

The Permagarden Pathway to Resilience & Food Security: Lessons in Scaling Up from Nepal and Uganda

Outstanding Questions & Answers from Webinar on March 16, 2021

For additional information on the Permagarden approach, please review the [Permagarden Toolkit](#).

Water availability

- **Q: Is it possible to run the permagarden all year round including the dry season periods? How do you manage the problem of water?**
 - A: The goal is year round production. There are three distinct elements of the permagarden approach to achieve this. 1. Deeply prepared planting beds and water harvesting banks large amounts of water during the rains. This enables extended growing into the dry season. 2. The approach emphasizes the reuse of household waste water to irrigate crops in the dry season. 3. The approach promotes a diversity of crops grown with a focus on annual, biennial and perennial crops that provide leaves, fruit, roots or other harvestable yields particularly in the dry season.
- **Q: In dry regions and cases where refugees are renting land and can only do so much with it, [permaculture] can be particularly challenging. How does one overcome such challenges?**
 - A: We confront challenges everywhere, but the permagarden approach emphasizes building soil biology and water management, and helps create stronger growing conditions particularly in the dry season or in arid or semi-arid areas.
- **Q: Where do you get water from and was it clean, not contaminated?**
 - A: The permagarden approach emphasizes the reuse of many kinds of household waste water. Some of this may be clean but often it includes soaps or other contaminants. In the permagarden we emphasize greywater mulch basins that can use this type of water in productive ways.
 - A: Additionally, the permagarden approach emphasizes the use of rainwater harvesting structures such as swales, demi-lunes, mulch basins, etc. to bank and store water in the soil.

Nutrition

- **Q: How do people choose the plants to grow in the garden?**
 - A: The choice of plants should be part of the training process, allowing farmers to choose those that they want to grow and that meet their individual needs, whilst also encouraging farmers to grow a diversity of plants that meet different ecological/soil and water

conservation, nutritional and income needs, and those that can provide multiple benefits such as mulch, food and fencing. Access to seeds is also an important factor that should be addressed, ensuring that farmers use plants and varieties that are locally available and suited to the local context.

- **Q: Was there a way to help participants understand which foods were more nutrient dense in specific micronutrients?**
 - A: As part of the program we had a nutrition component that we layered on permagardens. This helped the farmers to understand which foods were more nutrient dense. [Mercy Corps Nepal]
- **Q: What was the nutritional benefits of the gardens. Do you measure this?**
 - A: We measure the number of varieties of crops grown and increase in meals eaten per day. For refugees the gardens provide a greater level of diversity than they can often get via food aid or access in the local markets. [AWR]
- **Q: I notice the goal was to feed children. Did you look at any impact on infant and young child feeding practices or childrens' nutrition?**
 - A: While we don't actively promote IYCF practices the gardens have been shown to increase the number of meals and diversity of food for refugee households. We would imagine this has a strong impact on infants and other young children. [AWR]

Time/Labor

- **Q: I am very curious to know more about the 'time burden'. When you say that, especially in the very beginning, establishing the garden requires a considerable time investment, can you give an estimate/elaboration on how many hours we are talking about?**
 - A: Deeply preparing a permagarden bed probably takes two to three times the amount of time it might take to create a regular planting bed. While this is an obvious burden, we've seen the added benefits of the approach far outway the initial time it took to dig the garden. If prepared correctly, garden beds don't need to be redug for 3-5 years.
- **Q: Did the women work for free or where they paid?**
 - A: The women are not paid since they are preparing their own gardens. Many times they work collectively within their women's groups to provide extra labor for other group members. This is never paid but is part of the support they provide each other within the groups. [AWR]

Sustainability / Long-term adoption

- **Q: Were there any barrier analyses done in regard to adoption of certain permagarden practices/technologies?**

- A: Initially it was a pilot program in Nepal. But in the second year a barrier analysis was conducted which included pictorial sheets, a productive behavior checklist, a set of 'walk and talk' question and questions on permagarden practices.
- **Q: How to overcome the challenge of sustaining permagardens? Comment surmonter le défi lié à la durabilité des permagardens?**
 - A: The AWR Permagarden methodology is based on 3 distinct trainings across multiple seasons. We have found this approach helps to ensure long-term sustainability and uptake of these principles and practices. We have seen a number of organizations try to do this faster or cheaper but they lose the quality and coherence of the approach that ultimately helps to sustain the gardens. Within AWR we hold strong to the principle of adequately training and supporting community members. This takes place in 3 distinct trainings for each group as well as regular interactions and check-ups with AWR technical staff. [AWR]
- **Q: Do people save seeds to keep it sustainable? Or how do the gardens continue after the initial investment of seeds and starts?**
 - A: Some of them save seeds. For those who don't- we are layering the permagarden farmers with the lead farmer and connecting the lead farmers of the community to the existing agrovets. This is from where the community has access to seeds for the next season. [Mercy Corps Nepal]

Training and Input Support to Farmers

- **Q: Linda, what support have you given to farmers to implement permagardens? *Linda, quels sont les appuis que vous avez apportés aux agriculteurs pour qu'ils mettent en place les permagardens?***
 - A: Our permagarden approach is based on a broader [Resilience Design](#) methodology that emphasizes soil building and water management. We use the RD approach when we work at a broader farm or landscape level with these households. It is the same principles and interventions, just used at different levels of scale, be it a home garden, the larger field crop garden or across a community watershed.

For a PG within a refugee setting we try to access culturally appropriate seeds from the local market. As well as identifying waste resources within the camp such as manure, charcoal dust, wood ash, leaves, that can be used to build the soil fertility. [AWR]
- **Q: The danger for small gardens is that sometimes one or two crops are grown. Has crop rotation been taught?**
 - A: Yes, Chapter 5 of the [permagarden manual](#) outlines a number of strategies that should be undertaken related to biointensive planting including crop rotation



- **Q: What is the method used to popularize the techniques (extension approach)? Quelle est la méthode utilisée pour vulgariser les techniques (extension approach)?**
 - A: Lead farmer approaches with model permagarden demonstration. [Mercy Corps Nepal]
- **Q: Is there follow up support to the families? How long does each family get added support after the training?**
 - A: The AWR Permaganen program provides a 3-training for each group across multiple seasons during a calendar year. In addition community extension workers provide ongoing technical support for a year, sometimes longer. [AWR]

Impacts and Challenges

- **Q: What were the greatest impacts through the permagardens?**
 - A: We invite you to look at the various impact studies mentioned during the webinar, available on the FSN Network:
 - <https://www.fsnnetwork.org/sites/default/files/foodSecurityReport-nepal-interactive.pdf>
 - <https://www.fsnnetwork.org/resource/impact-assessment-permagardens-palabek-refugee-settlement-northern-uganda>
 - <https://www.fsnnetwork.org/resource/participatory-impact-assessment>
- **Q: What were the most adopted techniques for interventions? *Quelle est la technique la plus adoptée lors des interventions?***
 - A: We invite you to look at the various impact studies mentioned during the webinar, available on the FSN Network:
 - <https://www.fsnnetwork.org/sites/default/files/foodSecurityReport-nepal-interactive.pdf>
 - <https://www.fsnnetwork.org/resource/impact-assessment-permagardens-palabek-refugee-settlement-northern-uganda>
 - <https://www.fsnnetwork.org/resource/participatory-impact-assessment>
- **Q: Which were the main drawbacks/challenges with permagardens?**
 - A: We invite you to look at the presentation and listen to the recording for a discussion on challenges.

Other

- **Q: Who paid for the infrastructure?**
 - A: There is not typically infrastructure needed in the development of permagardens, as there is a strong focus on the use of locally, readily available materials for fence building, etc. However, in the event there are some few inputs provided this might be provided

through the program. This will depend on the set up of the program, donor requirements, etc.

- **Q: How many months out of 12 do your participants use permagardens in your regions?**
Combien de mois sur 12 vos participants exploitent-ils le permagarden dans vos régions?
 - A: They use them year round, We have seen them most beneficial in the dry season.
- **Q: I love that you are working in refugee camps! Has there been resistance to creating gardens in the camps?**
 - A: On the contrary, people appreciate new ideas on how to maximize the limited space they have. The tricky part is that it is difficult in any refugee setting to have the ability to plant trees due to policy and landowner resistance. [AWR]
- **Q: What vegetables are promoted during the planning stage: indigenous vs exotic/introduced? Are community surveys conducted to gauge preferred foods?**
 - A: Local plants and varieties are encouraged. Surveys are not generally conducted as part of the permagarden approach in particular; plant types and varieties are discussed during the training process, but this could be a good element to include in an assessment.
- **Q: How are Permargardens different from Bio-intensive agriculture?**
 - A: Bio-intensive planting is included as a component of the permagarden design (see Chapter 5 of the [permagarden toolkit](#))