Fact Sheet

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, such as 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 one 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

Choosing a location for your compost

- Partial shade and protection from weather
- At least one metre 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

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 a 200L/44gal drum, or pieces of untreated timber to construct your own compost bin
- Make sure the bin is open at the 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

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

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Composting - Continued

Composting with A.D.A.M.

There are four principles that will ensure success with your compost, referred to as the A.D.A.M 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 four to six 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 you 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 and tea bags
- Hair from your brush and comb
- Seaweed
- Brown organic materials, which are full of carbon
- Dried leaves and dried grass clippings
- Sawdust (untreated timber only)
- Wood shavings (untreated timber only)
- Hay and straw
- Vacuum cleaner dust
- Newspaper and shredded paper
- 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

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Composting - Continued

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.

Use the table below to troubleshoot some of the common problems you may encounter:

Problem	Cause	Solution
Taking too long to break down	*Too dry.* *Not the right mix of greens and browns.* *Not enough air.*	*Add water.* *Add equal amounts of vegetable scraps or fresh lawn clippings (greens), with fallen leaves or straw (browns). Turn more, add more compost worms, punch holes in your bin or add in some piping.*
Smelly	*Too wet or acidic.* *Insufficient air.*	*Add wood ash or dolomite to neutralise the heap.* *Turn more regularly or rebuild with some dry materials.*
Flies	*Will probably be vinegar flies that are harmless. If they are house flies or blow flies they are being attracted by meat or dairy products.*	*Cover organic waste with a layer of soil.* *Avoid meat or dairy products.*
Too wet	*Too much water has been added.* *Organic waste is too moist.*	*Improve drainage under the heap by starting with layers of twigs.* *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 and moist conditions.*	*Place a handle on the lid, cover each organic layer with soil and maintain balance of dry and wet conditions.*