



# *Dr. Deb's* Sustainable Living

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## Keyhole Gardens

Contrary to popular belief, waste can equal food. A keyhole garden makes great use of wastes in order to become a truly 'sustainable garden' with no to low watering and no fertilizing. So if knowing how and when to dig, fertilize, or water vegetable gardens has been keeping you from growing healthy and nutritious produce for your family, then a keyhole garden will simplify your life.

Keyhole gardens are a technique of gardening used to grow vegetables in dry climates and have been successfully used in places around the world that get far less water than even the driest places in Texas, or a North Carolina drought. They are a special form of raised bed gardens, circular, and walled in by stones or closely packed poles with a path to the center. At the center is a smaller circular basket made from chicken wire that holds manure and other organic kitchen waste. This center of manure and kitchen waste is the self-watering and self-fertilizing aspect that makes gardening life easier, reduces grocery bills, reduces the amount of water to the plants, eliminates fertilizing, and positively influences eating habits with fresh fruits and vegetables.

### Here's how it's put together:

**Step 1.** With a string that is 6' long, measure off the inside diameter of the outside wall of your keyhole garden and draw this circle on the ground so that you can use it as a reference. For the self-watering and self-fertilizing component to work, the diameter needs to be exactly 6'. Decide where you want the access to the garden (the keyhole), and then place the basket at its apex.



**Step 2.** The inner basket needs to be made of chicken wire or similar. Choose any material for the outside wall that can support the weight of wet soil. Materials can range from rocks to sticks or even metal. Use something that is readily accessible or doesn't cost much. Follow your 6' diameter measurements with the chosen material and build upward and then inward for the keyhole access.

**Step 3.** Once the outside wall is completed, shape the chicken wire into the 1' diameter inner basket and place it inside the garden up against the inner edge of the keyhole. The height of the inner basket should exceed the finished height of the outside wall by about 1'. So, if the outside wall is 3' the inner basket will stand 4' from the ground. Now you are ready to fill the garden.



**Step 4.** Line the inside of the outside wall with cardboard-lots of it, up against the rock. This is to keep any soil from creeping out over time. Then fill the entire inside of the garden (not the inner basket) with alternating layers of compostable stuff (see sheet mulching).

- 1st layer on the ground should be more cardboard and 3" thick (considered brown)
- 2nd layer could be some green leaves also 3" thick (considered green)
- 3rd layer should be brown again so choose twigs and small branches for air pockets
- 4th layer could be 3" of soft green prunings or lots of grass clippings
- 5th layer of sawdust or shredded newspapers

The top layers should be saved for good manure, mushroom compost, sawdust, or tiny green leaves and twigs, also in alternating combinations. This allows you to plant soon in the spring since these items decompose quickly. The final layer of 'soil' should reach the height of the outside wall (3') and the height of the inner basket (4'); so it will be sloped downward from the inner basket.

**Step 5.** Fill the inner basket also with alternating layers of green and brown, but this time use kitchen scraps and herbaceous weeds (everything except meat and bones and dairy). As this inner basket decomposes (with the help of bacteria and fungi) it provides water (kitchen waste equals food for the compost) and fertilizer for your plants by turning the wastes into nutrient-rich compost. Water this basket to give it a jump, and the rest of the garden if needed, but discipline your plants by going as long as you can without watering them... this will force their roots downward into the layers of compost and the inner basket where the moisture really resides. The concept works better at different times of the year, given the size and quality of your layering in both the garden and the inner basket.

**Over time** (within a month) the ‘soil’ level will drop so you will need to be ready with more ‘soil’ if you are replanting. You will be amazed at how many plants you can get in this small space. Remember that crowding is good so that the leaves of one plant provide shade for another. Deb’s keyhole garden shown in the figure supported and produced

- 2 Jack-O-Lantern pumpkin vines with four pumpkins,
- 2 Cinderella pumpkin vines with one huge pumpkin,
- 12 Malabar spinach vines, 4 cucumber vines,
- 4 cantelopo vines, 1 zucchini (who needs more than one),
- 12 beet plants,
- lots of carrots, parsley, marjoram, swiss chard,
- 4 grocery bags of harvested basil.

**Intensive gardening at its best!**

**Have fun!**



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