

# Turning Waste into Soil

Most organic waste from the garden and the kitchen can be used to create compost. This compost can then be added to your garden. The composting system you choose will be driven by:

- The amount of food waste you produce,
- the space you have (and how much mess that space can stand),
- cost,
- time and effort.

## Your options

Broadly speaking there are four composting options for use at home.

- Bokashi bucket (Covered in the Composting workshop)
- Worm farm
- Composting in bins (Covered in the Composting workshop)
- Composting in bays (Covered in the Composting workshop)

System	Amount of waste	Space needs	Cost	Time/effort	Comments
Boakshi	Low to medium	Low and not at all messy.	Moderate	Minimal and simple	Works best with more than one bucket; on-going cost of enzyme mix.
Worm farm	Low	Low but can be a bit messy. Also, worms like to be kept cool.	Low after initial investment.	Minimal time, need a bit of care and attention.	Worms aren't that hungry and they don't like it too hot!
Compost in a bin	Medium	Medium and can be messy.	Low after initial investment in bins, but do benefit from added materials like manure and straw.	To really work you need to keep adding layers and make sure they're moist.	Works best with more than one bin. Need to sit on earth.
Compost in a bay	High	High and very messy	Low, but benefit from added materials as above.	A big commitment in terms of gathering materials and building it. Then needs to be kept moist and turned once or twice.	Work best with three or four bays with different ages of compost in each bay. Also work best when a compost heap is built using a large amount of material in one go.

## How to...

### Worm farms

A worm farm usually consists of a series of trays made of black plastic. The middle trays have holes in them. The bottom tray is sealed, but has a tap. Worm farms are very easy to set up and use. They are best set up with a purchased worm farm and worms. If you know someone with a worm farm there is no need to buy worms, just take a few from them and breed them up.

Worms can be a bit touchy about what they eat. They do not go well with lots of citrus or onions.

They do not eat a lot, so a worm is not great for dealing with large volumes of food waste.



To set-up the worm farm:

1. Assemble as per manufacturers instructions.
2. In one tray put a layer of soil, grass clippings, green matter or (if provided peat moss).
3. Add the worms on top and cover them with some green food waste and some shredded paper.
4. Feed the worms about once per week. Finely chopped vege and fruit scraps mixed with some shredded paper works well. Do not add too much citrus or onion. Water them if they are drying out, but not too much.
5. Once a tray is full then another layer can be added on top. Start as before. The worms will migrate so long as there is contact between the trays. Once the old tray is free of worms, the soil can be added to the garden. It's excellent compost.
6. A worm farm also produces liquid manure that can be tapped off. Dilute 1 to 10 with water and use to feed the garden.

### **A Worm tower**

A worm farm tower simply means a worm farm put directly into your garden bed and the castings and leachate will go straight into the soil.

### **Materials**

- A piece of wide plastic pipe (150mm wide or thereabouts) about 50cm long.
- A drill, to make holes in the pipe
- A saw, to cut the pipe to your desired length
- Compost worms - 50 would be plenty
- Newspaper and water
- A terracotta pot (or old dinner plate) to fit over the end of the pipe

### **Instructions**

1. Give the pipe a wash, and drill it with holes that are at least 5mm in diameter
2. Choose a spot in your garden bed for the worm tower. Allow for easy access (for adding organic material) and for maximum benefit to the plants around it.
3. Decide how deep you want the worm tower in your garden bed. This will depend on your soil and how you've made the bed. Let's say 30cm deep.
4. Cut your pipe so its entire length allows for your desired depth plus 20cm above the surface of the bed.
5. Dig a 30cm deep hole, a bit bigger than the diameter of your pipe, in your chosen spot.
6. Place your pipe in the hole, and fill in around it so the pipe stands steadily. You should have roughly 20cm of pipe above the surface.
7. Add a thick layer of dry carbon material (straw, dry grass etc) in the bottom of the pipe, to a depth of 10cm
8. Tear your newspaper into strips and soak in a bucket of water (or use some other carbon-rich material for this step – straw, dead grass, etc).
9. Place a thick bedding of wet newspaper strips in the pipe, about 15cm deep.
10. Add your worms.
11. Add another layer (5cm) of wet newspaper to bed the worms down.
12. Place a terracotta saucer on top of the pipe as a lid to exclude rain and keep critters out of the worm tower. Can also use an old dinner plate.
13. In a couple of days, start adding handfuls of organic matter.