

How to make a wormery

Wormeries or vermicomposters use worms to create dark crumbly compost from your kitchen and garden waste. It is a great method of recycling organic waste from homes where kitchen waste is the main material to be composted, such as households with small gardens. If you haven't the space for a traditional compost bin, you could find that worm composting is just the thing for you. Humus-rich worm compost is valuable in potting mixes and as a plant fertiliser, so even if you do not have a garden at all, you can use it for your houseplants and window boxes. This factsheet explains how to make a wormery from stacking boxes for a fraction of the cost of commercially available models.

Materials you will need:

- 3 rigid plastic boxes, either stackable or ones that nest inside each other
- 1 box lid
- Corrugated cardboard or newspaper (worm bedding)
- 250g of worms from an active compost bin or wormery. They are also available online or at angling shops where they are sold as bait
- 1 water butt tap (optional – to drain liquid from the 'sump' layer of the wormery)



Tools you will need:



- A drill (preferably a power drill as there are lots of holes to make!)
- A 5mm drill bit
- A 25mm flat drill bit (optional, for installing the tap)

Step 1 - preparing the boxes

Select two of the boxes to be the 'composting trays'. Drill 5mm holes around the top of these boxes to allow for better ventilation in the worms' living quarters.

Then drill lots of 'wormhole' holes in the bottom of the same two boxes. The number you make will depend on the strength of the base of the box you are using, but the more you can put in the better, as it helps liquid drain from the composting material and allows worms to move freely between layers. (A commercially available wormery may have 1 hole per 1cm² of floor area).

The third box acts as a sump for collecting liquid that issues from the composting material so needs no air or wormholes. If you want a tap in the sump use the 25mm flat bit to drill a hole in the side of the box and install a water butt tap. A tap allows for easy drainage of the sump but is not necessary if you check the liquid level regularly and pour off any that collects. If you install a tap, raise the wormery on bricks with a slight drop towards the tap and keep the tap open with a collection pot underneath.



Step 2 – preparing the bedding

You need to provide worms with somewhere to live before they start making compost. This should be a layer of moist organic material such as strips of newspaper or cardboard (dampened), mature compost or leafmould. Place a 5cm layer of this material in one of the boxes with holes.

Step 3 – adding the worms

Add worms to the box with the bedding, cover with a piece of damp cardboard and place on top of the sump layer and then add the lid. (Put the other box to one side until you have filled the first layer, which may take a number of weeks.

Step 4 – feeding the worms

You can put almost any sort of garden or kitchen waste in a worm bin provided it is not too big or too woody (remember, worms don't have teeth!). You need to feed your worms a balanced diet with approximately 25% dry 'brown' fibrous materials such as cardboard and 75% wet 'green' materials such as kitchen waste.

To start with add a small amount of waste under the cardboard layer in the composting tray. Worms can eat around half their body weight a day, so the 250g of worms you start with won't get through much until they have increased their numbers.

What can I put in my wormery?	What shouldn't I put in my wormery?
<ul style="list-style-type: none">➤ Vegetable peelings➤ Egg shells➤ Fruit peelings➤ Cooked vegetable leftovers➤ Burnt toast➤ Shredded paper➤ Coffee grounds➤ Tea leaves➤ Small quantities of soft, green garden waste	<ul style="list-style-type: none">➤ Grass cuttings (they heat up too much killing the worms)➤ Large quantities of citrus peel, rhubarb leaves and onion skins (worms need a constant pH – adding lots of acidic materials will lower the pH, but small amounts of these materials will be tolerated)➤ Dairy products, meat and fish (protein-rich substances like these will go putrid and may encourage rodents)➤ Cat and dog faeces (to avoid potential health hazards from pathogens)

Step 5 – day to day maintenance

Once the first box is full, remove the lid and put the second composting tray on top (and attach the lid to it). The worms will move up as they finish eating what's in the lower tray and once the material is fully composted remove and empty the lower tray so it's ready to use again when the top tray is full. Remember to regularly check the level and empty the 'worm juice' out of the sump layer.



Top - tips

- Remember to dilute the worm juice 1:10 with water as it can be too nutrient rich when neat
- If your wormery is smelly it's probably too wet. Add more fibrous material and stop feeding for a while
- Keep your wormery out of direct sunlight. Worms are most comfortable at 20°C and don't like it much above 25°C
- Put your wormery in a shed or greenhouse over winter. Worms really slow down below 10°C.