



## Module 5: Forest Garden Review and Planning



### Goal

In the beginning of year 2, farmers will reassess their Forest Garden design based on discussion and analysis of lessons learned in the first year of the project. Facilitators will also update and renew the project MoU and Participant Farmer List for year 2.

### Learning Objectives

1. Review the characteristics and benefits of Forest Gardens.
2. Learn more about structure and layout of a Forest Garden.
3. Understand the benefits of growing fruit trees.
4. Understand the benefits of collectively growing and selling fruit trees.

### Venue and Timing

This workshop should be held at the lead farmer's Forest Garden site, where the Module 1: Forest Garden Design workshop was facilitated the first year.

### Relevant Technical Manual Chapters

Before this training event, the facilitator should review and thoroughly understand the following chapters and sections in the Technical Manual:

- Chapter 1: Introduction to the Forest Garden
- Chapter 2: Phased Approach

### Preparation

- Determine which months each module (and flexible activities where relevant) are to be facilitated using the table in Activity 4.
- Ask the lead farmer and participant farmers to bring their Forest Garden designs from Module 1 to the workshop. Prepare the lead farmer to present it to the group.
- Take a photograph of the Lead Farmer's design from Module 1 and print out 5 copies.
- Review all of the resources from the previous year.
- Update the farmer group MoU for the year, to be signed at the end of the workshop.

## Supplies

- Roll of flipchart paper and tape
- Markers of various colors
- 5 copies of the lead farmer's Forest Garden design from Module 1 (the facilitator can take a photograph of the design on flipchart paper and print out for participants)
- 5 notebooks
- 5 pens
- 2 copies of the Farmer Group MoU for the upcoming year (to be signed by the farmer group attending the workshop)
- Participant Farmer List template
- A small ball

## Total Time

Approximately 4 hours

## Handouts in Farmer's Workbook

- Priority Fruit Trees
- Update Your Own Forest Garden Design

# Module 5: Forest Garden Review and Planning

## Summary of Activities

**Opener:** Lessons learned ball toss (1 hour)

- Congratulate farmers for completing the first year of training and explain the purpose of the meeting
- Farmers toss a ball and review what they learned in year one
- Review key points not discussed during the ball toss and get feedback on year one activities

**Activity 1:** What are growing? (30 mins)

- Why plant fruit trees
- Market opportunities for fruit trees
- Decide which tree the group will grow and sell collectively

**Activity 2:** Review lead farmer's Forest Garden design (1 hour)

- Lead farmer presents Forest Garden design created in Module 1
- Form small groups and inspect lead farmer's field
- Small groups present recommendations for lead farmer's Forest Garden

**Activity 3:** Peer review of Forest Garden designs (45 mins)

- Pair and share feedback on Forest Garden designs
- Debrief peer review and discuss year two plans for individual farmers

**Activity 4:** Plan year two activities (45 mins)

- Discuss year two plans for the group
- Discuss agroforestry technologies in year 2
- Read and discuss Memorandum of Understanding (optional for non-TREES projects)
- Sign Memorandum of Understanding
- Update the Participant Farmer List (PFL)

**Take Home Activity 5:** Update your Forest Garden designs (15 mins)

- Farmers update Forest Garden designs before the next visit from the facilitator
- Follow-up

## Opener: Lessons Learned Ball Toss

### Description

This activity gives farmers time to share what they learned during the first year of the Forest Garden training program. The facilitator records feedback to share with TREES staff for monitoring and evaluation purposes.

### Instructions for Farmers

**1. Congratulate farmers for completing the first year of training and explain the purpose of the meeting**

Congratulations on your hard work in establishing a Forest Garden that will provide food and income for your family for many years to come. Forest Gardens are constantly changing, that is why it is important to review our Forest Garden designs regularly so that you can update and improve them. Today we will review what you have learned during the first year of trainings and discuss the plan for year two.

The Forest Garden Approach has three phases for establishment. In the first year you focused on Phase 1: protecting the field. In the coming year you will start Phase 2: diversifying your field by planting a variety of vegetables, fruit trees and crops to feed your family and sell at market. Phase 3 will focus on techniques to increase and optimize the productivity of your Forest Garden. You will continue to protect your field throughout the whole program. Do you have any questions about the Forest Garden Approach?

**2. Farmers toss a ball and review what they learned in year one**

Everyone stand in a circle. I will start by saying something I learned this year and then toss the ball to someone else. That person says something they learned in the past year about Forest Gardens and tosses the ball to someone who has not spoken. The game continues until everyone has a chance to share something they learned about Forest Gardens.

- What is a Forest Garden?
- What are the benefits of Forest Gardens compared to other cropping systems?
- What are Forest Garden layers? How do these layers help to maximize production?
- How do you protect and revitalize your field?
- How does diversifying the trees and crops you plant help your family?
- How does it help the land?
- What techniques and skills have you learned and practiced?
- What are you doing differently now than you were before? What are the results so far?

### **3. Review key points not discussed during the ball toss and get feedback on year one activities**

Thank you all for sharing what you learned. Please continue to share your successes and challenges today so you can all learn from one another's experiences. I would like to hear from you about the workshops and your work in your Forest Garden during the first year. I will write down your feedback on flip chart paper so I can take it to share with the rest of the TREES staff.

- What are three things you liked and disliked about the training events?
- Which materials did you find most and least helpful?
- What are three things you like about the support TREES provided?
- What are three things in the project that could be improved for next year?  
How?

## Activity 1: What Are We Growing?

### Description

Farmers discuss which fruit trees and other fruiting plants (bananas, plantains and vines) they are currently growing and which they would like to start growing, including any the group will grow and sell together.

### Instructions for Farmers

#### 1. Why plant fruit trees

Who is growing fruit trees now?

- What are three benefits to planting fruit trees in your Forest Garden?
- What are the benefits of integrating annual crops with tree crops?

#### 2. Market opportunities for fruit trees

Fruit trees have many benefits, you can sell fruits at the market, fruits can improve your family's nutrition and health, and they can provide food/produce at different times throughout the year. We will discuss different types of fruit trees that can grow in this community.

- Which fruit trees are people growing in this community now?
- Which new types of fruit trees could grow well in this community?
- What kind of fruit do people like to eat?
- Can the fruit be sold locally?
- What types of fruit are in highest demand?
- Which fruits are overabundant and difficult to sell?
- What times during the year do you have little to eat or sell?
- Which fruit trees are productive at times of the year when other foods are scarce?

#### 3. Decide which tree the group will grow and sell collectively

By growing and selling high-quality fruits from common and profitable fruit trees, the group can get access to better markets which will mean higher prices for your produce. The input costs are lower if the group buys in bulk. We will have a discussion to decide which type of tree you would like to grow collectively. We can do a pairwise ranking if the group has trouble deciding.

- Where can you sell the fruits we've discussed for the most profit?
- How much would it cost to send fruit to a more profitable market?
- How can the fruit be selected and/or processed to make it more marketable?
- What inputs are needed?

## Activity 2: Review Lead Farmer's Forest Garden Design

### Description

Review the lead farmer's Forest Garden design. Farmers form small groups and inspect the lead farmer's field then provide feedback to the lead farmer on how to improve his/her Forest Garden in year two.

### Instructions for Farmers

#### 1. Lead farmer presents Forest Garden design created in Module 1

In our first Forest Garden training we created a design for the lead farmer's field. Now we will look at that design and hear from the lead farmer about what they did in year one.

- What did you plant in year one?
- How are your green walls doing? Will you need to plant a lot more trees to complete them and fill in gaps in the coming year?
- Are soils better protected (i.e. through windbreaks, green walls, alley crops, and/or contour lines)?
- Do you notice any changes in soil health? For example, more organic matter in their soils, more beneficial insects living in/around the soil (e.g. earthworms and beetles), better water retention, improved yields? The changes may not be noticeable in the first year, so you should continue to observe the soils year to year.
- What were some successes?
- What were some challenges?
  - What challenges have you had with Forest Garden design?
  - What challenges have you had with tree nurseries?
  - What challenges have you had with planting to protect your field?
  - What challenges have you had with outside factors, like pests, droughts, floods?
  - How have you addressed these challenges? Do others have ideas for how they could be addressed?
- Have other farmers in the group faced similar challenges? How have they overcome them?
- What would you like to improve?

#### 2. Form small groups and inspect lead farmer's field

Form groups of 4 or 5 people and come to collect paper and pen for each group. Take 30 minutes to walk around the Forest Garden site and take notes about what you observe. When you finish your observations, come and collect flip chart paper and markers and prepare to present to the group. Think about the following questions as you make your observations:

- What Forest Garden components and techniques do you observe?
- What has the farmer done well?
- What could be improved? How?

Also consider the following questions from Module 1: Forest Garden Design:

*Questions about the farm:*

- Is the field **secure** from animals and pests? How can you secure it? Does it need a **green wall**?
- Are there **erosion** problems on the field? How can you reduce erosion? Do you need to plant a **contour barrier**?
- Is the **wind** a major problem? What direction does the wind generally come from? How can you protect the field from wind? Do you need to plant a **windbreak**?
- Is the **soil quality** good? Does the soil quality vary across the field? Are there parts of the farm with degraded soil? How can you improve the soil? Do you need **compost**? Do you need to plant **fertilizer trees**?
- Are **pests** (animals, insects, diseases) a problem on the field? What do farmers do to **control pests**? Are there plants that repel pests? What are some alternatives to the use of expensive chemical pesticides?
- Are **rainfall patterns** changing? How can you keep more **water** in the soil? What can you plant that will tolerate unpredictable rainfall?
- What **weather** extremes should the field be prepared to endure? Are there frequent floods or droughts? How have weather patterns changed over the last few years? Which species might be the quickest to rebound from extreme weather?
- Is fire a problem in this area? What is a good way to protect the field from fire? Should you make a **fire break**? Where? How?
- Should the Forest Garden be divided into halves or sections for **rotating crops** or segmenting production? Should you plant lines of vegetation to **divide the sections**?

*Questions about the family:*

- What trees would provide more **food** for the family?
- When is the **lean season(s)**?
- Which foods and other tree products can be **harvested in the lean season**?
- Does the family need **wood for cooking**? Where do they get it? What would make it easier? Which trees give fuelwood? Where could they be grown?
- Does the family need to **feed animals**? Where do they get the fodder? What are the challenges/issues with this (e.g. cost, land degradation, time, etc.)? Which trees are good for animal forage? Where could they be grown?
- What products will be the easiest for the family to **sell**?
- Which set of products is the **farmer group** dedicated to growing and selling?
- How can trees diversify the **timing** of when the family generates income?
- What products will make the most money in the **short term**?
- What will make the most money in the **long term**?
- How can the Forest Garden minimize the **burden of women** in the family? How can the Forest Garden **increase income** specifically for women in the family?
- How can the Forest Garden provide young men or women in the family (youth) with **learning or business opportunities**?



### **3. Small groups present recommendations for lead farmer's Forest Garden**

Each group will present their recommendations for the lead farmer's Forest Garden. Then we will hear from the lead farmer about his/her plans for year two.

- Based on the recommendations heard from the groups, what changes does the lead farmer plan to make to the Forest Garden design?
- What new plants or trees will you add to your Forest Garden as a result of your exchanges with other farmers and TREES facilitators?

## Activity 3: Peer Review Forest Garden Designs

### Description

Farmers get into pairs to review and critique each other's Forest Garden design for their own field, using the questions from the previous activity.

### Instructions for Farmers

#### 1. Pair and share feedback on Forest Garden designs

Pair into groups of two and exchange your Forest Garden design with your partner. Ask questions about successes and challenges your partner has had during their first year of work on their Forest Garden, like we asked the lead farmer. Give your partner advice on how to improve their Forest Garden during year two. Then listen to your partner's advice for you on how to improve your Forest Garden.

- What did you plant in year one?
- How are your green walls doing? Will you need to plant a lot more trees to complete them and fill in gaps in the coming year?
- Are soils better protected (i.e. through windbreaks, green walls, alley crops, and/or contour lines)?
- Do you notice any changes in soil health? For example, more organic matter in their soils, more beneficial insects living in/around the soil (e.g. earthworms and beetles), better water retention, improved yields? The changes may not be noticeable in the first year, so you should continue to observe the soils year to year.
- What were some successes?
- What were some challenges?
  - What challenges have you had with Forest Garden designs?
  - What challenges have you had with tree nurseries?
  - What challenges have you had with planting to protect your field?
  - What challenges have you had with outside factors, like pests, droughts, floods?
  - Have other farmers in the group faced similar challenges? How have they overcome them?
- What would you like to improve?
- What changes do you plan to make to the Forest Garden design as a result of what you have learned over the course of the year and the advice from your partner?
- What new plants or trees will you add to your Forest Garden as a result of your exchanges with other farmers and TREES facilitators?

#### 2. Debrief peer review and discuss year two plans for individual farmers

Before we start talking about the group activities for year two, each farmer should stand up and mention the two changes or additions you plan to make to your Forest Garden design as a result of what you have learned over the past year.

- Does anyone have concerns for the coming year that might affect your continued success in establishing your Forest Gardens?

## Activity 4: Plan Year Two Activities

### Description

Farmers discuss plans for year two, including the workshop schedule, and sign the Memorandum of Understanding.

### Instructions for Farmers

#### 1. Discuss year two plans for the group

During the first year you planted trees to protect and revitalize the soils in your Forest Gardens. In the second year, you will start to plant fruit trees and vegetables that you can sell in the market. I will tell you the training schedule for next year.

- How can you work together as a group to get the most out of your Forest Gardens?
- What are the main crops you will plant this year as a group? Do you need to plant more agroforestry trees for your green wall? Fruit trees? Vegetables?
- What are your interests and needs for Year 2? What are your priorities?

#### 2. Discuss agroforestry technologies in year 2

Last year you began planting your green walls, alleys and/or contours. This year you will continue to fill in the rows of your green walls and plant more alleys/contours.

- How many trees will you need to plant this year to meet the Year 2 annual evaluation criteria? (see Year 2 criteria)
- Are you clearing the weeds and brush from your trees regularly?
- Does your dead fence need to be mended or rebuilt so that it will continue to protect your site? If not, you need to be sure it is in good condition before receiving seeds to start your nurseries.

I have prepared a schedule for when each module and flexible activity will be facilitated with over the course of Year 2. They are as follows:

#### Timing of Training Modules for Year 2

Module	Agricultural Calendar	Module Facilitation (month)
6. Fruit Tree Propagation	At least three months before the main rainy season	
7. Outplanting Fruit Trees	Before the start of the main rainy season	
8. Permagardening for the Market	Before the main gardening season	
Flexible Activity 1: Harvesting agroforestry trees	Generally during the dry season, during Module 6 or 7	

Flexible Activity 2: Transplanting slower growing seedlings from germination beds	Dependant on species, but often about 3+ months after planting	
Flexible Activity 3: Harvesting and preparing suckers	According to timing of banana planting	
9. Field Optimization (Year 3)	At the beginning of Year 3	

Activities 3-5 are optional for non-TREES projects

### **3. Read and discuss Memorandum of Understanding**

I will read the Memorandum of Understanding (MoU), which you all will need to sign before we close the meeting today. We sign a new MoU each year, after reviewing the progress you have made on your Forest Garden in the previous year. An important part of the review involves an evaluation of each farmer's Forest Garden. It is important that everyone knows that your commitment to the project, which is demonstrated by adopting the skills and techniques you learn in the workshops, is a key criterion we look at when we decide to continue with the project for another year.

### **4. Sign Memorandum of Understanding**

When everyone agrees on the terms, we will all sign the MoU. I will take a copy and I will leave a copy here with the lead farmer.

### **5. Update the Participant Farmer List (PFL)**

Finally I will pass around the Participant Farmer List sheet for farmers to fill in for year 2.

*If any farmers who were invited to participate in year two of the project are not present, the lead farmer will take the PFL and MoU to them to fill in and sign, and return the completed documents to the facilitator.*

## Take Home Activity 5: Update your Forest Garden Designs

### Description

Farmers update their Forest Garden designs based on the feedback they received from the facilitator and their peers. The facilitator will review the updated Forest Garden design on the next field visit and the farmer will bring it to the next workshop as well.

### Instructions for Farmers

#### **1. Farmers update Forest Garden designs before the next visit from the facilitator**

Think carefully about what we talked about today and the changes you plan to make to update your Forest Garden design for the coming year. I will come visit within the next 4 weeks to inspect your field and review your updated Forest Garden design. You will also bring your updated Forest Garden design to the next workshop, so keep it in good condition.

- Is the field protected?
- Is the soil in better condition? Does it hold water?
- Are pests a problem?
- Will the field provide the family with what they need? Food? Fodder for animals? Fuel for cooking?
- What can the family harvest and sell?

### Follow-up

The facilitator will examine, discuss, and photograph each participant farmer's updated Forest Garden design on the next visit to the farmer's field, usually within 1-2 months. Remind the farmer to keep their Forest Garden design and bring it to the next workshop.

# Evaluation Checklist for Skills Learned in Year Two



At the end of the year you will be evaluated on the following practices that you learned and discussed during training events. After demonstrating that you have completed the year two evaluation criteria, you will be invited to continue in the third year of the project.

## Year 2 Evaluation Criteria

- Green Wall
  - At least two rows planted, surrounding the entire site
  - At least part of the third row is planted
  - Dead trees and gaps from the first year are replanted
  - Proper spacing between rows
  - Proper spacing between trees within rows
  - Woven branches
  - Pruned into a hedge
  - Brush and weeds cleared
  - Dead fence surrounding green wall (for all projects where this is determined to be a requirement)
- Alley Cropping and/or Contour Planting
  - Minimum of 3 rows planted across cropping area
  - Agroforestry trees interspersed throughout site
  - Proper spacing between rows
  - Proper spacing between trees within rows
  - Contour lines followed (on sloped sites)
  - Coppiced or pollarded in year 2
- Fruit Trees
  - At least 3 species of fruit trees/plants
  - Proper spacing between fruit trees planted
  - Trees appear to receive enough water
  - Each tree is weeded and mulched
  - At least 2 species of fruit root stock growing
  - Fruit trees for grafting are transplanted from beds to sacks or trenches
- Compost
  - Three active piles, Passes stick test
  - Demonstrated product and use
- Permagarden
  - Raised or sunken beds
  - Amended soils
  - Mulching
  - At least six species/types
  - At least two new species/types that were not planted previously by family
  - Rotation planting

## Module 5: Facilitator's Notes



The facilitator should use the following pages to note down any questions or findings from the group that should be kept for or addressed at a later time. Depending on the module this may include species selection by group, crops identified in seasonal calendars, or anything else that should be noted.