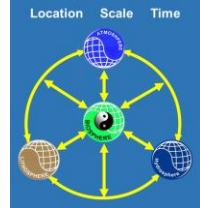




# Gardening without a Garden #1

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## Gardening in a Bag

Gardening in a bag is a way to grow some of your food when you have very limited space, limited water, and poor soil conditions. The assumptions for this type of gardening. You have:

1. No land to garden;
2. Limited access to soil or poor soil;
3. Limited access to water or limited water supplies.

This lesson was prompted by Abdul VU2MF, a HAM radio friend in India. He had shared many of the sustainable agriculture materials I developed for the Rural Training Center-Thailand (RTC-TH). He told me about another project site in Eastern Maharashtra, India where the people were struggling. They had little to no water to grow crops. They were in poverty and needed help. From a general Internet search for more information, it seems the soil conditions are poor.

With little information to go on, I assumed the worst and came up with the suggestion to try bag gardening. It involves re-using discarded materials, composting kitchen wastes, and using gray water.



*The bags can be used in either laying down on a side or standing upright. It all depends how much space you have at your home.*



### Basic Materials:

- Vegetable kitchen scraps and egg shells and bones. [Note: The egg shells and bones should be dried and crushed.]
- Dried leaves, newspaper, some twigs (not much thicker than a finger)
- Small amount of soil (about ¼ to ½ shovel)

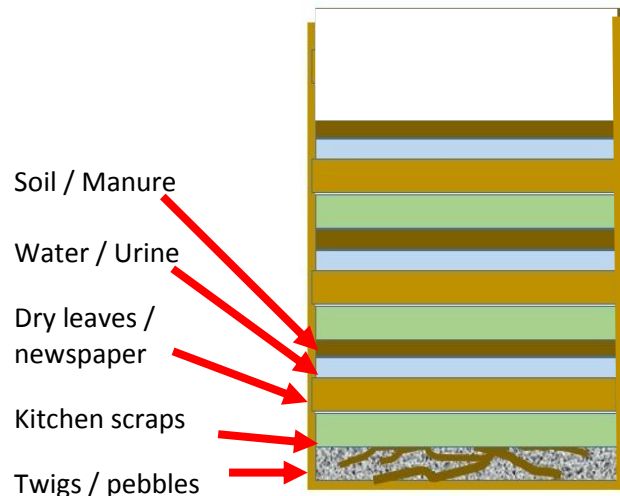
### Basic Tools:

- Shovel
- Discarded bag

### Procedure to Prepare the Bag:

Follow the steps below to build garden soil in the bag. It begins with composting.

1. Gather small twigs and stones (pebbles or gravel). Put them in the bottom of the bag. This layer should be about 2-3 cm deep.
2. Each day, put kitchen vegetable scraps in the bag. Spread them evenly over the layer of twigs and stones. If you have egg shells or bones, dry them and crush them before adding them to the bag.
3. Put a layer of dry leaves or shredded newspaper over the fresh kitchen scraps.
4. Sprinkle some water on the dry leaves or newspaper to get it damp. Water used to wash food or dishes can put to good use this way.
5. Put a layer of soil 1-2 cm deep over the dry leaves or newspaper. If you have any animal dung, add a layer 1-2 cm deep.
6. Make some several small holes in the bottom of the bag. This will let excess water out of the bag. Place the bag in a shaded spot out of direct sunlight. Also be sure rain water will not flood the bag.
7. Repeat steps 2-5 each day until the bag is filled 30 cm deep. Let the composting process continue. Start another bag while you wait for the contents of the first bag fully compost. [**Note:** Fill the bag to 60 cm or more if you want to plant potatoes, turnips or carrots.]
8. Check the bags to make sure they don't dry out. Add waste water to keep the contents damp but not wet. Don't saturate the compost. If you add some urine to the compost, you add more nitrogen to the compost.
9. The compost is ready when it appears to be like soft, loose, damp soil. It should easily crumble in your hand.



1



2

### Planting Procedure:

Smaller vegetables are better suited to grow in bags (See list on next page). Gardening in a bag only needs a few seeds. If you set up the bag in a vertical position, plant the seeds in the top of the bag (Photo 1 on the left). You can also make a small hole on the side of the bag to plant seeds for herbs (Photo 2 on the left).

Placement of the bag in sunlight depends of what you are planting. Some plants need more

direct sun than others. Some plants need less direct sunlight. If you live in a particularly hot and dry place, a shaded area might be better. On average a spot with 6-8 hrs of sun is good.

Water as needed. If the plant leaves wilt, the plant needs more water. If the soil is very

wet, there is too much water. The planting bag will tend to dry out faster than plants growing in a pot.

You should avoid using chemical fertilizers. This reduces growing costs and eliminates the possibility of contaminating food with chemicals. Besides, the purpose of growing food is to feed your family, not to poison them. If you make good compost, you should have no need for chemical fertilizers. The compost will have all the necessary nutrients for the plant.

### ***Some Suggested Plants for a Bag Garden***

Do not be limited by this suggested list. A simple guide line is this: Grow what you eat, eat what you grow.

Beans	Chili	Peas
Beets	Cilantro	Potatoes
Bell peppers	Herbs	Radish
Carrots	Lettuce	Tomatoes
Celery	Onions	Turnips

### ***Notes***

#### **Gardening in a bag **WILL NOT****

1. produce all the food you need for your family.
2. make you rich selling your produce.

#### **Gardening in a bag **WILL****

1. produce some of the food needed to feed your family
  2. save you some money that you spend to buy produce in the market.
- Your planting bag will not last forever. Sunlight will cause it to deteriorate. But you can reuse the soil in the bag. Just mix in more compost.
  - Rotate what you plant. Don't plan the same vegetable in the same soil. Alternate what you grow in any batch of soil. Renew the soil by mixing in more compost.
  - During cold weather, you can cover the planting bag with a clear plastic bag to protect your plant. It's similar to growing things in a green house.
  - Water your garden bag using gray (used wash water not sewerage). An example of gray water is water you used to wash vegetables. Use a cup or small ladle to pour water at the base of the plant so it gets to the roots. This avoids wasting water.
  - Use mulch. Put a thick layer of leaves to cover exposed soil in the bag. This reduces losing water by evaporation. It will also help reduce weeds. 🌐