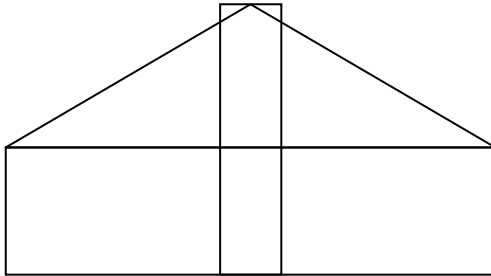
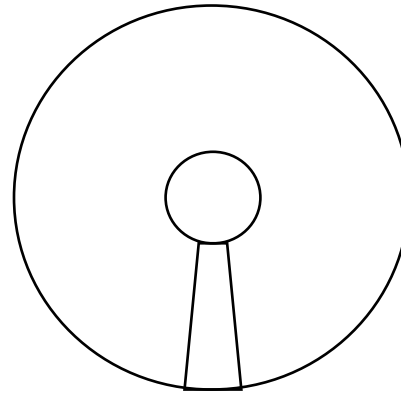


Keyhole gardens

Over the last two years keyhole gardens have been promoted in different communities throughout different programmes in African countries. They are popular and productive across vastly different environments and cultures.



Keyhole garden as viewed from the side



Keyhole garden as viewed from above

Essentially the keyhole gardens consist of a ring of stones (in other countries bamboo or bricks are also used) about 2m in diameter, and about 1m high. At the centre of there is a stick, wire or bamboo structure that contains organic wastes. This is about 1.5 m high, with the soil sloping a pyramid fashion from the edge of retain wall up to the core. Fresh waste and water is poured into this core on a regular. Moisture and nutrients then seep down from this core into the surrounding soil. Access to the core is provided by a small path way, giving the plot an appearance of a keyhole when view from above.

Their success can be attributed to a number of factors:

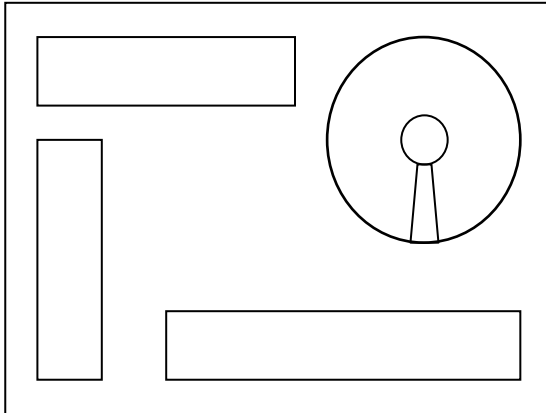
1. They can built in places where it is impossible to establish an ordinary garden (rocky areas, shallow or compacted soils, etc).
2. If established near the house (recommended) they are easily accessible, even to the aged or ill.
3. Their height means that they can be worked without having to bend over.
4. No heavy digging is required.
5. They provide a suitable place to dispose of any organic waste as well as waste water, and to make this productive.
6. Because they are built up from a mixture of soil and manure and/or compost (as well as ash, if available) they are immediately fertile and produce well.
7. If constructed to the correct height (1m) they provide good root depth for vegetables in un-compacted soils.

Keyhole gardens may have all of the above strengths, but they are still subject to the same forces which can be so destructive to any homestead garden, notably: chickens, pigs, goats and other livestock and strong winds resulting in high levels of evaporation. For this reason it is encouraged to erect a traditional animal-proof stick fence around the keyhole garden. To support this the project provides participants with three strands of barbed wire and metal stakes for the corners.

Within the fenced area the gardeners dig deep trenches and plant climbing beans and other plants that can make use of the fence. Some gardeners cover the their plots during temperature extremes by pulling some sort of cloth over the a light frame.

Arrangement of different types of gardens together in an enclosure

Buckets are used for diluting urine and prepare manure teas. The material in the central is prevented from falling out with a flattened metal drum. Fences are high to protect from animals.



The first step is to make an enclosure for the earth and compost mix. It should be of a radius of 120 cm (4 feet), with a column in the centre for compost materials and watering of 30 cm width (1 foot) The compost – earth mixture should be in a ratio of 1:3.



Once the keyhole garden is constructed and filled with compost – earth mixture, it should be covered with mulch to prevent drying out of the seed bed. Within the mulch, either seeds, or seedlings can be planted. If seeds, the mulch should be watered regularly; if seedlings, they may be watered from the centre of the keyhole garden, once plants are well established.



Below a variety of keyholes are presented with a short comments.

Example 1: This keyhole has two arches over it constructed from black wattle. In the background is clear plastic that is pulled over the arches to provide shelter.



Example 2: A proud couple stand in front of a keyhole garden full of vigorous vegetables. Growth is enhanced by diluting human urine with water 3:1, and pouring the mix down the core and directly onto the plot. This will seem strange to most people, but is safe and is a good source of nitrogen for the plants.



Example 3: The walls can be made of bamboo, or stones, or bricks, or erect sticks – whatever materials are readily available. The key is to keep it simple using local materials. It is also important to use traditional vegetables, even those from the wild, like amaranth, nightshade greens, spider plant, sweet potato vines, pumpkin vines, bean greens, etc. It is important to plant greens to increase vitamin A in local diets especially during the dry season.



Example 4: Even in cases where the ground is very difficult to work a keyhole can provide enough food for a family. Soil can be gathered by scraping it from hard ground, and a rich mixture of compost will ensure a good garden.



Example 5: The walls of the keyhole garden do not have to be as high as this one, but it does make picking and planting very easy for an elderly couple. The metal fencing stakes indicated that the garden is being prepared for a stick fence. A keyhole garden located within a protective area may be surrounded by deep trench gardens also supporting a variety of vegetables. Such gardens can be replanted again and again without reconstructing them, especially if manure tea is used to improve fertility after each harvest.

P.O. Box 16338
Arusha, Tanzania
027-254-5607
0754-480-184
gsctanzania@cybernet.co.tz

Global Service Corps-Tanzania is an affiliate of Global Service Corps International
www.globalservicecorps.org

