

ZERO WASTE

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fact sheet

Worm Farms

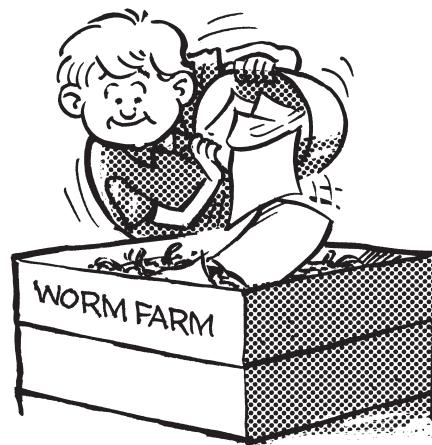
Did you know?

- Worms are hermaphrodites: each worm has both male and female sex organs.
- Worms have no eyes, but can sense vibrations, light and temperature through special organs in the skin.
- Worms breathe through their skin and expel urine through special pores.
- If worms don't like the conditions around them they will try to leave. If they don't find a new home in composted material they will die.
- The worm has a long gut running from one end to the other. It is like a big muscle that squeezes food particles and dirt until the nutrients are absorbed. Whatever the worm can't absorb is passed out as castings.
- Worms will stop breeding when they reach the container's capacity, they will breed again if some worms are removed.
- The population in a well-maintained wormery will double every 2-3 months.
- Each adult worm can produce up to 12 babies per week.
- Worms from your garden are not suitable for worm farming.

Why worm farms?

Worm farming is a composting process known as 'cold composting'. It is an alternative to hot composting garden waste and fruit and vegetable scraps from the kitchen. Worm farms are ideal for people living in flats or houses with small backyards.

The worm castings produced are one of nature's best composts and fertilisers. The nutrients from worm castings are organic, odourless and more readily available to plants than the chemical fertilisers that leach through Perth's sandy soils.



Making a worm farm

You can build your own worm farm from polystyrene fruit cartons, old baths and fridges, wooden crates or old tyres. Alternatively you can purchase a ready-made worm farm made of recycled plastic or timber. To prevent infestation by vermin, worm farms should either be raised off the ground on legs, or have a layer of wire mesh secured at the base.





Worms for worm farming are not the same as the worms found in your garden. Special worms, called composting worms work best as they thrive in the rich, moist conditions of a wormery. The most common compost worms are called Tiger Worms, Red Wrigglers and Indian Blues. These are available through some local councils, garden centres and worm farmers. You will need at least 2,000 worms to get your worm farm started. Once operating, your worms will regulate their own population, by breeding if food and space is plentiful and stopping when it's not.

Find a corner in your yard for the worm farm; worms don't like getting too hot so it's important to find a shady place. Ensure that any liquid can drain from the worm farm so that worms don't drown.

Worm farms need to be kept moist (but not too wet), so if a worm farm is likely to be unattended due to holidays or other absences, it is best to ask a friend or neighbour to occasionally water and feed the worms.

What can I feed worms?

Yes: almost any type of vegetable and fruit scraps, tea bags and coffee grounds, soft leaves, hair, vacuum cleaner dust and damp cardboard.

No: onions, meat or diary products, a lot of citrus. Also avoid materials contaminated with chemicals.

If possible, chop or break worm food into small pieces – this allows the worm to eat it faster. The worms in a small wormery should eat all the food scraps generated by a household of four. A school of about 300 students would need a wormery that could house between 23,000 and 46,000 worms (about a two square metre base)



Troubleshooting

Smell – if kept properly, a worm farm won't smell. If it is smelly, anaerobic bacteria have probably built up in uneaten food wastes. Stop feeding and stir some garden lime into the layer of food. This aerates the organic material and allows worms to access it more easily. Repeat this until the smell disappears, then start feeding again

Vinegar flies – you may be overfeeding your worms and causing bacteria that attract these small flies (which are harmless). Limit the food supply to what the worms can eat on a daily basis and add a little garden lime.

Ants – the worm farm is probably too dry or acidic. Add a little water to raise the moisture level and add some garden lime to where the ants are gathering. To prevent reinfestation, either smear Vaseline around the legs of the worm farm (if it has them), or stand the legs in container of water. If the container does not have legs, pour a ring of talcum powder around the base.

Resources:

Gould League/CERES. 1997.

The Good Compost Guide.

Nattrass, N. 1999. *Welcome to the Worm Factory: Instruction Manual.*

Useful websites:

www.wastenotwantnot.com.au

www.organicmatter.com

www.reln.com.au/html/worm_school.html

www.wormshed.com.au

www.wastewise.wa.gov.au





The Waste Wise Schools Program

The following program elements are funded by the Waste Management and Recycling Fund from money collected as a Waste Levy when waste is delivered to landfill. The Waste Wise Schools Program is helping to work towards Zero Waste in WA.



Waste Wise Schools Program

This program empowers schools to minimise their waste outputs and incorporate waste issues into the curriculum. The program provides teacher workshops, the Waste Wise Schools Kit, a network of Support Schools, Accreditation and Awards programs and ongoing support.

Waste Wise Schools Mobile Display

The Waste Wise Schools interactive Mobile Display about waste and recycling is available for *Participating* Waste Wise Schools, community groups, expos and shows. A Waste Education Coordinator will staff the display to conduct presentations, school waste audits and set up composting and worm farming systems upon request.

Waste Wise Schools Grants

These grants provide opportunities for *Participating* Waste Wise Schools and their related communities to undertake waste minimisation projects in their school. Grants are available, with applications assessed monthly.

Waste Wise Schools Website: www.wastewise.wa.gov.au

This website is your on-line link to the Waste Wise Schools Program. You will also find information on how to 'Shop Smart', recycle organic waste at home and recycle a variety of different waste items through the RecycleIT directory. The complete series of fact sheets are also available to download.

For further information on issues relating to waste minimisation in WA, visit www.zerowastewa.com.au

Contact

For further information, contact the Waste Wise Schools program at the

Department of Environment and Conservation.

Phone: (08) 6467 5133 or (08) 6467 5141.

Email: wastewise@dec.wa.gov.au

