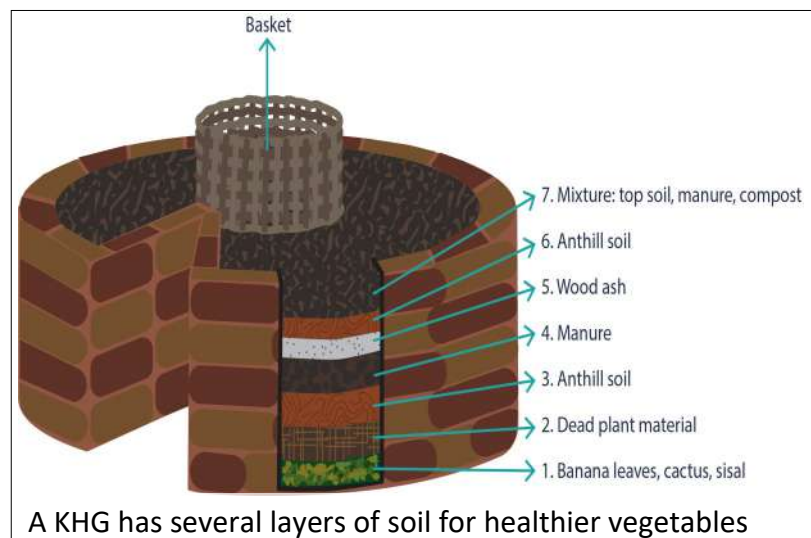




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The Keyhole Garden:

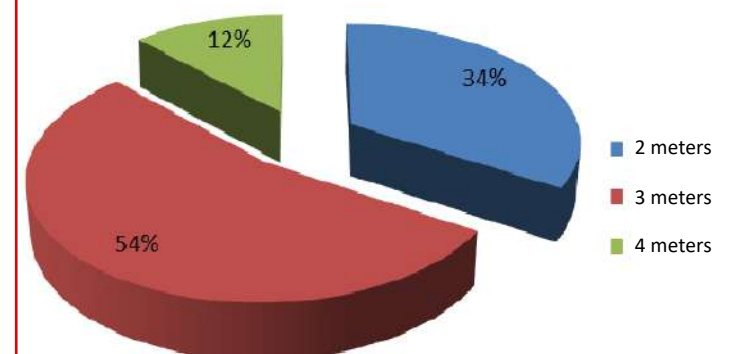
Approach



- Keyhole gardens can be defined as raised garden beds with composting area at the center, that are usually circular **with a path cut out to the central compost unit** - giving them their characteristic shape
- The keyhole gardening concept **originated in Africa**
- In Zambia, keyhole gardens are particularly important because they are **drought-resistant** and are beneficial in **improving household diets around the year but especially in “hunger months”**
- Beneficiaries receive **training** about the benefits of the concept and how to **construct** a KHG
- Training can be done in a short **introductory demonstration** lesson and few follow up visits
- Beneficiaries **construct the KHG on their own** but receive vegetable seeds in the first year after construction
- **No external input** needed - **local materials** can be used

! QUICK FACTS KHG ZAMBIA

- Introduction of the concept in 2016
- More than 1.000 KHG constructed
- As of 2019 slightly more than half (56%) of the KHG were still functional
- Most beneficiaries follow the advise given by FANSER and construct a KHG with a diameter of three meters*



*Proportions of Respondents Having Various Sizes of KHG in diameter



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The Keyhole Garden:

Effects in Zambia



KHG provide nutritious vegetables throughout the year



Fresh vegetables improve complementary feeding

During the dry season Zambian families often have no excess to nutritious vegetables. The KHG tackles this challenge through:

- **Retain moisture** in dry seasons and have a low level of water **consumption** and therefore are very effective in providing **year round** healthy nutritious foods for households.
- Can positively influence **behavior change** through permanent visibility.
- **Less labour intensive**, making it suitable for physically disabled or chronically ill family members.
- **High productivity**: Because of their setup, they produce relatively high quantities of food using very small parcels of land, compost sustains productivity
- The space in the keyhole garden allows for four different types of vegetables to be planted and therefore **contributes to a more balanced diet**.
- Little space needed – can put it **right next to your house**.
- **Low in costs**, easy to build and maintain.

| Vegetable grown in KHG | Percent |
|------------------------|---------|
| Spinach | 82 |
| Rape | 69 |
| Amaranthus/bondwe | 51 |
| Carrot | 41 |
| Green Beans | 22 |
| Onion | 38 |
| Chinese Cabbage | 36 |
| Mpilu | 19 |
| Sweet potato leaves | 8 |
| Swiss Chard | 6 |
| Ginger | 4 |
| Lettuce | 2 |
| Herbs and Spices | 1 |
| Beetroot | 1 |
| Garlic | 1 |

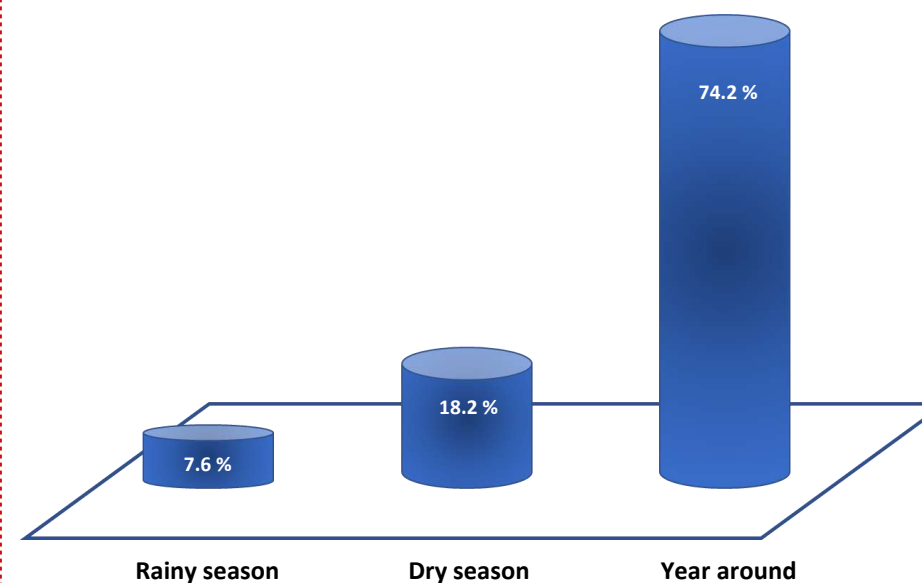
! QUICK FACTS KHG ZAMBIA

Watering the KHG



*91.5 % households report that they use less water for the KHG compared to home or dimba garden

Use of Keyhole Gardens throughout the year



Quality of vegetables



*99.1 % households report that the quality of vegetables from the KHG is better compared to home or dimba garden



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The Keyhole Garden:

Challenges and Solutions



Beneficiaries report that they don't have fencing material



Many gardens collapse during the raining season

! Challenges for use and maintenance over the seasons

Availability of Seeds 6 %

***44 % of the beneficiaries have challenges to maintain the KHG over the seasons. Reasons are:**

Animals eating vegetables because of a lack of fencing 11 %

The structure collapsed during the raining season 83 %

✓ Possible Solutions

- Support community nursery projects
- Emphasise the importance of fencing and possibilities to use local materials through trainings
- Research possibilities to strengthen the structure of Keyhole Gardens
 - ⇒ Use different materials (stones, etc)
 - ⇒ Use different techniques for the base



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The Keyhole Garden:

Transferability



Size and vegetables can be adjusted based on different needs



Different materials can be used to construct a KHG

Preconditions:



A semi-arid or arid environment increases the likelihood of beneficiaries adapting the concept



Existing training schemes like a cascade model ease the implementation

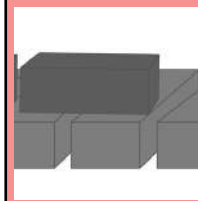


Beneficiaries must have an opportunity to access (buy or grow themselves) seeds

Challenges:



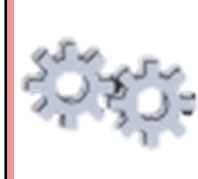
The selection of useable vegetables in the context of space and yield



Selection of suitable local materials for the construction of a Keyhole Garden



Effort and initiative is required to build a Keyhole Garden as part of a new gardening concept

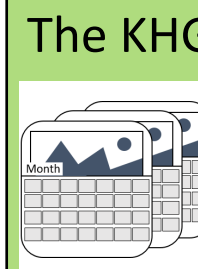


Only one part of the solution (limited quantities). Should be combined with other gardens

Advantages:



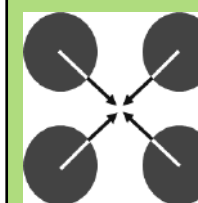
The concept can be adapted to fit different environments, cultures and eating habits.



The KHG is easy to construct. Even in arid or semi-arid environments the KHG allows to grow vegetables year around



Because vegetables in the KHG grow faster and are of better quality, they can add extra cash to a household



Easy to integrate into existing training concepts