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## Keyhole Gardens



## What is a keyhole garden?

It is a house garden locating on a piece of land, close to a rural family house or in the surroundings. It is established to support the family needs and requirements of the essential fresh vegetables.

### Characteristics of the keyhole garden

- Provides the family with fresh and healthy vegetables throughout the year.
- Highly efficient water use since it consumes small amounts of water.
- Could be handled and served by any member of the family.
- Low cost of establishment through utilizing the available local materials.

## Keyhole Garden Components

#	Component	Quantity
1	Area	~ 2 m <sup>2</sup> .
2	Agricultural soil	800 kg (~ 8 sacks)
3	Stones	As needed and depends on their sizes
4	Natural organic manure	200 kg ( ~ 5 sacks)
5	Ash	75 kg (~ 1,5 sacks)
6	Fine sand (to be collected from valley deposits), if available.	150 kg (1,5 sacks)
7	4 thick sticks + 12 medium sticks	16 sticks
8	House Residuals (metal cans, pottery residuals, animals bones, cactus leaves, small plant branches and crop residuals as straw or hay)	As required

## Contribution of Global Program for Food and Nutrition Security (GPFNS)

GIZ (German Agency for International Cooperation) is working through the Global Program for Food and Nutrition Security to support families in the targeted areas to establish home gardens through securing the following free items:

### **First: Seeds for the crops as:**

Squash, Lettuce, Onion, Okra, Arugula, Tomato, Hot pepper and Radish.

### **Second: Farming Tools**

Screening steel net (10m long), garden rake, axe (pickaxe), shovel, sickle, vegetables collecting basket, cotton gloves, Thermal insulation shade net, Metal box, Plastic strainer, Small sprayer and pair of scissors for trimming plants.

### **Third: Training**

It includes training of the farm family members and providing them with essential agricultural skills and knowledge to be able to establish and take care of their own keyhole garden.

*Keyhole Garden Components*

## Method of Building the Garden

1

- The garden location should be defined in a proper area which is easily reachable. Draw a circle with at least a 2m diameter. A small rectangle is drawn in the center of the circle and four thick sticks with 70cm long should be installed vertically in four corners to be the base of the basket. The basket should be lined with thatching grass that allows the added water to flow easily to all garden parts.
- Twelve medium sticks of 1 meter long should be put in the middle within the four thick sticks and tied up together with a rope or a wire.
- Mark the border of the garden with suitable stones and defining a small entrance towards the center to be used as a garden gate to serve and take care of the garden (shape 1).
- Finish the construction of the outer wall of the garden to a suitable height (~60cm).



Method of Building the Garden

## 2



- Set up the base layer of the garden with metal scraps such as empty food and beverage cans, broken pottery and pots, aloe or cactus leaves, dried animal bones and tree branches.
- Cover the above residues with a layer of soil which should be levelled.





# 3

- Then make a light layer of ash followed with another layer of soil and then a thick layer of dry animal manure.
- Add the pre-final layer of soil on top of the thick layer of animal manure.

# 4



- Fill in the basket with alternate layers of manure and ashes (Light layer of ash followed by thick layer of manure. This process is repeated till reaching the upper line).
- Lastly, set up the final layer by putting a mixture of soil, ash and sand (if any).
- Level this layer in a way that the slope becomes directed from the basket towards the garden wall.



- The garden should be planned and prepared very well into lines. The distances between the lines should be between 10 – 20 cm, depending on the planted crops.
- Leafy as well as leave root crops lines should be established consecutively.

# 6



- Irrigating the garden for the first time should be done either by covering the surface with a piece of sack and then pouring the water on that sack or by using the watering jug. After that irrigation is conducted through the compost basket.



- The nets around the park are placed to protect them from animals and poultry.

7

*Method of Building the Garden*

## Maintenance of the Keyhole Garden

### Firstly: Crops Cultivation

The plantation process is conducted for the crops that are needed by the family in lines after the final levelling and planning. Each crop type is cultivated in separate line/lines. Distances between lines are different according to the crop type and generally ranged within 10 – 20 cm.

### Secondly: Irrigation

Garden irrigation is conducted with an average level of 30 liters in the hot area & 20 liters in the cold area per week.

### Thirdly: Replanting

After few days of planting the crops, replanting should be conducted for the non-germinated seeds as well as for weak plants. The replantation process should be done by using new seeds.

### Fourthly: Thinning

This process is conducted after the appearance of the crop's third leaf. Crowded and weak plants are removed, so plants could grow in proper conditions.

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