

YOUR EASY GUIDE TO WORM FARMING

SUITABLE FOR
APARTMENTS

Did you know the average red lidded waste bin in the City of Canada Bay contains more than 50% food waste? We send almost 8000 tonnes of food waste to landfill each year, which leads to the production of methane, a potent greenhouse gas. Help us reduce the amount of food waste sent to landfill by worm farming.

What is worm farming?

A worm farm is a tiered structure that houses a special breed of compost worms to convert food scraps into worm tea and castings. Worm tea and castings are powerful soil improvers for gardens, trees, and pot plants. When we feed our soil in this way we:

- Increase its ability to absorb carbon from the atmosphere
- Increase water retention by 30% on average
- Improve overall soil quality and nutrient content.



WHAT DO YOU NEED?

Worm farm

Worm farms are usually purchased at nurseries and come in varying sizes and shapes. They can be placed outdoors in a shady sheltered spot or indoors in the laundry, garage, balcony. NB Worms are purchased separately.

Worms

Worms are super heroes and play a critical role in soil fertility and agriculture. There are thousands of worm species but only a few are suitable for worm farms. Tiger Worms and Red Wigglers are the most common breeds sold for worm farms at nurseries and come in starter packs of 1000. These tropical worms can eat up to their body weight each day in food and thrive in the densely populated and nutrient-rich conditions of a worm farm. They eat and breed according to the conditions. A healthy worm farm population can double every three months. Please note that common earth worms cannot survive in worm farms.

Worm bedding

It is essential to place the worms into a layer of bedding. Bedding should be around 10-15 cm deep and is usually made with coco-fibre brick which is supplied with the worm farm kit. The brick is placed in a bucket with a few litres of water. After a few hours the coco-fibre expands into moist crumbly soil like material. If you are building your own worm farm, you can buy a coco fibre brick separately or you can make bedding from any combination of compost, soil, potting mix and shredded paper (always ensure the bedding is moist).

HOW DO I TAKE CARE OF WORMS?

A worm farm should ideally mimic the conditions of the surface of a tropical rain forest: a moist, shady warm layer of decomposing leaf mulch and forest debris. A healthy worm farm will have a pleasant earthy smell and will not attract vermin. Follow the steps below to create an ideal habitat for worms.

Temperature and light

Worms thrive and are most productive during mild temperatures between 18-25°C. Always place worm farms in a sheltered and shady location outdoors or indoors in the laundry, garage or balcony. Provide additional insulation during extreme heat such as covering the farm with a wet towel. Worms slow down during winter and benefit from being covered with a hessian sack or blanket. Please note worms will not survive freezing temperatures.



Water and moisture

Worms need a moist environment to survive. It is essential to soak any dry materials that are added e.g. paper, cardboard, hessian blanket. Worm farms should be gently flushed with a watering-can each week. Spray over the entire feeding surface and ensure the tap has been left open to allow the liquid to drain and prevent worms from drowning. A bucket should be kept under the tap to capture the filtered worm juice.

Acidity

A neutral pH level is ideal for a worm farm. A worm farm can become acidic when high volumes of fruit are added, due to the sugar content of the fruit. Typically this attracts fruit and vinegar fly. This acidity can be easily rectified with a sprinkling of dolomite lime and adding shredded paper and a higher ratio of vegetables to the worm farm.



How much food?

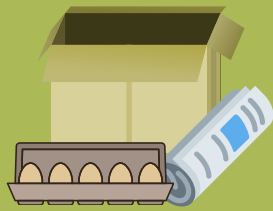
One of the biggest mistakes made with worm farming is over feeding. When starting out with one thousand worms, place only small quantities of food into the farm and gradually increase as the worm population increases. It may take up to a year for the worm farm population to build up before it can get through the average family weekly food scraps. If there is too much food it will start to go mouldy before the worms are able to eat it. Worms will not eat the mouldy food however this will attract cockroaches and make the farm smelly, so it's best to remove it.

WHAT DO I FEED MY WORMS?

Feed worms:



fruit and vegetable scraps



shredded and moistened newspaper and egg cartons



pulp from juicer or blender



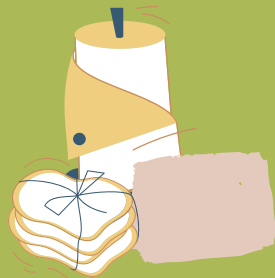
crushed egg shells



tea leaves, bags and coffee grounds



small amounts of bread, pasta and rice

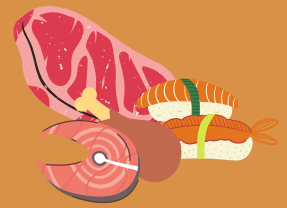


towels, napkins, serviettes and cotton rugs

Do not feed worms:



dairy products



bones, meat and seafood



onion, chilli and garlic



potato peel



materials with chemicals



animal faeces



citrus fruits



oils and fats

Top tips for feeding your worms:

- Start with small handfuls of food and increase the volume as the worm population increases
- Feed your farm a balance of fruit, vegetables, and moistened shredded paper to avoid acidity
- Feed your worms around twice a week
- Worms do not have teeth, so the smaller the scraps, the faster the worms will consume it
- Add a handful of moistened soil over the food scraps every week or two, this adds grit which helps the worms to digest their food
- Aerating the feeding tray every couple of weeks or so — use your hands or a tool to gently mix the top level to allow more oxygen for the worms and beneficial bugs (this also deters unwanted pests)
- Add a sprinkling of dolomite lime every month or so to reduce acidity
- Purchase more worms and bigger worm farms if you have a large household and plan to recycle a high volume of food
- Use chemical free rainwater in your worm farm where possible, alternatively, eliminate the chlorine in tap water by exposing a bucket of water to the sun for 24 hours.

SETTING UP YOUR WORM FARM

Base level

This can be referred to as the bathroom level. The base tray collects the worm juice/tea/ wee and has a tap or opening for drainage. The base is positioned on legs or a crate so a bucket can collect the liquid from the tap. Always keep the tap open to allow the liquid to drain. It is recommended to put a plastic container or brick in the base layer so any worms that fall through, can climb back up to the first level. If the tap stops working properly, simply remove it and allow the drainage through the hole. It's a good idea to flush out the base layer every few weeks to prevent stagnation.

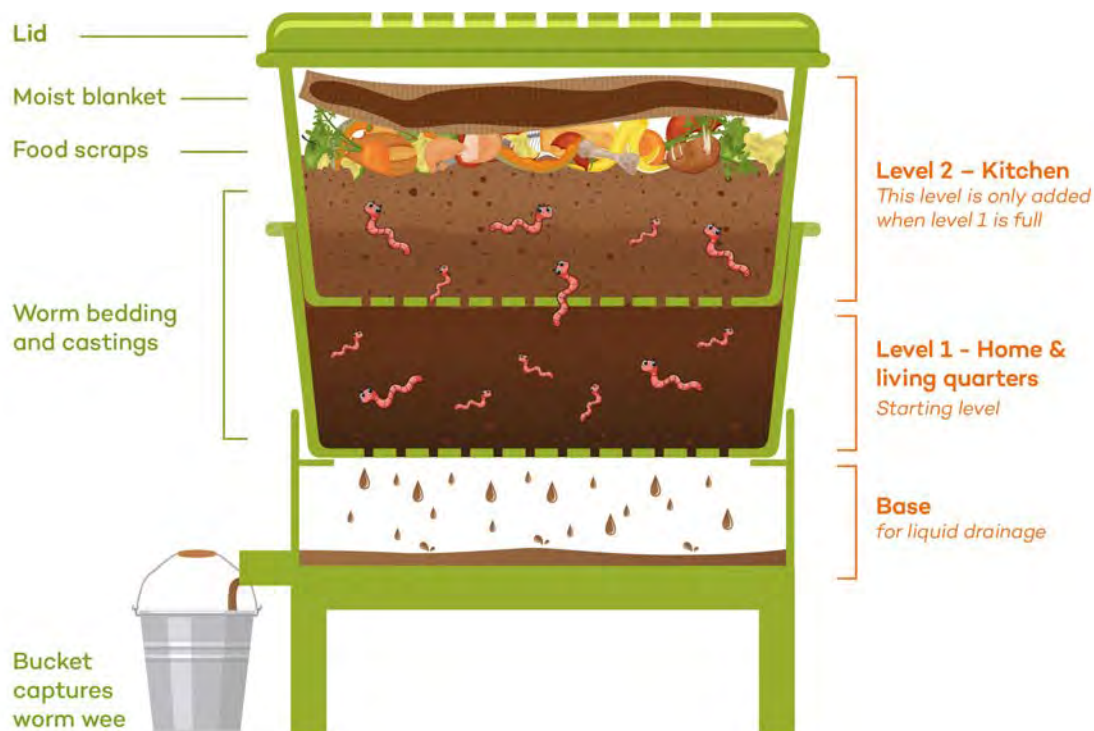
Level one

Level one is placed on top of the base and can be referred to as the living room. This level will have holes in the bottom to allow liquid to drain to the bottom level. To prepare this level:

1. Line it with a sheet of moistened cardboard to prevent worms from falling into the base, over time this cardboard will break down and be replaced with worm castings
2. Add the worm bedding (10–15 cm thick), this is usually moistened coco fibre but can also be a combination of compost/soil/potting-mix or shredded paper
3. Gently add the worms to the bedding and add a small handful of scraps or moistened shredded newspaper
4. Cover food scraps with a moistened blanket, hessian sack or old cotton towel to keep worms moist, dark and protected whilst they are feeding—the cover will need to be replaced every few months as the worms will eventually eat through it
5. Cover the worm farm with the lid to provide added protection and to keep pests away.

Level two

This level is only added when level one is full - usually after a few months. Level 2 is placed directly on top of level one ensuring there are no gaps between the levels so the worms can easily travel between the levels. This level now becomes the feeding tray.



Start with the base and level 1 only. When level 1 is full of worms and castings, then add level 2. Level 1 and level 2 have holes so worms can travel between all the levels

WHAT'S NEXT?

How do you use worm juice?

Worm tea/juice/wee is a liquid fertiliser and is very beneficial for all round garden and plant care. It's best to use the juice within a day or two for maximum benefit. The worm juice needs to be diluted before using in the garden. On average, dilute one part worm juice to four parts water (or the consistency of weak tea). The diluted worm juice can be used on any plants, trees, shrubs, veggies, seedlings, lawn, and indoor pot plants.



How do you harvest castings?

When the second level is full of worms and castings, harvest the castings by taking the following steps:

- Remove the worm blanket and the top feeding tray and place it aside
- Remove the lower level with the castings and place it aside
- Place the top feeding tray onto the base tray so it now becomes the lower level
- Place the lower level with the castings, on top and leave it exposed to the light for at least 30 minutes to allow the worms to burrow down
- The castings can now be scooped off the top
- This tray now remains as the top feeding tray.



How do you use castings?

Worm castings are very nutrient rich and are a wonderful natural fertiliser which can be used in many ways:

- Dig into garden beds
- Place around the drip line of plants and cover with mulch
- Add to potting mix
- Add to seed raising mix.

WORM FARM TROUBLESHOOTING

"My worm farm is smelly"

Healthy worm farms will not produce bad odour. Your worm farm may smell if there is too much food, it is too wet or it doesn't have enough air. Remove mouldy food scraps, gently aerate the feeding tray with your hands or a hand tool, and add a sprinkling of dolomite lime. Gently flush with water, ensuring the tap is open. Stop feeding for a few days instead add some shredded dampened newspaper.

"How do I prevent vermin and cockroaches"

Vermin such as rats or mice are attracted to meat, bread and dairy products so avoid putting these in the worm farm. Remove any rotting food and aerate the feeding tray and flush with water, as vermin and cockroaches do not like disturbance and wet environments. Add some dolomite lime to reduce acidity which may attract vinegar fliers. Ensure the worm farm is snugly covered. If the worm farm has spiders or ants it is a sign that the farm is too dry. Gently flush the entire farm with water about once a week. Please note, there will be other creatures visiting the farm which are not harmful for example skinks, slaters, slugs and mites.

"What do we do when we go away"

If you are going away for up to two weeks, simply add thick layer of moistened shredded newspaper. If you are going away for longer, ask a friend to feed the worms.

