



Introduction

This is a practice-focused programme that offers you many opportunities to apply what you are learning by working directly with selected households in the community. Learning is an interactive process: you learn from people in the community and they learn from you and together you discover new ways of doing things.

Practical activities called *portfolio activities* have been carefully designed to guide you in your work with the households in the community to start a garden or revive or improve on an existing. This section gives you detailed information about the portfolio activities that are linked to Module 5.

Before you continue remind yourself of the meaning of all the concepts you dealt with in Unit 1, Unit 2 and Unit 3.

Key concepts	I still recall the basic definition and know the information can be found on page..... of this study guide	
	Tick ()	Page number
UNIT 1		
Sustainability Farming system Homestead Traditional Farming High-External-Input farming Low-External-Input farming Animal production sub-system Plant production sub-system Decomposing sub-system Indigenous knowledge Mimicry Micro-organisms Cyclic flow patterns SWOT analysis Furrows Mounds		
UNIT 2		
Abiotic factors Biotic factors Limiting factor Photosynthesis Respiration Transpiration Pollination		



Fertilization Nutrients Cross-pollination Self-pollination Gaseous exchange Stomata Soil acidity Soil alkalinity Nitrogen fixing Legumes Microclimate Windbreaks Diversity Mixed cropping Crop rotation Companion planting Succession planting		
UNIT 3		
Mulch Compost Manure Soil fertility Trenches (deep and shallow) Double digging Keyhole beds Decompose Transpiration Liquid manures/ teas Mildew Aphids Foliar spray Antibiotics Succession planting Furrows Thinning Mechanical control Chemical control Biological control Organic remedies Predators Propagation Sexual reproduction Asexual reproduction Hardwood cuttings Soft tip cuttings Heel cuttings		

In this module you worked in partnership with households to help them finalise and implement their homestead food gardens. In this unit you will complete a set of activities that you did with households, for your portfolio.



4.1 Building good working relationships

No matter what path you take in your efforts to improve food security in your community, you will need to develop cooperative and constructive relationships with many people. For this portfolio you should have already built a strong relationship with the families you are working with and it is important to remember that you are now working in the private domain of the homestead with the household and the household's garden care-giver. So, remember what we emphasized in the other modules that:

- Be honest
- Be calm and polite
- Be fair
- Be well-informed
- Be helpful
- Be patient, by taking long view
- Celebrate the small successes

We are adding a few new things to remember:

- Respect the **indigenous knowledge** of the elderly,
- Always respect the **knowledge and experiences of both women and of men**. The two genders may not have the same knowledge and experiences because of their gender roles, but both may know about good practices working for them in their garden.

Also remember that in making a garden one also has to have respect for resources found in the four corners of the homestead such as soil, water and equipment.

4.2 The 'Triple A Cycle'

As you know from the previous 4 modules the portfolio activities are based on the 'Triple A Cycle' approach and involve activities that require you to: assess, analyze, and take action. As a reminder, the steps of this important cycle are shown in the diagram below:

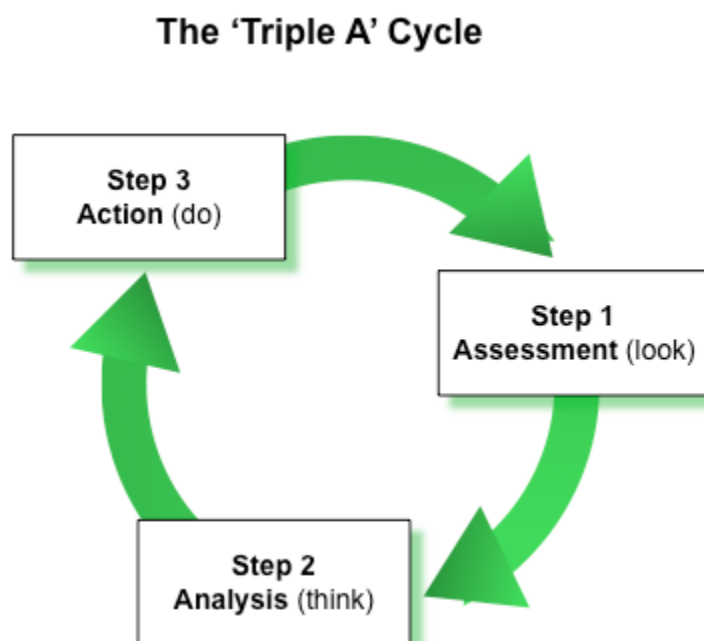


Figure 4.1 The "Triple A Cycle"



In order to be able to complete the tasks for this module successfully you (together with the households you are working with) must:

1. **Assess the household's existing farming/garden system** and then draw a **farming/ garden system flow diagram** for the household that shows the different resources, inputs, outputs, processes and relationships involved with the gardening/farming activities. Making maps is a good way for people to look at the environmental and other resources that are available to them. They show the potential and disadvantages of an area clearly, helping people to understand their own situation. Groups studying the map together can discuss and solve the problems the maps identify. Maps can be used to help in planning where to put a garden/farm and how to integrate nutritious crops in different areas, including the fields, around the homestead or near water sources.
2. **Analysis:** This is the critical thinking and reflecting phase. You and the household need to **interpret the information** obtained from the system flow diagram and using **SWOT analysis** make sense of it. The SWOT analysis will help in identifying areas that have been successful and areas that need improvement within the garden/farming system.
3. **Action:** This is the **informed action** phase – you together with the household plan to take action – to improve the garden/farming system by experimenting with selected techniques and methods that you learnt about in Module 3. Together with the households you need to **set goals** and develop a **workable action plan** to address the identified problems associated with the garden/farming system. You support the households to **implement the action plans** and monitor progress.

The end of step 3 is not the end of the learning and development process as the cycle is ongoing. This systematic approach allows you and the households to increase your understanding of the issues. Households can use this approach to keep refining the actions that have a positive impact on their lives.

Remember that in order to complete your portfolio tasks successfully you need to keep **documentary evidence** of all your activities with each of the households and also keep a journal in which you can jot down your **reflections** on these processes. Submit for each activity your evidence for each household. In this way you are building up a profile for each households throughout the six modules to enable you to monitor growth towards household food security and for notes with later follow-up visits.



Refer to the portfolio section in Tutorial Letter 103 and 301 when you compile your portfolio.



4.3 The portfolio activities for module 5

The main tasks for this module are the four activities shown in the table below. They are **compulsory portfolio activities** and you must include relevant evidence in your portfolio file.

Your task	Tools and methods	Portfolio activity
<p>1. Assessing Information in partnership with your household and deciding which are positive and which are negative points of the existing garden/farm system</p>	<ul style="list-style-type: none"> Assessing a homestead farming system using: <ol style="list-style-type: none"> a farming system flow diagram) and SWOT analysis 	5.1
<p>2. Analysis The information collected so as to start planning the way forward to improve things using experimentation</p>	<ul style="list-style-type: none"> Using the information obtained to start setting goals and developing a household farming/gardening improvement action plan. 	5.2
<p>3. Taking action Together with the household – implementing and monitoring the planned farming/garden intervention</p>	<ul style="list-style-type: none"> Implementing the household farming/gardening improvement action plan Writing a reflection report 	5.3 5.4

How do you go about conducting (carrying out) the three tasks of gathering information, analyzing and organizing information in to a plan and then taking action in partnership with your households who agreed to participate.

4.3.1 Assessing (collecting information)

You need to collect information on the present homestead farming / household garden system. When you start planning you will have to consider this information as you and the household attempt to establish and maintain the garden using resources the household already has and consider using possible assets and resources that have not been utilized yet.



Portfolio Activity 5.1 Assessing a homestead farming system

Activity 5.1 should be done after Unit 1 has been completed



Complete this activity on the portfolio evidence sheets provided

Aim: *Together* with the household assess a homestead as a farming system using a farming system flow diagram and SWOT analysis.

Time: 4 hrs

What you must do

Please note this activity consists of two parts (Parts A and B). An explanation of what you have to do to complete the task follows below:

Part A – Drawing a farming system flow diagram

In modules 1, 2, 3 and 5 you learnt how to draw and work with maps showing resources and system flow. Just to remind yourself by looking at the diagram on the following page which shows the system flow diagram of a Bangladeshi household. Please note that the crops are not typical of a South African household. Answer the following questions to test your understanding **before** you work with the households to develop their own farming/garden system flow diagrams. There are a few terms that you may not be familiar with (some are spelling mistakes) in the diagram these include:

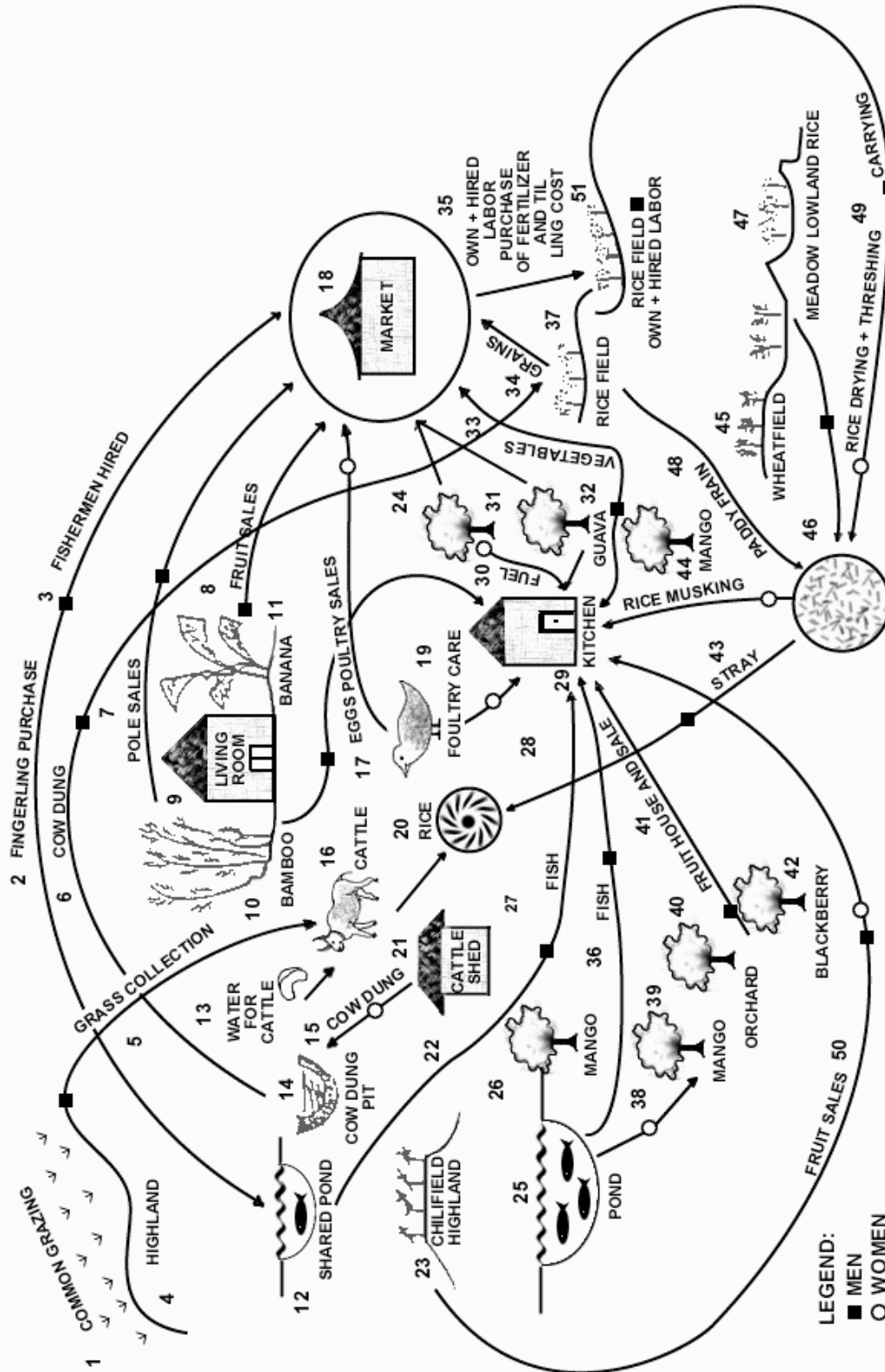
- Fingerlings = baby fish
- Paddy frain (spelling mistake) = **paddy grain** = grains of rice from a rice field/paddy
- Rice musking (spelling mistake) = **rice husking** = removing husks (skin) from rice grains
- Threshing = process of separating the grain from the chaff/husks

Also take note of the arrows linking the different elements of the system. In this diagram the arrows with a little black box in them represent those activities and processes done by men. The women are involved in those with the white circle. The diagram on the next page is used as an example.

Questions for **you** to test your understanding of the household systems flow diagram below:

- a) Name at least 5 major **farming activities (processes)** occurring on the farm.
- b) List at least 5 **inputs** (resources required for farming) that are required for this farm to function.
- c) Name at least 5 **outputs** (products of farming) that contribute to **food for the household** or **generating money** for the household.
- d) List 6 **outputs** that are used by the family
- e) Name at least 2 **inputs** that are used that come from **outside the farm**
- f) Name 2 **activities (processes)** that are carried out by women only.
- g) Name at least 1 **activity (process)** carried out by both men and women.





Source: Lightfoot, Feldman and Abedin (1994) incorporating Gender in Conceptual Diagrams of Household and Agroecosystems. In: Feldstein and Jiggins (eds.) (1994) Tools for the Field, Methodologies Handbook for Gender Analysis in Agriculture. Kumarian Press.

Figure 4.2 A flow diagram of a Bangladesh household farming system

With the household:

1. Draw a **farming system flow diagram** of their homestead farm/garden. Guide them on how to make the maps. Explain that the map has to be a simple plan, not an art work. They may include comments in the drawing or on a separate piece of paper.
 - a) Get them to use **simple symbols** for buildings, trees and crops rather than pictures. The map should include the **important resources** that the household have, including – fields, natural areas, water sources, livestock, plants etc.
 - b) Make sure you clearly indicate the **boundaries** of the system (farm/homestead garden system), **inputs**, **outputs** and **links** (in the form of arrows) showing the relationships between subsystems.
 - c) Remember that **inputs** can be: **Physical inputs** e.g. climate, soils, relief, vegetation; **human and economic inputs** such as farm/garden labour, machinery/tools, fertilisers, government support, transport costs, seeds, livestock etc.
 - d) The map should also show the **processes** that occur i.e. these are the **activities** carried out to turn inputs to outputs e.g. weeding, ploughing/digging, mulching, harvesting, milking etc.
 - e) Examples of **outputs** are products of the farm/garden: plant products such as maize, carrots, and timber/wood or animal products such as milk, meat.

To help focus the activity as well as get clarity on certain issues you can ask the questions listed below. Note the responses and try and include them in the map.

- a) What are the **major farming/gardening activities/processes**? For example: growing crops/vegetables, keeping livestock
 - b) What are the **major farming/gardening inputs**? For example: labour, capital, seeds, animals, fertilisers, pesticides
 - c) What are the major activities that occur **away** from the farm/garden? For example: fuel collection, water collection, fishing
 - d) What are the **major non-farming/gardening activities**? For example marketing, paid labour away from the household
 - e) Which activities and resources **contribute most to meeting the basic needs** of the household?
 - f) **Who** is involved in the various activities i.e. males? Females? Both?
2. Together with your household look at the map and discuss the present farming system and further identify and **fill in any missing elements**.
 3. During your discussion also try and get answers to the following questions relating to the household's use of LEIF in their gardening/farming practices:
 - a) Can you identify any principles of LEIF being used? If yes, what are they?
 - b) How do these LEIF principles relate to each other?
 - c) How does their use increase the success of this farming system?



Part B – Carrying out a SWOT analysis of the household’s gardening/farming

A SWOT analysis is a method that provides a quick summary to analyze a situation that can be used as a **decision-making and planning tool**. It shows the important issues in a short and accurate form. Generally we present these lists of the different issues in the form of a table. This becomes the basis of a discussion for the best possible interventions or actions for change in a particular situation.

1. Complete a table such as the one below. When completed it should show the strengths (**S**), weaknesses (**W**), opportunities (**O**) and threats (**T**) of the household’s farming/gardening system. Use the following questions to help you and the household get lists of the answers needed to complete the table:

Example of table

Part B

Strengths	Weaknesses	Opportunities	Threats

- a) **Strengths (S)**: What is working well with the existing homestead farming system?
- b) **Weaknesses (W)**: What are the problems and difficulties with the existing homestead farming system? What is not working well?
- c) **Opportunities (O)**: What actions or changes could improve the homestead farming system in future?
- d) **Threats (T)**: What are the dangers or problems relating to the suggested opportunities in the future?

This reflection may assist the households to identify the problems and find solutions. The solutions will be coming from the knowledge you gained in the modules and are guiding the households to consider other practices that could increase production. The solutions should come from the knowledge you gained in the previous modules and should be used to guide the households to consider other practices that could increase production.

4.3.2 Analysing information into a plan

Use the information of the homestead farm / household garden to identify goals and develop a plan on how to optimise the production of food by using improved practices in the homestead farm or garden.



Portfolio Activity 5.2 **Setting goals and developing a household farming/ gardening improvement action plan**

Activity 5.2 should be done after Unit 2 has been completed.



Complete this activity on the portfolio evidence sheets provided

Aim: Together with the household **set goals** and develop an **action plan** aimed at improving the household's farming/gardening practices through the experimental **integration of some suitable LEIF gardening/farming principles**.

Time: 3 hours

A goal is a statement of **something that we want to achieve**. This goal setting activity will help households to identify what they want to achieve in relation to the outcomes of their gardening/farming activities or the problems they are experiencing. This the household have already worked through in Activity 5.1. Goal setting helps households to visualise their success and encourages them to use the support and knowledge they have received to actually implement a garden (if they do not have one) and/or improve their existing farming practices to make them more sustainable. By identifying clear goals they will be able to develop **action plans**.

Some examples of household goals could be:

- To improve my family's nutrition by growing vegetables in a garden using LEIF principles
- To have access to a wide range of healthy vegetables all year round.
- To help less fortunate people in my community by giving them seedlings to help them set up their own gardens
- To protect my soil and water resources by practicing good growing methods.
- To generate an income by selling surplus produce.
- To have food all year round by drying and preserving the extra fruit and vegetables I grow.

Action plans help the households to plan **what activities they need to carry out in order to achieve their goals**. Action plans are particularly important for individuals working together to try and achieve a common purpose. In this instance the aim is to help households plan activities that they are going to implement in order to improve on their present practices and in future have a successful and productive garden or farm.

Remember that the purpose of the following two activities is to get the households to come up with a plan to **improve on their existing gardening/farming activities** using the knowledge you and they have gained about using LEIF principles.

What you must do

1. Together with the households develop **a list of achievable goals** relating to their future gardening/farming practices **using LEIF** so as to improve their food security and household nutrition. Write this list of goals in the space provided in your portfolio of evidence sheet.



2. Review with the households the goals they developed in the goal formation activity. Next ask them to (as a group):
- List the **activities they need to carry out** in order to achieve these goals. Remember these activities must be aimed at **improving past gardening/farming practices and result in “doing things better”** – in an experimental but environmentally friendly and sustainable way.
 - List the **resources they will need** for each activity,
 - Identify **who in the group or family will be responsible** for carrying out the activity
 - Indicate **when the activity will be carried out**.
 - With information obtained above generate the **action plan** in the form of a **table** and insert it in the space provided in **your portfolio of evidence sheet**. (See the table below for an example of an action plan developed by a nutrition action group in Zimbabwe – their **goal** was to improve the nutrition of their families by growing a range of healthy vegetables all year round).
 - You should keep a copy of the action for yourself and give one to the household so you can refer to it again in future.

Example of action plan for improvement of family nutrition (taken from FNCZ/FAO/UNICEF - *Healthy Harvest Manual*)

Activity	Resources required	Person responsible	Time Schedule													
			J	F	M	A	M	J	J	A	S	O	N	D		
Make a list of nutritious crops we want to grow and when we want to plant them	Paper and pen	Nutrition group	X													
Buy seeds	Money and transport	Mrs Chitima	X													
Prepare seedling containers	Containers, sand, soil and compost	Mrs Gweshe	X													
Prepare beds	Hoe and compost	Chipo and Farai	X													
Plant seeds for rainy season crops	Small hoe, mulch and water	Mrs Chitima and Mrs Gweshe	X	X									X	X	X	
Plant seeds for dry season crops	Small hoe, mulch and water	Mr Kunaka and Mrs Sithole		X	X	X	X	X	X	X	X	X				
Transplant seedlings	Small hoe, mulch and water	Mrs Chitima		X		X		X		X		X				X
Harvest produce	Basket and sharp knife	Mrs Chitima And Mrs Sithole			X	X	X	X	X	X	X	X	X	X	X	X
Make compost	Tools, leaves, grass, weeds, kitchen scraps, water	Chipo and Farai			X			X			X			X		
Mulch beds	Dry grass, leaves or compost	Chipo and Farai		X		X		X		X		X				X



4.3.3 Taking action

As a facilitator you have to be very considerate of people's previous knowledge. Established homestead farmers and gardeners may already be using practices that could be used as good examples to demonstrate to new farmers. The group should be encouraged to learn from each other. African households (mostly ones in the rural areas) will know indigenous practices that are different or similar to some of the practices referred to in the module. Therefore the knowledge of the elderly men and women should be respected and considered as options to be used. You could also make a demonstration garden bed in the homestead garden using different practices and examples of doing things i.e. experiment Encourage the households to experiment taking into consideration what they think will work for them.

Portfolio activity 5.3 Putting your improvement action plan into action

Activity 5.3 should be done after Unit 3 has been completed



Complete this activity on the portfolio evidence sheets provided

Aim: Linking all aspects of garden design in order to put your plan into action

Time: 3 hours

What you must do

In the previous task you had to set some goals and develop an action plan with the households you are working with. However you now need to put these plans into action so together with your household, you now need to examine everything that is needed in order to start a successful food garden or required to improve an existing one. The table below gives you an outline of the steps you need to follow, in order to achieve this.

Steps for planning and starting a household food garden

1. Using the information, knowledge and skills that you have acquired in all your modules up to this point, **work with the households to start or improve an existing food garden**. Before you start take note of the following things:
 - a. Remember that whatever you set out to do should be **achievable** (do not make it too complicated) and should incorporate some aspects of **LEIF principles** so that the households can **experiment** and make a comparison between doing things the 'old' way and doing things the 'new' way.
 - b. **Before you start these activities** you need to take into consideration the following questions as you endeavour to do things 'differently' and 'better'.
 - i. Is there a need to make any changes to the sequence of steps? If so, make sure you document and report on this.
 - ii. Is there a need to add additional steps or to remove some of them? If so, make sure you document and report on this.



2. As you follow the steps indicated in the table below **capture the relevant information relating to each household for each step** and insert it in a separate table (portfolio sheets) for each household that you work with.

<i>This is an example of the portfolio evidence sheet to be used for this task.</i>
Step 1: Ensure that appropriate inputs and equipment are available <i>Supply the information for the household you are working with.</i>
Step 2: Determine the size of the garden <i>Supply the information for the household you are working with. .</i>
Step 3: Decide on the location of the garden <i>Supply the information for the household you are working with.</i>
Step 4: Find information on the climate of your area <i>Supply the information for the household you are working with</i>
Step 5: Plan the layout of the garden <i>Supply the information for the household you are working with</i>
Step 6: Fence the garden <i>Supply the information for the household you are working with</i>
Step 7: Prepare the soil <i>Supply the information for the household you are working with</i>
Step 8: Plant the crops <i>Supply the information for the household you are working with</i>
Step 9: Apply mulch <i>Supply the information for the household you are working with</i>
Step 10: Weed your garden <i>Supply the information for the household you are working with</i>
Step 11: Irrigation <i>Supply the information for the household you are working with</i>
Step 12: Control pests <i>Supply the information for the household you are working with</i>

The next activity will assist you to reflect on the 3 activities you have just completed doing with the households.



Portfolio activity 5.4 Write a reflection report

Activity 5.4 should be done after Unit 1, 2 and 3 have been completed



Complete this activity on the portfolio evidence sheets provided

Aim: Reflect on your participation in the various tasks with households.

Time: 2 hours

What you must do

1. Read the following background information on reflection (and reflective practice), and answer the questions that follow.

What is meant by reflection?

It is important that you should strive to make the work that you do with households, more effective. We all make mistakes from time to time. However, it is important to learn from these mistakes you may have made when you worked with households, and prevent similar mistakes in future. On the other hand, you may realise that a certain way of approaching people, or brainstorming ideas with the households, are effective. You should build on this strength. We call this process, where you think about your own practice (way of doing things), *reflection*.

We examined reflection in Module 2 and 3 now you have an opportunity to apply your understanding of reflection to your work with households with regards to Module 5 portfolio activities.

When reflecting, keep the following questions in mind:

- What exactly happened during my participatory sessions with households?
- What could the reasons be for what happened?
- How did I respond? Why did I respond in this way?
- What are the key issues that I need to be aware of?
- Do I have the information available that will help me to act differently or to improve my actions in future? If not, what do I need to find out and how?
- Who else could/should I involve to assist me?
- How would I deal with a similar situation in the future?

Steps to guide reflection

There are several techniques to help you with your reflection. When reflecting we suggest you use the following steps:

Step 1. Describe what happened

Step 2. Analyse the situation

Step 3. What does it mean for my practice (way of doing)? How should I act upon it?

Let us look at an example to illustrate the steps you need to follow when reflecting.



Sarah working with the Mtombeni household

Sarah is a UNISA student, who works in a rural community in KZN. One of her households, the Mtombeni family, wants to make a food garden, to enhance their food security. Sarah is a very good student who takes her work seriously, and she gets upset with Mr. Mtombeni, who she perceives as being very negative. The following is an account of a contact session they had.

Sarah: *I think we should plant the following vegetables in your food garden.*

(Sarah shows the packets of seeds to the Mtombeni family).

Mr. Mtombeni: *We don't want to plant carrots. None of my children really like carrots.*

Sarah: *Oh, but you must! It is a rich source of Vitamin A. Listen to me, you clearly don't know how to plan a balanced diet!*

Mr. Mtombeni: *You don't ever listen to me, and you always know better. I think you should leave my house.*

When Sarah reflected on this incident, she wrote the following:

Step 1. Describe what happened

Mr. Mtombeni and I had a confrontation today. I wanted him to plant carrots in their food garden, and he refused, saying that I am nosy, and always know better.

Step 2. Analyse the situation

Thinking back, I realised that I should have perhaps followed a different approach. Perhaps I should have started by asking the household what vegetables they like to plant. Perhaps I should talk less, and listen more.

Step 3. What does it mean for my practice? How should I act upon it?

I realise that I excluded the household from the decision making process. I should ensure that I act as facilitator, but that people in the households feel that they have a voice.

2. Now do the following on the evidence sheet in your portfolio file.

Reflect on any incident that caused you some discomfort or stress when you worked with households, using the three steps mentioned above.

See the Annexure for tables that may be useful.





Under construction

