



Citrus Orchard Foreman Occupational Learning

Work Scenario Guide

I2: Asset Monitoring

Qualification:	110667 – Occupational Certificate: Orchard and Vineyard Foreman
Work Scenario:	I2: Asset Monitoring
Learning Area:	I: Oversee the management and maintenance of production infrastructure, machinery and equipment
Scenario Description:	You need to monitor the condition of on-farm infrastructure, vehicles, machinery, tools and equipment to ensure that they are in good condition and ready for safe, effective use.

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Alignment Information

Qualification

The content of this learner guide is aligned to the following occupational qualification:

SAQA QUAL ID	Qualification Title			
110667	Occupational Certificate: Orchard and Vineyard Foreman			
Originator				
Development Quality Partner – AgriSETA				
Primary Or Delegated Quality Assurance Functionary			NQF Sub-Framework	
-			OQSF - Occupational Qualifications Sub-Framework	
QUALIFICATION TYPE		FIELD		SUBFIELD
Occupational Certificate		Field 01 - Agriculture and Nature Conservation		Primary Agriculture
Abet Band	Minimum Credits	Pre-2009 NQF Level	NQF Level	Qual Class
Undefined	147	Not Applicable	NQF Level 04	Regular-ELOAC

Modules

The content of this learner guide is aligned to the following modules of the occupational qualification above.

Module Code	Module Title	Level	Credits
Knowledge Modules			
611202-001-00-KM-01	Plant Structure and Physiology	4	5
611202-001-00-KM-02	Vineyard or Orchard Establishment	3	2
611202-001-00-KM-03	Vineyard or Orchard Manipulation Processes	3	8
611202-001-00-KM-04	Harvesting	3	4
611202-001-00-KM-05	Basic Principles of Plant Nutrition	4	4
611202-001-00-KM-06	Crop Protection	3	3
611202-001-00-KM-07	Assets in Horticultural Production	3	2
611202-001-00-KM-08	Farm Business Management and Farming Process Management	4	8
611202-001-00-KM-09	Human Resource Management and Processes	4	8
611202-001-00-KM-10	Overseeing Farming Resource Utilisation	4	8
Practical Skill Modules			
611202-001-00-PM-01	Organise, Allocate and Monitor Availability and Productive Use of Resources	4	5
611202-001-00-PM-2a	Set Team and Individual Performance Goals to Enhancing Team Performance	4	10
611202-001-00-PM-2b	Control Vineyard or Orchard Practices	4	10

611202-001-00-PM-03	Supply Accurate Daily Orchard or Vineyard and Production Information	4	10
Work Experience Modules			
611202-001-00-WM-01	Vineyard or Orchard Resource Optimisation	4	20
611202-001-00-WM-02	Skilled and Motivated Work Team Output	4	20
611202-001-00-WM-03	Daily Orchard or Vineyard and Production Information Availability	4	20

Learning Outcomes

The content of this learner guide is aligned to the following learning outcomes of the modules above.

Knowledge Topics	
Outcome Code	Module Title
KM-05-KT05	Irrigation
IAC0509	The principles of using irrigation efficiency reports to determine the need for maintenance and repairs are explained
KM-06-KT02	Identification of pests, diseases and weed
IAC0207	The reasons for regular inspection of equipment are listed
IAC0209	Fault-finding principles are explained
IAC0210	The reasons for good working condition of all equipment are motivated
IAC0211	The implications of faulty and poorly calibrated equipment on the production process and the product are evaluated
KM-07-KT01	Assets
IAC0102	The life cycle of an asset is described
KM-07-KT02	Use and storage of on-farm infrastructure, systems, tools, equipment and machinery
IAC0202	Methods of monitoring maintenance, sanitation and storage of tools and equipment are described
IAC0203	Methods of monitoring the condition of infrastructure and determining the need for repairs or maintenance are discussed
IAC0204	The importance of monitoring and maintenance of machines and equipment is explained
KM-07-KT03	Maintenance of on-farm infrastructure, systems, tools, equipment and machinery
IAC0301	Principles of optimum efficiency of machines and equipment and the effect on the durability of the asset and production are described
IAC0309	Methods of monitoring maintenance, sanitation and storage of tools and equipment are described
IAC0310	Critical factors for working condition of infrastructure are outlined
IAC0311	Methods of monitoring the condition of infrastructure and determining the need for repairs or maintenance are evaluated
IAC0314	Reasons for regular inspections and checks are explained
KM-10-KT02	Management of Agricultural Assets
IAC0204	Aspects which will prolong the life span of a physical asset are identified
IAC0205	Factors which will shorten the life span of a physical asset are identified
IAC0206	The effect of wear and tear on the durability of the infrastructure, machines and equipment is described
IAC0208	The principles of fault finding and troubleshooting are discussed

IAC0209	The principles of regular inspections and checks are delineated
Practical Skills	
PM-01-PS04	Conduct basic fault finding on tools, equipment and machinery and report on non-conformance and wear and tear
IAC0401	Correct inspection techniques are applied
IAC0402	Fault finding techniques are correctly applied
IAC0403	Machine and equipment faults are correctly identified
PA0401	Practically inspect equipment and machinery for operability
PA0402	Identify faults
PA0403	Perform pre-start up checks of equipment
PA0405	Inspect equipment to ascertain that it was properly cleaned and stored

Chapter 1

Asset Monitoring

learning outcomes

The content of this chapter is aimed at helping you to:

- Monitor the use of on-farm assets.

1. Asset Monitoring

As you now know, assets can be very expensive and important to the proper functioning of a farm. This means that we need to make sure that they are always running properly and being well managed and operated. The only way to be sure of this is good monitoring. As with other kinds of monitoring, it is best if you create a system for asset monitoring. This system will be based around good recordkeeping (which we discussed in earlier material).

2. Tracking Usage

Different assets are used for different jobs, in different amounts, and at different times. This means that you must monitor all usage so that you can keep track of wear-and-tear and plan maintenance when needed.

Obviously, you can't be there to watch every time an asset is used, so you will need to train your workers on properly keeping usage records. These records should include the number of hours each piece of equipment is used for and what it was used for, as this is used to determine when maintenance is needed. Some assets may have built-in electronic systems that can track usage for you, such as advanced tractors or irrigation systems.

3. Visual Inspections

While tracking usage is very important, you must also ensure that workers and supervisors conduct regular visual inspections of the assets. These checks should happen during routine maintenance but also should occur regularly (such as once a week) regardless of maintenance.

When inspecting machinery, you should first look for visible signs of wear, such as rust, cracks, or loose bolts. Next, (for assets that have them), you should check the parts of the asset individually. For example, for a tractor you should check the tyres, engine, gears, suspension, etc. Ask manufacturers or suppliers about which checks should be performed.

summary

Chapter 1 – Asset Monitoring

- Assets can be very expensive and important to the proper functioning of a farm.
- The best way to ensure that assets are functioning properly is through good monitoring.
- A good asset monitoring system is based around effective recordkeeping.
- Different assets are used for different jobs, in different amounts, and at different times, so all usage must be tracked.

- All workers that use assets need to be properly trained on asset usage tracking and recordkeeping.
- Visual asset inspections should occur regularly, not just during routine maintenance.
- When inspecting assets, you should first look for visible signs of wear, before going through each part of the asset in turn.

assessment activities

- ✓ **Activity P1:** Complete this activity to test your knowledge of asset monitoring.
- ✓ **Activity F1:** Complete this activity to test your knowledge of the entire module.