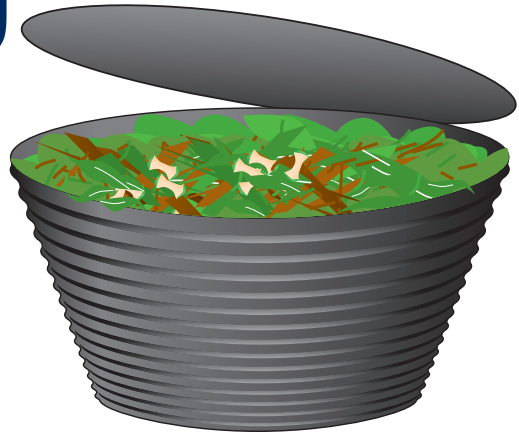


Composting



In Australia, half of the waste we throw away each week is organic material, which is food and garden waste. Today, home composting is encouraged as a way to reduce the amount of waste that is buried in landfill. When organic materials, like plants, fruit and vegetables, decompose in the earth, the nutrients contained within them are unlocked and are recycled back into the soil, to be used again by other living organisms.

Setting up a compost heap (for large amounts of organic waste)

- Dimensions should be at least 1 cubic metre
- Enclose the heap using bricks or untreated timber
- Leave an access area at the front of the heap
- Cover to protect against weather, and to retain heat and moisture

Setting up a compost bin (for smaller gardens)

- Plastic bins and plastic or metal tumblers are available from nurseries, hardware stores and Councils
- Alternatively, you can use something like a 200L/44gal drum, or pieces of untreated timber
- Make sure the bin is open at the top and bottom, to allow worms and other composting organisms to move into it from the soil below
- The top also needs a tight-fitting lid to protect against weather, and to retain heat and moisture

Choosing a location for your compost

- ✓ Partial shade and protection from weather
- ✓ At least 2 feet away from buildings and fences
- ✓ Access to water and good drainage

Re-using your compost material

- Dig into gardens to a depth of 5cm
- Use as mulch on garden beds, or spread over lawns as top dressing
- When using on gardens, keep compost away from plant stems and roots to avoid burning

Maintaining your compost

- Always add even amounts of "greens" (eg fruit and vegetable scraps, fresh grass clippings and garden prunings) and "browns" (eg dried leaves, hay and twigs)
- Cover with a layer of soil, and add some water (just to dampen)
- Cover with a hessian sack or old piece of carpet, or if you are using a compost bin, simply replace the lid
- If you are using a compost bin, turn the decomposing material every week using a garden shovel or fork
- If you are using a compost heap, you only need to turn the contents every two weeks

Composting with A.D.A.M.

There are four principles that will ensure success with your compost, referred to as the ADAM strategy:

Aliveness — Compost is a living environment. The soil on which your compost is built is alive with organisms that will move in and help with the decomposition of your organic waste items.

Diversity — To achieve healthy compost you must feed your compost bin or heap a well-balanced and diverse diet. That means equal amounts of both 'green' and 'brown' organic materials to provide balanced nitrogen and carbon levels.

Aeration — Turn the pile over every couple of weeks, or every 4–6 days if using a compost bin. Aeration helps to speed up the decomposition process, keep nasty odours at bay, and minimise the invasion of unwanted pests in your compost bin or heap.

Moisture — Keep the compost just damp. Over-watering will ruin your compost. Moisture is also very important in the decomposition process, so dampen down your compost every week or as required. Remember 'green' organic items have high moisture levels, and so will increase the moisture level of your compost.

How does it break down?

Organisms that live in the compost break down organic waste. Such organisms include:

Bacteria – micro-organisms grow and begin the rotting process on organic materials, which softens them and breaks them up so that they may be eaten up by larger organisms of the soil.

Fungi – various species of fungi also assist in the rotting process to enable organic materials to be decomposed and eaten up. Fungi also help to break down the cellulose and lignin inside woody matter.

Insects, mites and nematodes – macro organisms - the ones you can see, such as spiders, flies, slaters, earwigs, centipedes, beetles, etc, that nibble away on the decomposing organic materials and grind them up into soil.

Earthworms – earthworms consume decomposing organic materials, and process it in their long, narrow stomachs. Their castings are rich in nutrients, and improve soil fertility and structure.

The action of all these organisms, combined with the right type of organic waste, the production of high temperatures, sustained moisture levels, and the presence of oxygen, all work together to break down the materials, turning them into a nutrient-rich soil additive.

What makes good compost?

The organisms in your bin love to eat the following:

Green organic materials, which are full of nitrogen

- Leaves (green prunings)
- Grass (green clippings)
- Cow, horse or chicken manure
- Food scraps
- Coffee grounds
- Tea bags
- Hair from your brush and comb
- Seaweed

Brown organic materials, which are full of carbon

- Dried leaves and dried grass clippings
- Sawdust (not treated pine)
- Wood shavings (not treated pine)
- Hay and straw
- Vacuum cleaner dust
- Shredded paper
- Newspaper
- Egg shells

What to avoid

There are many organic waste items that may encourage vermin such as rats, flies and cockroaches, and will smell when they decompose.

Some items to avoid putting in your compost heap/bin include:

- Fats and oils
- Meat products
- Dairy products
- Cat or dog faeces
- Man-made materials such as plastic, steel, aluminium and glass

Troubleshooting Problems with your Compost

You need to make sure you have the right balance of moisture, heat, air, and decomposing materials to have a successful compost environment. If a problem does occur and you think you've found a solution, don't stop there. Continue to give your bin daily check-ups until you see or, in many cases, smell an improvement. This may take some time to perfect so you may have to do a little problem solving when you first start. You may encounter some of the common problems listed below.

Problem	Causes	Solution
Taking too long to break down	Too dry	Add water
	Not the right mix of greens and browns	Add equal amounts of vegetable scraps or fresh lawns clippings (greens), with fallen leaves or straw (browns)
	Not enough air	Turn more Add more compost worms Punch holes in your bin Add in some piping
Smelly	Too wet	See below
	Too acidic	Add wood ash or dolomite to neutralise the heap
	Insufficient air	Turn more regularly Rebuild with some dry materials
Flies	Will probably be vinegar flies that are harmless	Cover organic waste with a layer of soil
	If they are house flies or blow flies they are being attracted by meat or dairy products	Avoid meat or dairy products
Too wet	Too much water has been added	Improve drainage under the heap
	Organic waste is too moist	Mix in some dry 'brown' materials – shredded newspaper, hay, etc
Rats or mice	Attracted to uncovered food and/or warmth	Cover each organic layer with soil and place the bin on a layer of fine mesh
Slaters or ants	Heap is too dry	Add water or moist materials
Spiders under the lid	Attracted by the invertebrates, most likely small flies	Place a handle on the lid Check for spiders Cover each organic layer with soil