

Composting Organic Waste

What is organic waste?

"There is no such thing as organic waste, only wasted organics." (Vermi~BIOLOGICALS)

Organic (or green) Waste is anything that was or is living. It includes:

- Garden waste: Leaves, grass clippings, branches, hay, flowers, sawdust, woodchips and bark.
- Food waste: Fruit, vegetables, tea, bread, cereals, eggshells, grains, meat, dairy products.
- Other: paper, animal hair, faeces, vacuum cleaner dust, hair, wool, wood ash.

About 60% of our household waste is organic. Metropolitan Perth generates about 1.2 million tonnes of organic waste annually, much of this waste goes to landfill. Organic waste is a valuable resource that can be used to help improve soil quality.

Why recycle organic waste?

Benefits of recycling organic waste include decreasing a garden's need for water and fertiliser by returning the nutrients once in the living material into the soil to help new plants grow.

Recycling organics reduces waste to landfill and develops potential products and markets for green waste including mulch, compost, soil conditioners, recycled timber and firewood.

Recycling organic waste

Organic waste can be recycled by using it as mulch, compost or in a worm farm

This fact sheet covers mulching and composting, another fact sheet in this series covers worm farming.



What is mulch?

Organic mulch is chopped, chipped or shredded plant material that is applied on top of soils. It is created by physically breaking down plant material using a chipper or other device. A thick (15-20 cm) layer of mulch will reduce water loss from the soil and prevent weeds. Mulch can also prevent soil erosion and provide habitat for insects. Organic mulches include: straw or hay, bark chips, fallen leaves, chipped tree prunings and grass clippings.

Do not include weeds or diseased plants in mulch as it may spread the problem through your garden.



What is compost?

Composting converts kitchen and garden waste into dark coloured soil that is high in nutrients.

Composting is the name given to a method of breaking down organic waste, usually in a container or heap. Decomposition occurs due to the action of naturally occurring bacteria and fungi. Small creatures, such as earthworms, slaters and millipedes help to complete the process.

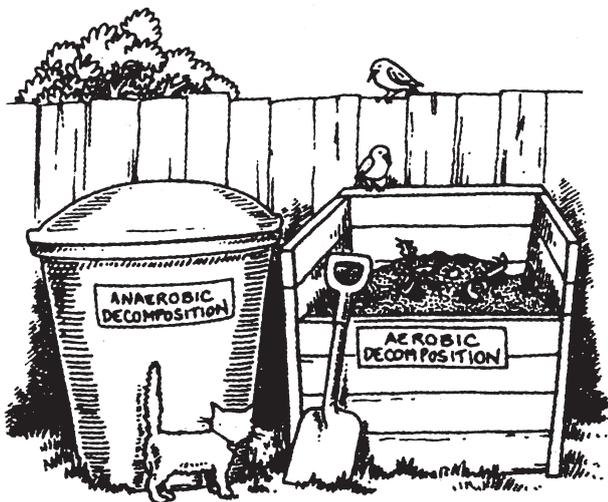
Types of decomposition

Anaerobic

Anaerobic decomposition occurs without oxygen in sealed containers. The process is quite slow and can give off unpleasant odours and methane gas.

Aerobic

In aerobic decomposition, the breakdown is caused by the action of micro-organisms that thrive in oxygen. The process is relatively rapid and does not produce unpleasant odours.



How to make your own compost

Many people choose to compost in a compost bin or tumbler. You should contact your local council about an approved bin or tumbler, which should be both fly and vermin-proof. There are a number of commercially available compost bins:

- Plastic bins with ventilation holes
- Plastic bins without ventilation
- Metal drum with holes punched in the side and the base removed
- Rotating drum units (tumblers)
- Enclosures made from timber, bricks or chook wire

If you prefer, you can make compost in open heaps, but they should be covered with a plastic sheet or hessian to prevent the heap from drying out in hot weather.

With any composting system it is important to achieve balance by using roughly equal amounts of "greens": food scraps, grass clippings, leaves etc. and "browns": straw, fallen leaves, shredded paper etc.

There are two basic methods of composting:

The layering method (slow and cool)

1. Add a mixture of materials. Try to add alternate 10 centimetre layers of vegetable and fruit scraps, grass clippings and leaves and some shredded newspaper.
2. Cover each layer with a thin layer of soil and a handful of fertiliser, such as blood and bone.
3. Keep moist (like a damp sponge) but not too wet. The compost should be ready in three to six months. Breakdown will be speeded up if the heap is occasionally turned.

The 'all in together' method (fast and hot)

1. Store enough kitchen and garden waste to make a heap of about one cubic metre.
2. Add to a bin or a tumbler, or form into a heap with some fertiliser.
3. Turn several times a week. This heap will generate a great deal of heat as the rate of breakdown is very high. The compost should be ready in three to six weeks.

What can go into compost?

YES: Vegetable and fruit scraps, vegetable oil, prunings and lawn clippings, tea bags and coffee grounds, vacuum dust, shredded paper and cardboard, used potting mix, egg shells, flowers

NO: Meat and bones, dairy products, large branches or logs, diseased plants, magazines, bleached and magazine paper, bread or cake.

Compost troubleshooting

- **Too wet:** improve the drainage or add some dry material like newspaper or sawdust.
- **Too dry:** water it or add compost scraps like vegetables etc.
- **Pests:** cover with a lid and /or a thick layer of dirt. Don't put in meat, bread or dairy products that attract animals.
- **Takes too long to break down:** check it has all the things it needs – moisture, right mix of ingredients and air.
- **Smells:** there may be too much water or it lacks air, so it's not breaking down properly. Ensure no meat or dairy products are in there, they smell as they rot.



Composting precautions

Compost is produced from natural materials and contains a variety of living organisms. On rare occasions, these organisms have been associated with illness and allergies in humans. For health reasons, it is important to:

- Wash you hands after handling compost.
- Protect broken skin by wearing gloves.
- Avoid handling compost in confined spaces.
- Keep compost moist to prevent spores or bacteria becoming airborne.

Resources:

Nunes, K. 1997. The Good Compost Guide. EcoRecycle Victoria. Available online at www.ecorecycle.vic.gov.au.

Useful websites:

www.reln.com.au/html/homecompostingnew.html
www.oldgrowth.org/compost/index.html
www.abc.net.au/gardening



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

