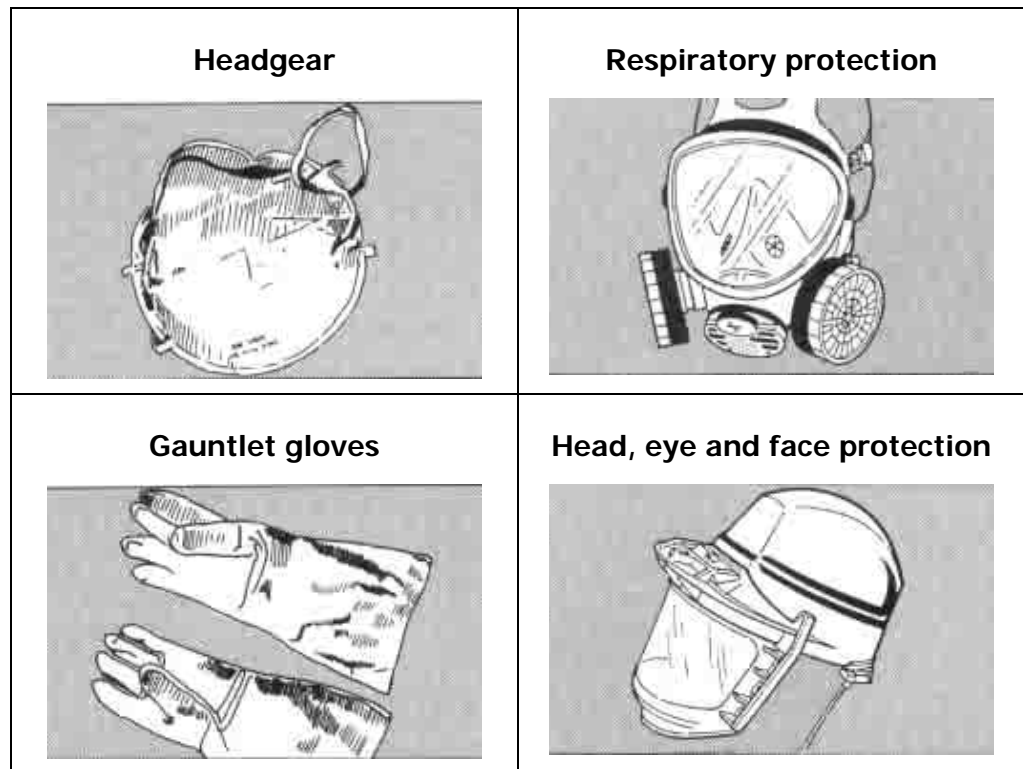
### Model Answer(s):

**Most agrochemicals present a risk to the user that may be controlled by engineering control measures. Where recourse to the above measures does not suffice, personal protective equipment should be used.**

**3. Protective clothing**

**Model Answer(s):**

Because of the nature of farm work, engineering control measures may not always be feasible. Protective clothing therefore remains a necessary part of working with agrochemicals. The items required would depend on the harmful effects of the agrochemical and the way in which it is used. In practice, labelled information supplied with the agrochemical will generally specify the level of protection required. Detailed information on the quality of various items such as the minimum thickness of gloves or the material from which they are made, e.g. neoprene, nitrile or butyl, may also be supplied. Similarly, prescribed items of respiratory protective equipment and the care necessary in their maintenance might be listed. Examples of personal protective clothing are given in figure 1.



*Figure 1. Examples of personal protective equipment*

**4. Selection, use and maintenance of personal protective equipment**

**Model Answer(s):**

**When specified on the product label, the selection of appropriate personal protective equipment, its use and maintenance are essential for the protection of a person using hazardous agrochemicals. Advice should be sought on the use of agrochemicals."**





**Explore your world:** Draw up a checklist for checking safety and repair of the following hand equipment:

Spades, Pick axes, Hammers, Crowbars, Spray pumps.

Learner Workbook: Page 10-11      Facilitator Guide: Page 15

## Spades

Critical checkpoints

**Model Answer(s):**

- Blade sharp.
- Handle/shaft not worn, split or splintered.
- Blade properly attached to shaft.

Repairs to be done.

**Model Answer(s):**

- Sharpen blade.
- Fix blade to shaft.
- Replace damaged handles.

Who to report to.

**Model Answer(s):**

- As per farm protocol.

## Pick axes

Critical check points.

**Model Answer(s):**

- Head fixed to handle.
- Handle not worn/split/splintered.

Repairs to be done.

**Model Answer(s):**

- Fix head to shaft.
- Replace damaged handles.
- Replace worn heads.

Who to report to.

**Model Answer(s):**

- As per farm protocol.

### Hammers

Critical check points.

**Model Answer(s):**

- Head fixed to handle.
- Handle not worn/split/splintered.
- Head smooth & without dents.

Repairs to be done.

**Model Answer(s):**

- Fix head to shaft.
- Replace damaged handles.
- Replace worn heads.

Who to report to.

**Model Answer(s):**

- As per farm protocol.

**Spray pumps**

Critical checkpoints.

**Model Answer(s):**

- Seals in tact.
- Lever operational.
- Nozzles correct.
- Nozzles unclogged.

Repairs to be done.

**Model Answer(s):**

- Replace worn seals.
- Replace lever seals.
- Replace damaged nozzles.
- Unclog nozzles.
- Fibreglas cracks if possible.
- Replace faulty units.

Who to report to.

**Model Answer(s):**

- As per farm protocol.

**My Notes ...**

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**Draw a picture:** Draw a picture of how you would arrange your tools store. Then motivate why tools have to be stored in a clean, safe state and in a separate area.

**Model Answer(s):**

Could vary between learners.

Note correct placement of twines; locking away of specific tools; not placing heavy tools above head height etc.

Let the group assess each other's pictures.

**Motivation**

Clean.

**Model Answer(s):**

Maintain in working condition; prevent damage from debris and residues, a measure to ensure that tools are accounted for.

Safe.

**Model Answer(s):**

Prevent accident, injury and liability; protect business and employees.

Separate.

**Model Answer(s):**

Easily identified, counted and accounted for; prevent tool damage from one tool to another.

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SO 5, AC 4

**Brainstorm:** Think of a time when someone got injured on your farm through the use of hand equipment and write down what happened.

Learner Workbook: Page 13

Facilitator Guide: Page 18

Now write down why you think that happened and what could have been done to avoid this from happening.

**Injury by hand tool**

**Model Answer(s):**

None supplied due to subjectivity of question. Note reasons for accidents reflecting: damaged tools, unsafe handling, unsafe storage, uninformed staff, use of incorrect tool for the job, etc. Note prevention as: maintain tools, handle tools correctly, inform & train staff, use correct tool for job, etc.

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SO 5, AC 1-4

**Discuss in your group:** Give 4 examples of how incorrect use of a piece of hand equipment would cause it to break and need repairs and maintenance.

Learner Workbook: Page 14

Facilitator Guide: Page 18

Now describe what the correct way would be to use that piece of equipment

**Example 1**

**Example 2**

**Example 3**

**Model Answer(s):**

None supplied due to subjectivity of question. Note reasons for accidents reflecting: damaged tools, unsafe handling, unsafe storage, uninformed staff, use of wrong tool for wrong job, etc. Note prevention as: maintain tools, handle tools correctly, inform & train staff, use correct tool for job, etc.

### Assessment Feedback Form

Comments / Remarks	
<p><b>Feedback to learner on assessment:</b></p>	
<p><b>Feedback from learner to assessor:</b></p>	
<p><b>Learner's Signature:</b></p>	<p><b>Date:</b></p>
<p><b>Assessor's Signature:</b></p>	<p><b>Date:</b></p>

# Summative Test and Attitude & Attribute Evaluation

**B**efore the knowledge test 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.

Please set up a knowledge test from the questions given as a guideline to learners and supply each learner with a test sheet.

Supply each report with the following heading:

<b>Unit Standard:</b>	116167	<b>NQF Level:</b>	1
<b>Learner Name:</b>			

Questions	Model Answers
1. What can the tool be used for?	<p>None supplied due to the specific nature of question. Note reasons for accidents reflecting:</p> <ul style="list-style-type: none"> <li>• damaged tools,</li> <li>• unsafe handling,</li> <li>• unsafe storage,</li> <li>• uninformed staff,</li> <li>• use of incorrect tool for the job, etc.</li> </ul> <p>Note prevention as:</p> <ul style="list-style-type: none"> <li>• maintain tools,</li> <li>• handle tools correctly,</li> <li>• inform &amp; train staff,</li> <li>• use correct tool for job, etc.</li> </ul>
2. What is the tool generally used for on the farm where you work?	
3. How must the tool be stored during break times in the day (e.g. lunch time)?	
4. How must the tool be cleaned at the end of the workday?	
5. How must the tool be cared for at the end of the workday?	
6. How must the tool be stored at the end of the workday?	
7. What has to be checked regarding the tool at the beginning of a job in which you will use the tool?	
8. How must you carry the tool?	
9. How must you work with the tool?	





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