



Citrus Orchard Foreman Occupational Learning

Work Scenario Guide

I3: Maintenance Planning

Qualification:	110667 – Occupational Certificate: Orchard and Vineyard Foreman
Work Scenario:	I3: Maintenance Planning
Learning Area:	I: Oversee the management and maintenance of production infrastructure, machinery and equipment
Scenario Description:	You need to participate in developing maintenance plans for infrastructure, vehicles, machinery, tools and equipment so that they remain in good condition and ready for safe, effective use.

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Content originator:
Citrus Academy

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Ukudla Namanzi (Pty) Ltd

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Contents

Alignment Information	4
Qualification	4
Modules	4
Learning Outcomes	5
Chapter 1 Maintenance Planning	6
1. Maintenance Planning	6
2. Maintenance Plan Components	6
3. Emergency Maintenance	6
4. Developing a Maintenance Plan	7

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
IAC0510	Irrigation system maintenance plans and emergency response procedures are outlined
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
KM-07-KT03	Maintenance of on-farm infrastructure, systems, tools, equipment and machinery
IAC0306	Principles of agricultural equipment maintenance are outlined
IAC0308	Infrastructure maintenance plans are discussed
IAC0312	Infrastructure maintenance plans are discussed
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
IAC0207	The principles of scheduled maintenance is outlined
IAC0210	The calibration of equipment and the need for accuracy is discussed."
Practical Skills	
IAC0401	Correct inspection techniques are applied
IAC0402	Fault finding techniques are correctly applied
IAC0403	Machine and equipment faults are correctly identified
IAC0404	Recording of equipment and machinery condition is appropriately accomplished
PA0401	Practically inspect equipment and machinery for operability
PA0402	Identify faults
PA0403	Perform pre-start up checks of equipment
PA0404	Monitor the basic maintenance practices
PA0405	Inspect equipment to ascertain that it was properly cleaned and stored

Chapter 1

Maintenance Planning

learning outcomes

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

- Plan required maintenance activities.

1. Maintenance Planning

Maintenance is a broad term for all the different actions that you perform to keep your assets, tools, equipment, and infrastructure in a good, working condition for as long as possible. As you can imagine, this means that maintenance is very important on a farm. Maintenance planning involves creating plans to make sure that maintenance is always performed when it should be, by the right people, in the right way.

Good maintenance is preventive, meaning that it involves regular, scheduled maintenance practices to prevent issues before they occur. This might include tasks such as lubricating parts of a vehicle, replacing worn-out components in electrical systems, and inspecting machinery for wear and tear.

You would always rather put some time aside to perform good, preventive maintenance, rather than wait for the equipment to fail and slow down or even stop production. These days there are advanced programs that can predict when equipment might fail, and these will obviously make planning a lot easier.

2. Maintenance Plan Components

A maintenance plan for a farm can be a large, detailed document, and will vary from farm to farm. There are a few common components in most maintenance plans, which we will discuss now.

Firstly, there should be an inventory of all the assets, tools, equipment and infrastructure that will require maintenance. If your farm is well-managed, you should be able to easily get this inventory from farm management.

You should of course also include what specific maintenance each of these items will require, as well as details such as the frequency, the required workforce, and any special notes.

Finally, you should include a budget for maintenance activities. The budget should include costs for parts, labour, and any external services needed. You should work with whoever manages the farm's finances and general budgeting for assistance with this.

As we said above, your maintenance plan may need to look different to the one described above, including more or even less information, so you should be open to adapting it to your farm's needs.

3. Emergency Maintenance

Even if you create the best maintenance plan possible, and your workers maintain and use their equipment absolutely correctly, unexpected failures can still occur. This means that your plan needs to include information about emergency repairs. This information should

include a list of emergency contacts (such as specialised repairmen), locations of spare parts, and possibly even instructions for emergency repairs.

4. Developing a Maintenance Plan

Now that we know what should be in a maintenance plan, let's discuss the process of developing a maintenance plan. This plan will be used to create maintenance schedules, which are discussed in other material.

Firstly, as we mentioned already, you should create or get a hold of an inventory of all tools, equipment, and infrastructure on the farm, and identify which items need regular maintenance. Make special note of the maintenance tasks that are performed on the most important assets, which the farm cannot function without, such as irrigation systems.

Next, for each type of equipment, create a checklist that includes the maintenance tasks required. This will make sure that nothing is overlooked during routine checks. For example, a checklist for an irrigation system may include tasks like checking for leaks, cleaning filters, and inspecting the pump's performance.

You should then develop timelines for completing maintenance tasks. This will help with organising workers and minimising disruption to production practices. You can also assign workers now, making sure that they are well trained in the necessary maintenance tasks.

Your maintenance plan should be reviewed and any necessary changes made at least once a year. If you see that maintenance is consistently not being performed properly, then you should immediately review the maintenance plan.

summary

Chapter 1 – Maintenance Planning

- Maintenance refers to the actions performed to keep assets, tools, equipment, and infrastructure in a good, working condition for as long as possible.
- Maintenance planning involves creating plans to make sure that maintenance is always performed when it should be, by the right people, in the right way.
- Good maintenance is preventive, meaning that it involves regular, scheduled maintenance practices to prevent issues before they occur.
- A maintenance plan for a farm can be a large, detailed document, and will vary from farm to farm.
- A maintenance plan should include an inventory of all assets that will require maintenance, what maintenance is required, any additional necessary details, and a budget.
- When creating a plan, create a checklist that includes the maintenance tasks required for each asset, as well as timelines for completing maintenance tasks.
- Your maintenance plan should be reviewed and any necessary changes made at least once a year.
- If you see that maintenance is consistently not being performed properly, then you should immediately review the maintenance plan.

assessment activities

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