

# Facilitating and Learning Materials

NATIONAL CERTIFICATE 2

TRADE AREA:

## CASHEW VALUE CHAIN

UNIT 2:

**Management of scion banks in cashew production**



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<b>Content</b>	<b>Page</b>
<b>0</b> Introduction	<b>5</b>
<b>LO 1 Demonstrate skills for planning scion bank operations</b>	<b>6-14</b>
a) Explain planning of scion bank operations	
b) State the importance of planning	
c) State the factors to consider for planning	
d) State the activities that require planning	
e) Develop an activity plan for scion bank operations	
<b>LO 2 Demonstrate skills for monitoring scion bank operations</b>	<b>15-21</b>
a) Explain monitoring of scion bank operations	
b) State the importance of monitoring	
c) State the activities that require monitoring	
d) State the tools and materials required for monitoring	
e) Monitor scion bank operations	
<b>LO 3 Demonstrate skills for documenting procedure in scion bank operations</b>	<b>22-26</b>
a) Explain documenting procedure in scion bank operations	
b) State the importance for documentation	
c) State the factors to consider in documentation	
d) Document scion bank operations	
<b>LO 4 Demonstrate skills for managing activities in scion bank operations</b>	<b>27-35</b>
a) State the importance of managing activities in scion bank operations	
b) State the factors to consider in managing activities	
c) State the activities that require managing	
d) State the tools used and material required for managing	
e) Manage scion bank operation	
<b>6 Reflection on your learning in this module</b>	<b>36</b>
<b>7 References</b>	<b>37</b>

## Table of Learning Outcomes (LOs)

LO 1	Demonstrate skills for planning scion bank operations
LO 2	Demonstrate skills for monitoring scion bank operations
LO 3	Demonstrate skills for documenting scion bank operations
LO 4	Demonstrate skills for managing activities in scion bank operations

### What is a QR Code (Quick Response Code)?

A QR code (quick response code) is a type of **2D bar code** that is used to provide easy access to information through a **smartphone**.





*Example of a QR code*

### How to scan the QR Code

- You open an app called *barcode reader* and point the phone camera at the QR code, the app works together with the phone's camera.
- The barcode scanner reads the code and takes you to either the webpage with the extra information or to a video with extra information for independent studies.

After certain information you will see a table with a QR code as well as the title of the document or video of the QR code and an icon, like the one below.

- You can either scan the QR code with your smartphone or
- Ctrl + Click on the heading which will take you to the same information.

For more information scan the QR below or follow the URL hyperlink		
	<a href="#">[QR Code] How to Use QR Codes</a>	

## 0. INTRODUCTION AND PRELIMINARY NOTES

The ultimate success of an orcharding enterprise largely depends upon the quality and genuinity of planting materials as nursery plants are the foundation of the orchard. The variation of scionwood and rootstock has great bearing on the productivity of an orchard.

This guide explains the main steps for maintenance of a cashew scion bank. A scion bank is a plantation for the purpose of producing scions for grafting.

Do you already know why it is important to follow Good Agricultural Practices (GAP) when maintaining cashew plantations and cashew scion banks?

If you follow the steps for maintenance of cashew plantations and scion banks at the appropriate time of the year, you will produce a lot of high-quality raw cashew nuts and cashew apples for more than 25 years. Do not miss a step! Apply your knowledge and skills perfectly to maintain your cashew scion bank. In this unit the learner will obtain and learn skill based on scion bank operation planning, scion bank operation monitoring, scion bank operation documentation and finally scion bank operation management.



## LO 1: DEMONSTRATE SKILLS FOR PLANNING SCION BANK OPERATIONS

### a) What Is Planning of Scion Bank Operations?

Planning is the beginning of the process in which you will develop a scion bank for your cashew trees. The planning process means that you will make decisions on certain things in the operation before hand to ensure that the operation goes smoothly and as planned. In planning for scion bank operations, you will establish timelines and outline procedure of how things should be done.



### b) Importance of Planning

In scion bank operations it is important that there is a set plan and outline of activities that need to take place in this process. Below are some of the reason planning is important in the operations of scion banks:

- It helps managers to improve productivity and efficiency, by establishing objectives and selecting a course of action, for the benefit of the scion operation.
- It minimises risk and uncertainty in the activities that would need to be done.
- It facilitates the coordination of the scion bank operation and eliminates unproductive work.
- It uncovers and identifies future opportunities and threats.



**c) Factors to Consider for Planning**

**a) Harvesting**

It is important to know the exact time that you plan on harvesting the cashew trees as you will need to work back from the time of harvesting in order to determine when the seedlings should be planted and the scion bank operations should be established.

**b) Climate**

Cashew trees are sun loving plants and this means that the climate that you will be growing the trees needs to be in summer and spring.

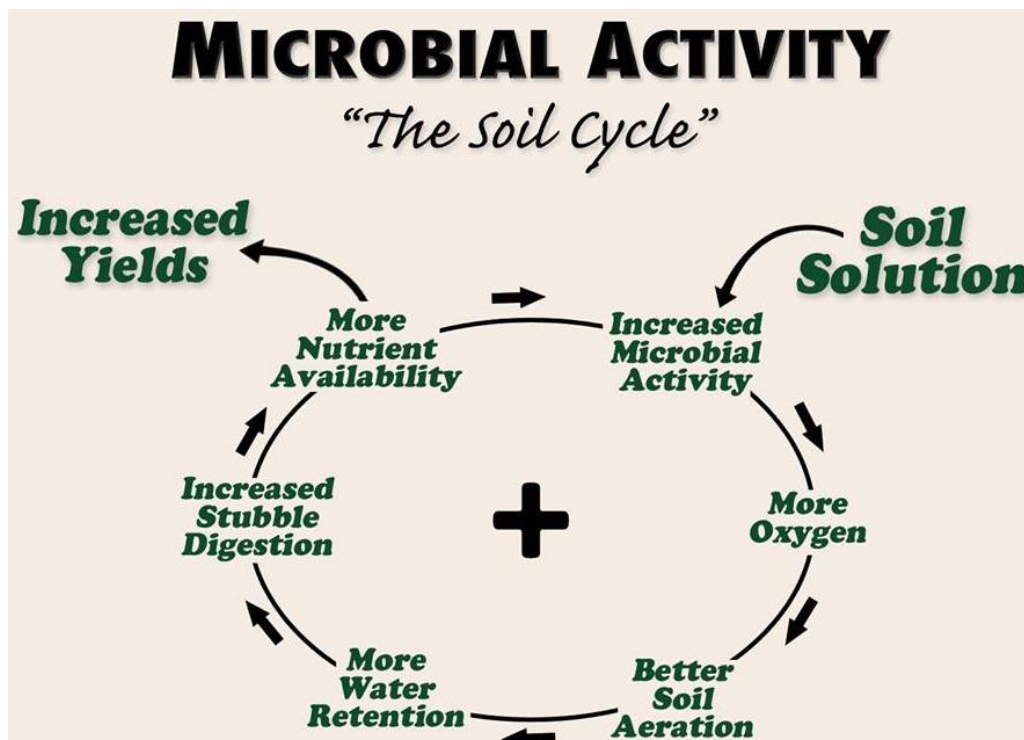
**c) Availability of water source**

Is there going to be enough water for the duration that the cashew trees will be growing? It is extremely important to have enough water available to you as the cashew trees required a lot of water to grow.

**d) Nutritional requirements**

Different soils require different nutrients for the growth of cashew. As seen in the previous unit there are several soil tests that can be done.

Based on the result of the soil test that have been done determine what specific nutrients you will need and over regular time the nutrients will have to be added into the soil.



### e) Pests and disease control

In order to keep the trees healthy and pest free certain pesticides and insecticides will have to be sprayed onto the trees. Determining when and what pesticide to you will be based on what pests, insects and disease may be present in that area of land.



### f) Market research

When planning for scion bank operations it is important to do some research on the needs of the consumers and what the market would prefer regarding the processed product.



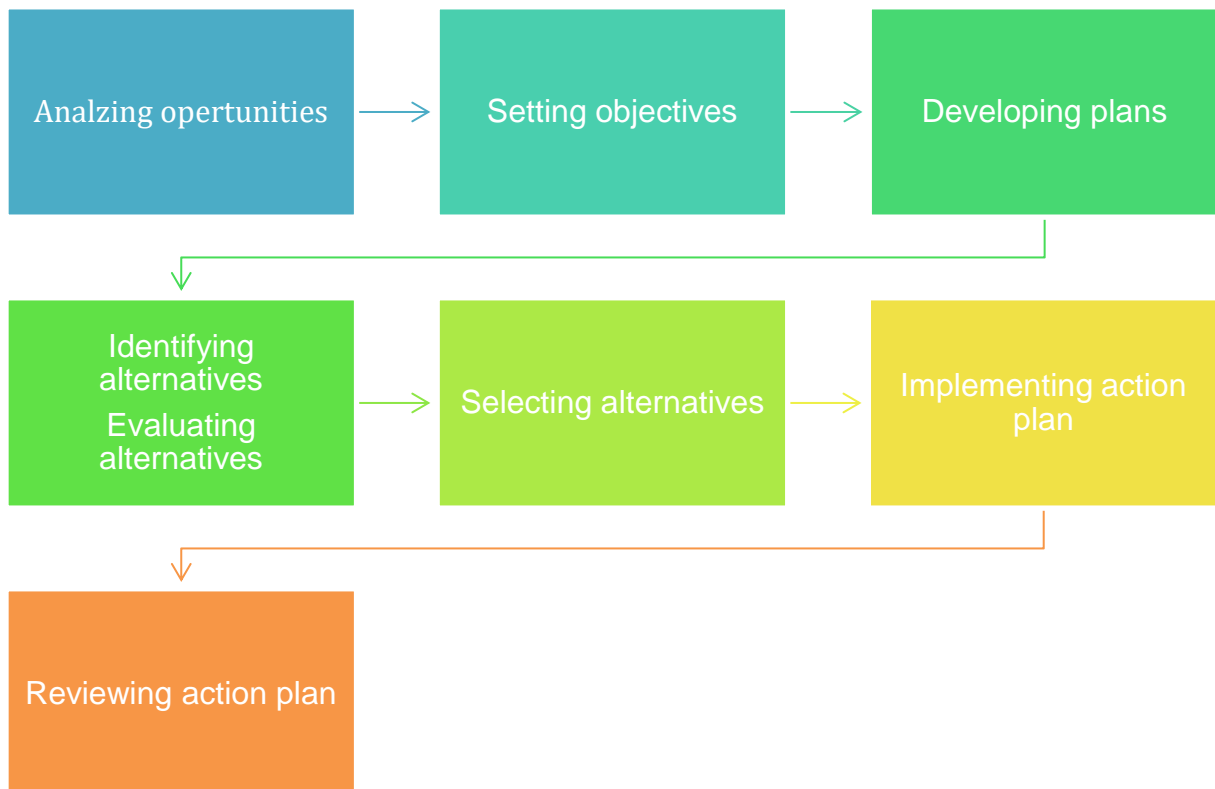


### g) Finance





When planning for scion bank operations it is important that the amount of finance and the duration that is finance is needed as you will always need to keep stock of fertilizers, pest and disease control products etc.



### d) Activities required for planning



### e) Materials Required for Planning

<p><b>Pen</b></p>	
<ul style="list-style-type: none"> <li>• Used to write the operation plan.</li> </ul>	
<p><b>Notepad</b></p>	<p><b>2018</b></p>  <p><b>2019</b></p> 
<p><b>Calendar</b></p>	<ul style="list-style-type: none"> <li>• Used to determine date of operation activities.</li> </ul>

### Job Task 1: Managing scion banks



Situation: You are a supervisor over an area of a farm that is preparing to grow cashew trees. Your job is to construct an action plan for the work that needs to be done on the farm.

#### Instructions:

1. Construct an action plan for the work that needs to be done.
2. Include the person who will perform the job and how much time he will have to do the work.
3. You have **1 hour**.

#### Performance Criteria:

Use the checklist to follow the stated steps in managing scion bank operations. Rate your own performance critically and honestly after you have completed each activity.



Excellent



Okay



Try Again

Daily PM Activities	Rate
1. The action plan was constructed using the example with the correct information filled in.	
2. Everyone responsible and the date were filled in.	
3. The time given was adhered to.	

ACTION	DESIRED OUTCOME	RESOURCE	PERSON RESPONSIBLE	PERSON ACCOUNTABLE	PERSON CONSULTED	PERSON INFORMED	DATE OF COMPLETION
Site selection	Appropriate land to plant seedlings	Soils testers, notebook, pen, measuring tape	Farm owner / Supervisor	Farm owner	Farm owner, extension worker, department of agriculture	Department of agriculture and farm owner	



ACTION	DESIRED OUTCOME	RESOURCE	PERSON RESPONSIBLE	PERSON ACCOUNTABLE	PERSON CONSULTED	PERSON INFORMED	DATE OF COMPLETION



## SELF ASSESSMENT

Explain planning of scion bank operations.

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State the importance for planning.

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Explain two factors factors to consider for planning scion bank operations.

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Name the activities that require planning scion bank operations.

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List the material required for planning scion bank operations.

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## LO 2: DEMONSTRATE SKILLS FOR MONITORING SCION BANK OPERATIONS



### a) Monitoring of Scion Bank Operations

Monitoring is the action of observing and checking the progress or quality of the action plan and the job specified over a period using systematic review.

A systematic review is the review of all parts of a process using clearly defined guidelines and checking operational progress against a set plan.

### b) Importance of Monitoring Scion Bank Operations

If the scion bank operation is not monitored correctly, the progress against plans cannot be determined. It is therefore important to continuously monitor the operations and take the necessary actions to ensure the desired outcomes were achieved



### c) Factors to Consider When Monitoring

When monitoring you will need to think about the conditions that the farm is kept as well as all the factors that you had to consider in the previous learning outcome.

Here is some question to ask yourself:

**1. Was the Action Plan Laid Out Properly and The Task Needed to Be Done Specified Correctly?**

If the action plan does not state what needs to be done, who would be performing the action and the time expectations clearly the job cannot be monitored properly.

**2. Is the task given accomplishable in the time given?**

When the task is given to the person the amount of time that that person would have to complete the amount of time give should be fair and reasonable for the action that is required.

**3. Is the person competent in being able to monitor the scion bank operation process?**

If the person is incapable of performing the duties of monitoring, then the person that task or person they would be monitoring would not be monitored properly.

**4. Fertilizer**

If the wrong fertilizer is used the pH of the soil will change as well as the growth of the trees.

**5. Water**

The amount of water that is the soils need to be monitored and the amount of water that cashew trees need must be properly monitored to be properly monitored.





## d) Activities Required in Monitoring

When monitoring action plans and work that needs to take place it could be done in several different ways. When monitoring the activities as well as the cashew trees to determine whether the plants, soil, moisture and if the job has been done correctly you can use these methods that are mentioned below:

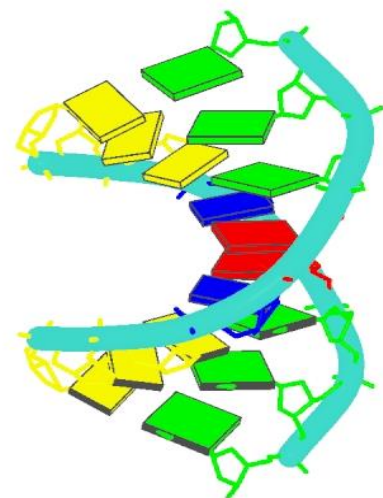


### 1. Process Monitoring/ Physical Progress Monitoring

In process monitoring, routine data is collected and analyzed in order to establish whether the project tasks and activities are leading towards the intended project results. It authenticates the progress of the project towards the intended results. This kind of monitoring measures the inputs, activities and outputs. In other words, process monitoring answers the questions “what has been done so far, where, when and how has it been done?”

### 2. Technical monitoring

Technical monitoring involves assessing the strategy that is being used in project implementation to establish whether it is achieving the required results. It involves the technical aspects of the project such as the activities to be conducted.



### 3. Impact Monitoring

Impact monitoring is a type of monitoring which continually assesses the impact of project activities to the person responsible for the activities that need to take place. Indeed, impacts are usually the long-term effects of a project. However, for projects with a long-life span or programs (programs have no defined timelines) there emerges a need for measuring impact change in order show whether the general conditions of the intended beneficiaries are improving or otherwise.








### 4. Assumption monitoring

Any project has its working assumptions which must be clearly outlined in the project log frame. These assumptions are those factors which might determine project success or failure, but which the project has no control over. Assumption monitoring involves measuring these factors which are external to the project. It is important to carry out assumption monitoring as it may help to explain success or failure of a project.



### e) Tools and Material Require for Monitoring

<b>Pen</b>	
<ul style="list-style-type: none"> <li>Used to write the operation plan.</li> </ul>	
<b>Notepad</b>	
<ul style="list-style-type: none"> <li>Used to take notes, make calculations and time measurements.</li> </ul>	
<b>Magnifying glass</b>	
<ul style="list-style-type: none"> <li>Used to see small pests and insects you cannot see normally.</li> </ul>	
<b>Jar</b>	
<ul style="list-style-type: none"> <li>To take soils samples and water samples.</li> </ul>	
<b>Sweep net</b>	
<ul style="list-style-type: none"> <li>To catch any flying insect.</li> </ul>	

## Job Task 2: Managing scion banks



Situation: You are a supervisor over an area of a farm that is preparing to grow cashew trees. Your job is to monitor the work the work that needs to be done on the farm.

### Instructions:

1. Using one of the methods of monitoring monitor the work and plants on the farm.
2. Do the necessary test that need to be done.
3. You have **2 hours**.

### Performance Criteria:

Use the checklist to follow the stated steps in managing scion bank operations. Rate your own performance critically and honestly after you have completed each activity.



Excellent



Okay



Try Again

Daily PM Activities	Rate
1. The work and plants were monitored correctly.	
2. The necessary tests were done.	
3. The time given was adhered to.	

## SELF ASSESSMENT

Explain monitoring of scion bank operations.

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State the importance of monitoring.

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Explain two factors to consider in monitoring.

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State the activities that require monitoring.

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State the tools and materials required for monitoring.

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## LO 3: DEMONSTRATE SKILLS FOR DOCUMENTING SCION BANK OPERATIONS

### a) Procedure for Documenting Scion Bank Operations

#### Step 1: Identify and Name the Process

Figure out which process you are going to document first. Determine its purpose (why and how the process will benefit the organization) and provide a brief description of the process.

#### Step 2: Define the Process Scope

Provide a brief description of what is included in the process and what is out of the process scope, or what is not included in it.

#### Step 3: Explain the Process Boundaries

Where does the process begin and end? What causes it to start? And how do you know when it's done? Get these boundaries well defined.

#### Step 4: Identify the Process Outputs

Establish what will be produced by the process or what result the process will achieve once it is completed.

#### Step 5: Identify the Process Inputs

List down what resources are necessary to carry out each of the process steps.

#### Step 6: Brainstorm the Process Steps

Gather all information on process steps from start to finish. Either start with what triggers the process or start at the end of the process and track back the steps to the starting point.

The brainstorming session should involve those who are directly responsible for the process tasks or someone with extensive knowledge of it, as they can provide precise data.

#### Step 7: Organize the Steps Sequentially

Take the list of steps you've come up with and put them in a sequential order to create a process flow.

Keep the number of steps to a minimum and if a step includes more than one task, list them under the main step.

### Step 8: Describe who is Involved

Decide everyone who will be responsible for the process tasks. Define their roles. Keep in mind to mention their job title rather than their name.

Also be considerate about those who would be referencing the document. Write it in a way that any employee with a reasonable knowledge can read and understand it.

### Step 9: Visualize the Process

This is to improve clarity and readability of your documentation. Using a process flowchart, neatly visualize the process steps you've identified earlier.

### Step 10: Note down Exceptions to the Normal Process Flow

A business process may not always follow the same flow due to various reasons. Mention these exceptions and what steps will be taken to address them.

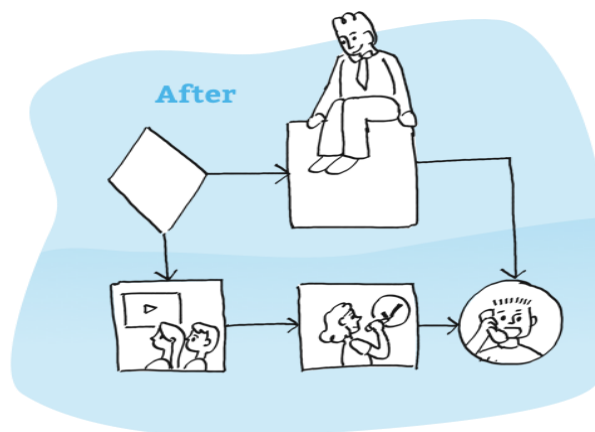
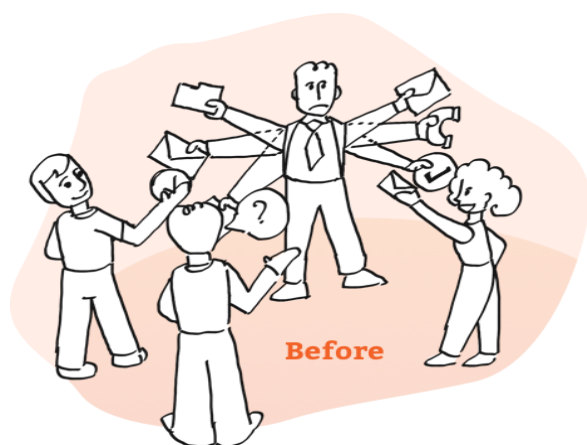
### Step 11: Add Control Points and Measurements

Identify where risks could occur in the process and add control points to help the process owner when monitoring the process.

Establish measurements to determine the effectiveness of the process and to help improve it.

### Step 12: Review and Test the Process

Gather everyone involved and review the process flowchart you've mapped. Are there any missing steps? Is everything in order? Once done, test the process and see if you've missed anything.



## b) Importance of Documentation

It is important to document scion bank operations so that if you ever need to go back to check something or if you are not sure on something all the information is there for you to look at. Also, if anything happens that you need to record of processes and activities that have taken place, they would be easy to access.

## c) Factors to Consider in Documentation

### Specification

When documenting scion bank operations, the jobs, activities, calculation, results and so forth need to be specified. You will need to be detailed in the writing of the documentation, so you do not get easily confused.



### Review

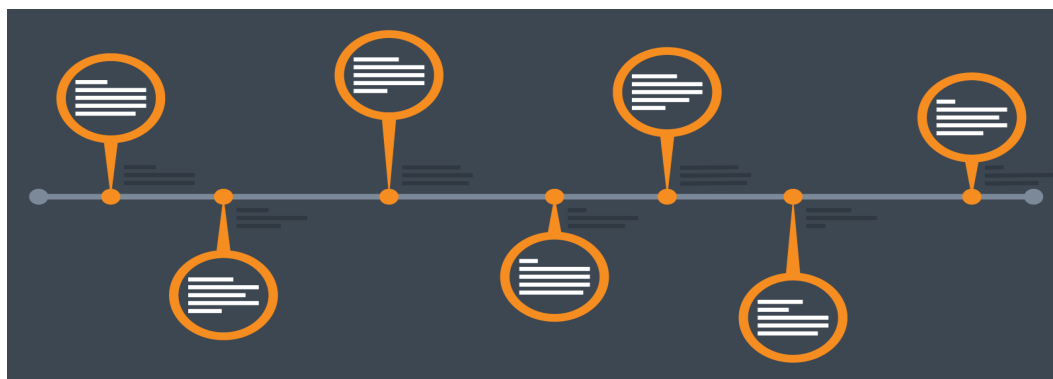
The documentation will need to be review by either the person who owns the company and the supervisor of the farm.

### Risks

When writing and documenting activities that have done on the farm you will have to consider the risk in doing them in certain ways, therefore the action plan in in place.

### Timelines

The time that you have specified in the action plan will need to be considered when documenting the activities of a scion bank operation.





### Job Task 3: Managing scion banks



Situation: You are a supervisor over an area of a farm that is preparing to grow cashew trees. Your job is to document the work the work that needs to be done on the farm.

#### Instructions:

1. From you action plan capture and document all the activities that have taken place keeping in mine that you have specified a certain amount of time for each activity.
2. The name and the job description need to be made clear.
3. You have **1 hour**.

#### Performance Criteria:

Use the checklist to follow the stated steps in managing scion bank operations. Rate your own performance critically and honestly after you have completed each activity.



Excellent



Okay



Try Again

Daily PM Activities	Rate
1. You documented the activities by following the steps above.	
2. The descriptions were made clear.	
3. The time given was adhered to.	

## SELF ASSESSMENT

Briefly explain documenting procedures in scion bank operations.

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State the importance for documentation.

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Briefly explain the factors to consider in documentation.

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## LO 4: DEMONSTRATE SKILLS FOR MANAGING ACTIVITIES IN SCION BANK OPERATIONS

### a) Importance of Managing Activities

It is important to manage activities that take place on the farm as the activities are sequential and limited by the growing season. If a cycle is missed it means another year is lost before production takes place. This means that planning and the management of the activities in the plan are critical to production.



### b) Factors to Consider in Managing

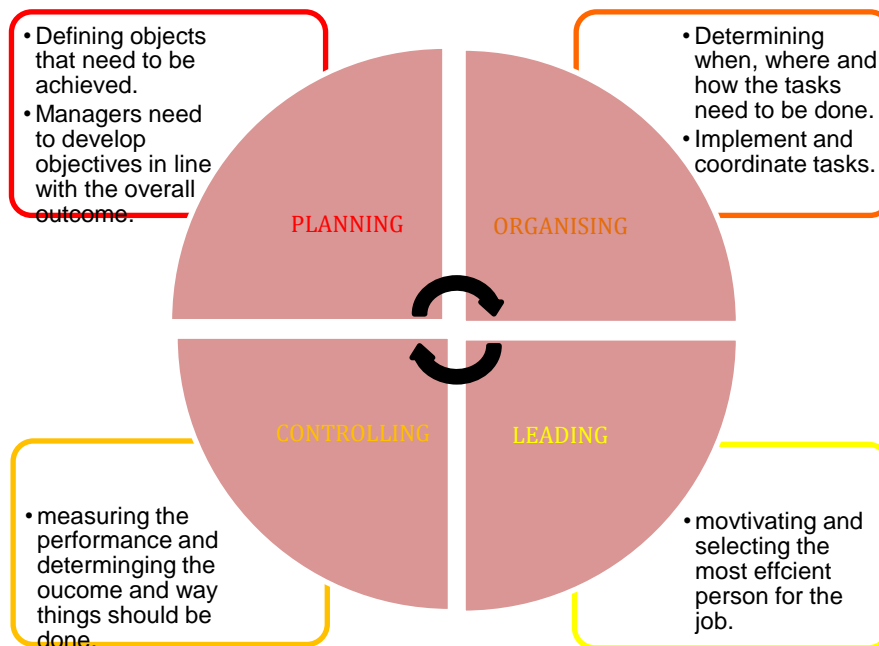
#### Time, Beginning of production and Growing season

If time is not correctly managed it will affect the time of production and how long the trees need for actual growing. If you do not manage the action plan set out and the timelines that outline the end production would be delayed.





#### Action plan

You will need to follow the action plan correctly and efficiently as this outlines the procedures and activities that need to take place.

#### Managing Activities



### c) Tools and Material Required for Managing

<b>Pen</b>	
<ul style="list-style-type: none"> <li>• Used to write the operation plan.</li> </ul>	
<b>Notepad</b>	
<ul style="list-style-type: none"> <li>• Used to take notes, make calculations and time measurements.</li> </ul>	
<b>Calculator</b>	
<ul style="list-style-type: none"> <li>• Used to make calculations of any measurements etc.</li> </ul>	
<b>Clipboard</b>	
<ul style="list-style-type: none"> <li>• Used for clipping your notebook onto so that you can write.</li> </ul>	

### Job Task 4: Managing scion banks



Situation: You are a supervisor over an area of a farm that is preparing to grow cashew trees. Your job is to manage work that needs to be done on the farm.

#### Instructions:

1. Following the example below develop objectives for 2 of the actions needed to be done in action plan developed from the first learning outcome.
2. You have **2 hours**.

#### Performance Criteria:

Use the checklist to follow the stated steps managing scion bank operations. Rate your own performance critically and honestly after you have completed each activity.



Excellent



Okay



Try Again

Daily PM Activities	Rate
1. The objective plan was developed according to the action plan.	
2. You adhered to the time given.	

ACTION	DESIRED OUTCOME	RESOURCE	PERSON RESPONSIBLE	PERSON ACCOUNTABLE	PERSON CONSULTED	PERSON INFORMED	DATE OF COMPLETION
Site selection	Appropriate land to plant seedlings	Soils testers, notebook, pen, measuring tape	Farm owner / Supervisor	Farm owner	Farm owner, extension worker, department of agriculture	Department of agriculture and farm owner	?

<b>Outcome 1:</b>	Site selection for the production of cashew.
<b>Specific:</b> Specify Who, What, When, Where, Why? Which?	Who - Farm owner / supervisor. What - chose appropriate land to plant cashew seedlings. When - according to production plan / action plan. Where - suitable for cashew production as close as possible to market
<b>Measurable:</b> Metrics and Milestones. How much? What percentage?	Size of land, water content of soil and required soil testing.
<b>Achievable:</b> Do you have the skills and tools to accomplish this objective?	Yes, all the tools are available and the person performing this action has the skills.
<b>Relevant:</b> Does it fit with the organisation's overall objectives?	Yes, links to farm business plan
<b>Time Bound:</b> Intermediate and final deadlines.	?



From you action plan that you have developed fill in this objective plan.

<b>Outcome 2:</b>	
<b>Specific:</b> Specify Who, What, When, Where, Why? Which?	
<b>Measurable:</b> Metrics and Milestones. How much? What percentage?	
<b>Achievable:</b> Do you have the skills and tools to accomplish this objective?	
<b>Relevant:</b> Does it fit with the organisation's overall objectives?	
<b>Time Bound:</b> Intermediate and final deadlines.	







<b>Outcome 3:</b>	
<b>Specific:</b> Specify Who, What, When, Where, Why? Which?	
<b>Measurable:</b> Metrics and Milestones. How much? What percentage?	
<b>Achievable:</b> Do you have the skills and tools to accomplish this objective?	
<b>Relevant:</b> Does it fit with the organisation's overall objectives?	
<b>Time Bound:</b> Intermediate and final deadlines.	



## SELF ASSESSMENT

State the importance of managing activities in scion bank operations.

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Explain the factors to consider when managing activities in scion bank operations.

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State the activities that require managing.

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Name the tools and material required for managing.

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## REFLECTION ON YOUR LEARNING IN THIS UNIT



You will write **short reflections** of your learning and actions relating to the knowledge you have learnt and the practical skills you have developed.

**Tips for writing your Reflection/Reflection Journal:** You should write in your Reflection Journal within 24 hours of completing your practical session to record your experiences while they are fresh in your memory. Use the **‘What, So What, Now What Model’** to guide your writing. Answer

the following questions:

**What** happened **to...**? (Describe what happened when did what you did)

**So What** did I learn from that? (Give at least 2 examples)

**Now, What** can I do better in future? (How can I improve next time?)  
 What did you learn to do?

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What difficulties did you face in this unit?

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What can I do it better in future?

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How long did it take you each time you did it?

Attempt 1 .....

Attempt 2 .....

Attempt 3 .....

## REFERENCES

*Other website about scion bank management in cashew production*

<https://creately.com/blog/diagrams/process-documentation-guide/>

<https://impact-evaluation.net/2013/07/02/types-of-monitoring-in-monitoring-and-evaluation-me/>

<https://en.wikipedia.org/wiki/Planning>

<https://businessjargons.com/planning.html>