



Worm Farming Fact Sheet

What is Worm farming?

Worm farming is another way to dispose of unwanted food waste and get a liquid fertiliser as well. Food scraps are placed in the worm farm regularly and special worm farm worms eat their way through it. The worms in a worm farm are different to the garden worms you find when digging in your garden. Worm farm worms are called Red Worms (from the Amazon) or Tiger Worms and have a fantastic appetite! These worms can eat anything that was once living - including cotton fabric, dog hair, vacuum cleaner dust or paper!

Worm farms tuck away neatly in any shaded corner, whether it's on a balcony of a unit or high rise or part of an office kitchen or school classroom. They don't smell, they don't take up much room, and are a efficient food processing machine!



Use a worm farm by itself or alongside compost bins for a great addition to your garden or balcony.

Worm Farming keeps food waste out of landfill.

On average Hornsby Shire red lid garbage bin's include 50% organic waste – a large portion of which is food waste. Food waste in our garbage bins costs us all money, wastes our precious natural resources and contributes to climate change as it breaks down in landfill. Let's all work together to keep food waste out of the red lid garbage bin!

Food waste is either **unavoidable** or it's **avoidable**.

- **Unavoidable** food waste, such as egg shells, vegetable peels and tea bags is best dealt with in a worm farm (or compost bin). That way you keep those precious nutrients in the form of worm tea and castings (a free fertiliser!). For more information see Composting and Worm Farming.
- **Avoidable** food waste, such as leftovers that never get eaten and food that reaches its expiry date can be reduced by remembering a few easy Love Food Hate Waste tips. These tips on buying, storing and preparing food to reduce waste can save you money, time and stress. See lovefoodhatewaste.nsw.gov.au for more information.





Benefits of Worm farming

More than a third of your waste could be given to your worm farm. By worm farming your food scraps at home, you can:

- Improve your soil and grow healthier and more resilient plants
- Reduce the need for watering and the use of artificial fertilisers
- Encourage helpful garden worms and micro-organisms into your garden
- Help keep garden vegetation out of landfill, reducing greenhouse gas emissions and odour problems

Worm farms produce two very valuable commodities for your garden. Worm tea is the liquid produced daily as a result of the worms' consumption of organic matter. It is a golden brown colour and is packed with micro and macro nutrients, a perfect general fertiliser for your plants. Initially dilute 1 parts worm tea to 9 parts water. Strength can be increased as your plants adapt to the richness. Worm castings are the other nutrient rich product produced in your worm farm. Worm castings are a thick brown sludge that can be added to potting mix or compost. Include a small amount when repotting or planting plants. It is very strong and only a small amount needs to be used.





Location

Worms are very sensitive to extremes in temperatures. Locate a spot for your worm farm where it will not get too hot or too cold. If you choose to keep your worm farm outdoors, leave the tap open to allow for drainage so the worms do not drown during periods of rain. Make sure you place a bucket under the tap to collect your worm tea.

Worm farms can be purchased from Hornsby Council Waste Management Team, garden shops or hardware stores. If you choose not to purchase one and wish to make your own there are a few options available. The worms used in worm farms are special worms and can be bought from your local nursery or hardware shop. If you are making your own worm farm, the base (bottom tray) should have a solid floor to catch the run off or worm tea from the upper layers or trays. Layers stacked above the base layer need to have holes in them to allow run off to drip into the bottom tray and for the worms to move between layers.



Use an old bath

Raise one end of the bath tub slightly so any liquid produced can run out of the plug hole. Place a vessel under the hole to collect this valuable 'worm tea' resource. Place bedding material in the base of the bath and add your worms. Make sure you cover your worm bedding with newspaper or hessian to keep worms feeling warm and safe. Place food under the newspaper.

Polystyrene boxes or buckets

Ask your local fruit and vegetable shop for two polystyrene boxes. Broccoli boxes are ideal. Poke holes in one box and place on top of the other box. Make your bedding in the top box. Place worms in bedding and cover with paper and then the lid. Your worm tea will collect in the bottom tray. This method can be adapted to buckets or many containers that fit inside each other. Use your imagination and see what can be reused around your home.



In ground system

An alternative option is to obtain a pipe or cut the bottom out of a bucket and place it 2/3rds into the ground. Simply place your fruit and vegetable scraps in the pipe and worms will come from afar to consume your waste. This method has the benefit of enriching the soil around it and is ideal for vegetable gardens or nutrient loving plants. The pipe can be moved around as required. You will need a lid on top to keep the moisture in and light out.

Bedding material and worms

Bedding material (the layer in which you place the worms) can be coconut fibre or shredded newspaper with a bit of soil or finished compost. You can buy coconut fibre (coir) from gardening or hardware shops. Make sure you chose one without fertiliser added.

You start a worm farm with about half a kilo or two thousand worms. The population doubles approximately every three months until the population reaches the capacity of the container. Worms are self regulating and will stop breeding once they reach the capacity of their container, as the older worms die off they will start breeding again.

Add food to the worm farm, a small amount of water and cover it with material made out of natural fibres such as a hessian sack, old towels or woollen blanket.

Looking after your worms

It is important not to over-feed your worms. Only add more food when the first lot is nearly eaten. Once your worms start multiplying, you will be able to give them more food. To help the worms get through the food more quickly, you can finely chop, mash or process the food before adding it to the farm. Worms eat a variety of kitchen scraps, but some are unpleasant for them to eat or can change the acidity of their bedding.





Materials that can be worm farmed include:

- Vegetable, food scraps, tea bags, eggs shells
- Soaked and ripped pizza boxes, egg cartons, paper
- Leaves
- Soil
- Hair

Materials that cannot be worm farmed include:

- Meat
- Fatty foods
- Dairy products
- Acidic foods, e.g. orange peels, onions, chillies, tomatoes
- Manures
- Pesticides
- Potato peelings



Harvesting

Harvest the castings from the bottom working tray when the castings have reached 2 cm above the moulded line in the top tray (the moulded line is in manufactured worm farms). Stop feeding the worms for 1 week, remove the top material cover and remove the first working tray and empty onto a plastic sheet. Any worms left in the castings will move away from light, slowly scrape layers off the casting until all worms have migrated away from the light into a small pile of leftover casting. Place worms back into the worm farm.

When the 'current' tray has reached the moulded line place the empty tray back in with some food scraps and worms will start to make their way up into the new tray. Continue the cycle.

The castings harvested from your worm farm can be-

- Mixed into compost and used in your "no dig" veggie garden
- Added to potting mix when potting plants (note that if harvesting in spring & autumn you could get baby worms appearing in pot plants!)
- Applied around the drip line of plants (especially vegetables and herbs) when planting into your "no dig" veggie garden



Trouble-shooting

Worm Farm Smells

If your worm farm is getting smelly, you may have overfed them. Stop feeding the worms and stir the material in the top tray with a fork - adding a sprinkling of lime. Continue this procedure regularly and start feeding when the smell has gone. Also avoid meat, dairy foods, fatty & highly processed foods.

Worms Leaving Farm

If the worms are leaving, it may be the farm is too dry or too wet. It is important to maintain moisture in the farm and leave the bottom tap open. Also avoid putting acidic foods, manures, and pesticides in the farm.

Unwelcome Visitors

If you have unwelcome visitors, your worm farm may be too dry and acidic. Add water and lime to deter ants. To get rid of maggots, put some milk-soaked bread in the feeding tray. Leave it there for two days and then dispose of it. It is best to keep the worm bed covered with a hessian sack or piece of carpet.

Not Breeding

If your worms are not breeding, it may be the farm is too acidic. Some food tends to form acid (such as fruit, grains, and sugary food). You may like to add some dolomite, wood ash, or lime to the worm farm.

Council resources

- Compost bins, worm farms and accessories are for sale at the Thornleigh Depot.
- Join the 'Compost Revolution' to receive a half price voucher on a compost bin or worm farm
- Free compost and worm-farming workshops are held throughout the year. Check out Council's 'Whats On' - <http://www.hornsby.nsw.gov.au/whats-on> or book by phoning the Waste Hotline on 9847 4856.
- For further information visit our website; <http://www.hornsby.nsw.gov.au/services/waste-and-recycling/composting-and-worm-farming>