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Citrus Orchard Foreman Occupational Learning

Work Scenario Guide

I6: Consumables and Spares

Qualification:	110667 – Occupational Certificate: Orchard and Vineyard Foreman
Work Scenario:	I6: Consumables and Spares
Learning Area:	I: Oversee the management and maintenance of production infrastructure, machinery and equipment
Scenario Description:	You need to ensure that sufficient spares, consumables and other repairs and maintenance necessities are on hand at all times in case of breakdowns or failures.

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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-07-KT01	Assets
IAC0105	An inventory of tools, equipment and maintenance items is compiled
IAC0106	The basic principles of agricultural mechanisation are outlined
KM-07-KT03	Maintenance of on-farm infrastructure, systems, tools, equipment and machinery
IAC0307	The use of production plans to determine tools, equipment and machinery needs and maintenance requirements is explained
KM-10-KT02	Management of Agricultural Assets
IAC0211	The breakdown of machinery and equipment is discussed in terms of corrective actions that should be taken
Practical Skills	
PM-01-PS03	Organise and allocate equipment and agri-chemicals to the work team to perform Vineyard or orchard practices
PA0302	Describe the process of the production unit to organize availability of equipment and chemicals (draw from the store)

Chapter 1

Consumables and Spares

learning outcomes

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

- Manage and order consumables and spare parts.

1. Consumables and Spares

On a citrus farm, there are two types of stock that are 'used up', namely consumables and spares. Consumables are discussed in the material on production stock management, so they will not be discussed further here.

Spare parts are used when a part of a machine or equipment breaks and needs to be replaced. Having these on hand allows for minimal downtime and maintaining farm productivity. Effective management of spare parts ensures that essential parts are always available when needed, while avoiding carrying unnecessary stock, which can be a waste of money and manpower.

Common spare parts include:

- Engine parts, such as filters, spark plugs, belts, hoses, and air and oil filters.
- Hydraulic parts, such as O-rings, pumps, seals, and cylinders.
- Electrical parts, such as fuses, batteries, wiring, alternators, and relays.
- Other vehicle parts such as tires, wheels and bearings.
- Irrigation system parts such as valves, pumps, and filters.

2. Spare Parts Management

The most basic part of managing spare parts involves keeping an accurate inventory of all the necessary parts to ensure that the parts are available whenever equipment fails. You should keep an organized inventory of commonly needed spare parts, ideally in an electronic format to streamline the management.

This inventory should include the part numbers, descriptions, and quantities of the items in stock. You should also record when each part was last used or replaced, so that you know how long each part should last for. Using an electronic system is advised as some of these systems can be set up to notify you when parts are needed, and even order replacement parts automatically.

You should ideally take a forward-thinking approach to stock management, by using your system to predict when parts will be needed, so that you won't be caught without spares during an emergency.

This forward-thinking approach includes analysing equipment usage patterns, maintenance logs, and historical repair data to predict when certain spare parts will likely need replacing.

For example, if you know that a particular part has historically needed replacement every 1,000 hours of operation, you can plan when to order more after a certain number of operational hours.

3. Supplier Relationships

It is very important that you build good relationships with suppliers of spare parts. Having a personal contact with a supplier can reduce the time needed for getting replacement, and you may even be able to work out deals to get the parts for cheaper than normal.

4. Budgeting and Cost Control

As we mentioned earlier, spare parts management is important not just for ensuring that enough parts are available, but also that there are not too many spare parts. If you order more spare parts than you need, this is an unnecessary waste of money, as well as taking up space in the storeroom.

This means that it is good practice to create a budget for spare parts. Effective budgeting will mean that you always have enough money to get the right number of spare parts without overspending.

You should prepare a budget that estimates the number of spare parts needed in a certain period (such as a year), based on operational needs, historical data, and planned repairs or replacements. You should also have some extra funds available for emergencies, such as the need for urgent repairs or the sudden breakdown of important equipment.

Another part of managing spare parts expenditure is to reduce wastage. Parts will last longer if the equipment they are on is properly maintained and used. If you can make sure that your workers are properly looking after their equipment, you may find that you need less spares.

summary

Chapter 1 - Consumables and Spares

- Spare parts are used when a part of a machine or equipment breaks and needs to be replaced.
- Having spare parts on hand allows for minimal downtime and maintaining farm productivity.
- Common spare parts include engine parts, hydraulic parts, electrical parts, other vehicle parts, and irrigation system parts.
- You should keep an organized inventory of commonly needed spare parts, ideally in an electronic format to streamline the management.
- This inventory should include the part numbers, descriptions, and quantities of the items in stock, and when each part was last used or replaced.
- Stock should be managed with a forward-thinking approach by using your system to predict when parts will be needed.
- Having a personal contact with a supplier can reduce the time needed for getting a replacement, and you may even be able to work out deals on the parts.
- You should prepare a budget that estimates the number of spare parts needed in a certain period.
- This budget should be based on operational needs, historical data, and planned repairs or replacements.

assessment activities

- ✓ **Activity P1:** Complete this activity to test your knowledge of consumables and spare parts.
- ✓ **Activity F1:** Complete this activity to test your knowledge of the entire module.