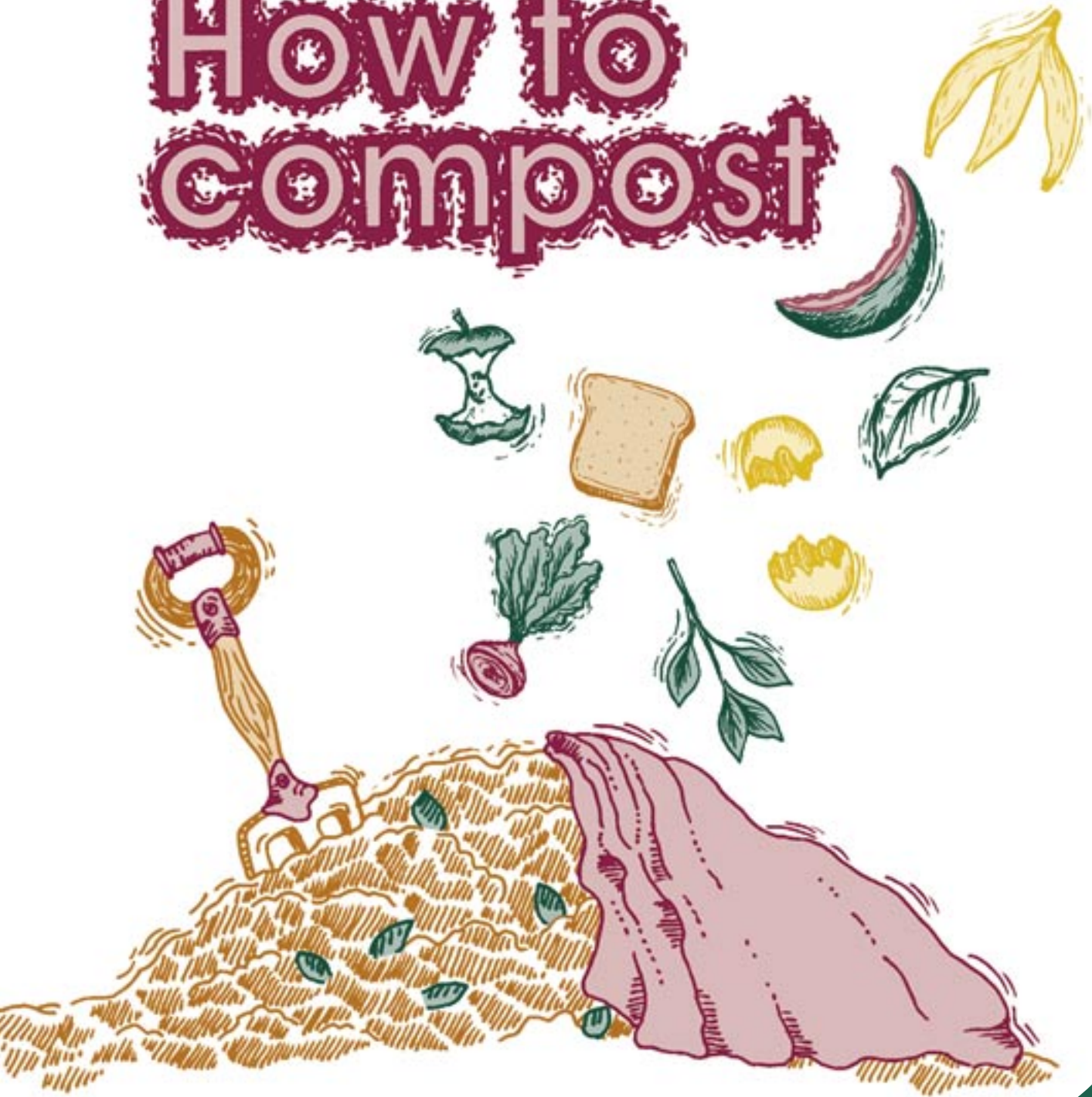


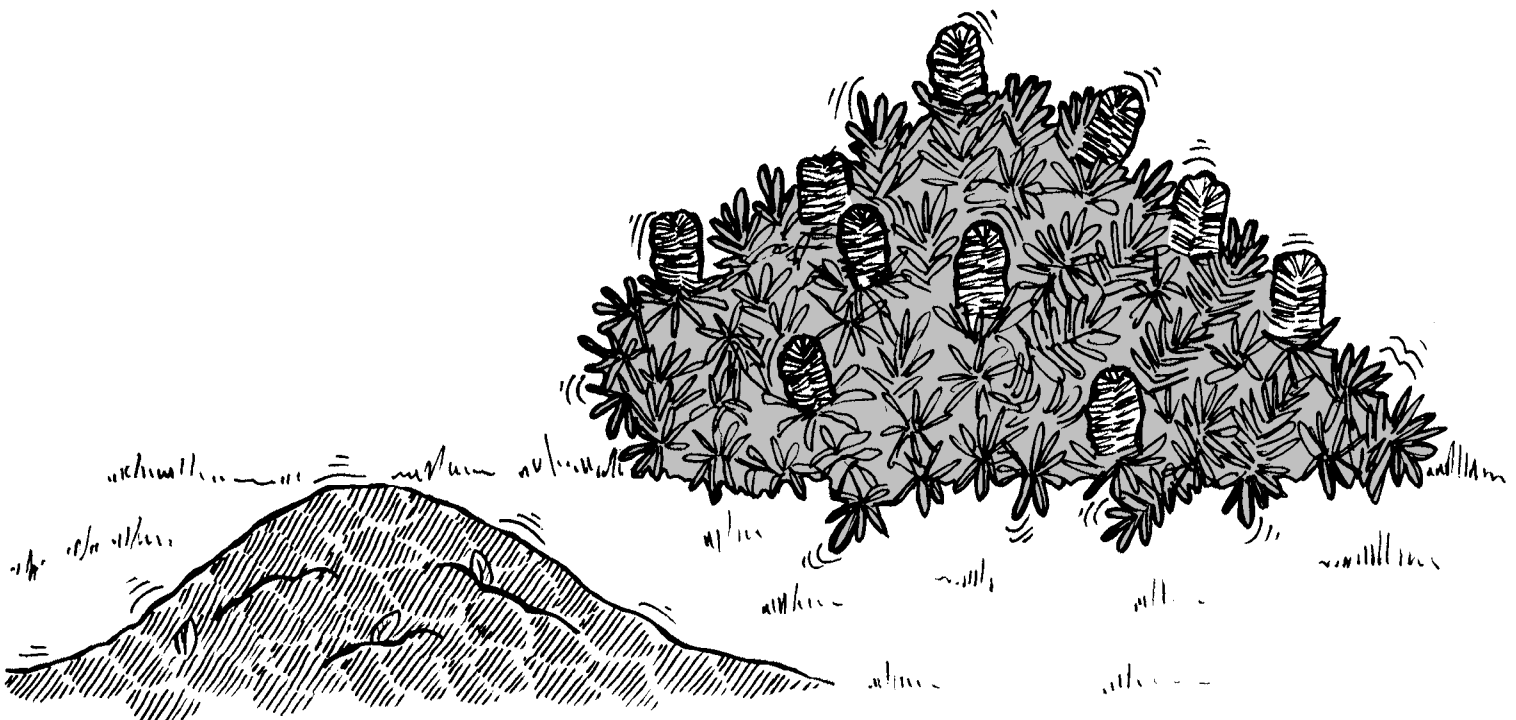
How to compost



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Turning your rubbish into fertilizer



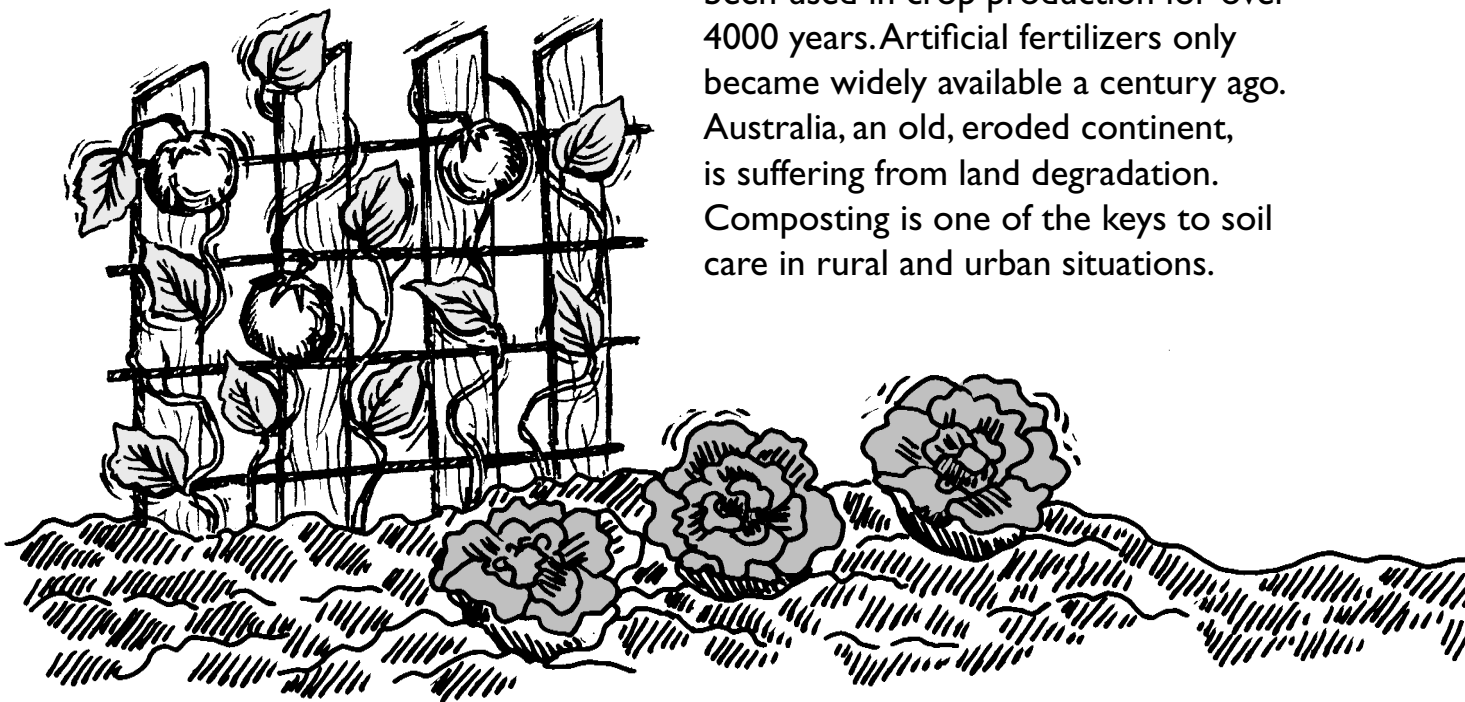
Every year, Australians throw away thousands of tonnes of household waste. Next time you take out your wheelie bin, look at what you are throwing away!

Almost half of our domestic rubbish consists of kitchen and garden waste. Most of this material can be composted. Composting reduces the amount of rubbish we throw away, decreases our need for landfill sites and provides a chemical-free fertilizer for our gardens.

Composting is a cheap and hygienic method of converting your kitchen and garden waste into a clean-smelling material used in the garden as a soil conditioner or surface mulch. Properly controlled, it should end up as a dark, crumbly fertilizer with a pleasant, earthy smell.

Compost not only returns nutrients to the soil that would otherwise be lost, but also improves soil structure and increases the water holding capacity of the soil.

Composting is not new. Compost has been used in crop production for over 4000 years. Artificial fertilizers only became widely available a century ago. Australia, an old, eroded continent, is suffering from land degradation. Composting is one of the keys to soil care in rural and urban situations.





How do I compost?



Compost can be made in either a heap or bin, depending on the amount of material for composting and the needs and size of your garden.

A heap is useful for gardeners with large quantities of waste. Minimum dimensions should be one cubic metre, sufficient to ensure a hot temperature. The heap may be enclosed using bricks or timber. Leave an access area or work space at the front of the heap for turning the compost and cover it with a lid or piece of carpet to retain heat and provide protection from rain.

A compost bin is often better for smaller, suburban gardens. Plastic bins, metal tumblers and plastic tumblers can be purchased from nurseries, hardware stores and local councils. Compost tumblers are available for gardeners who prefer to make compost in bins and want quick results.

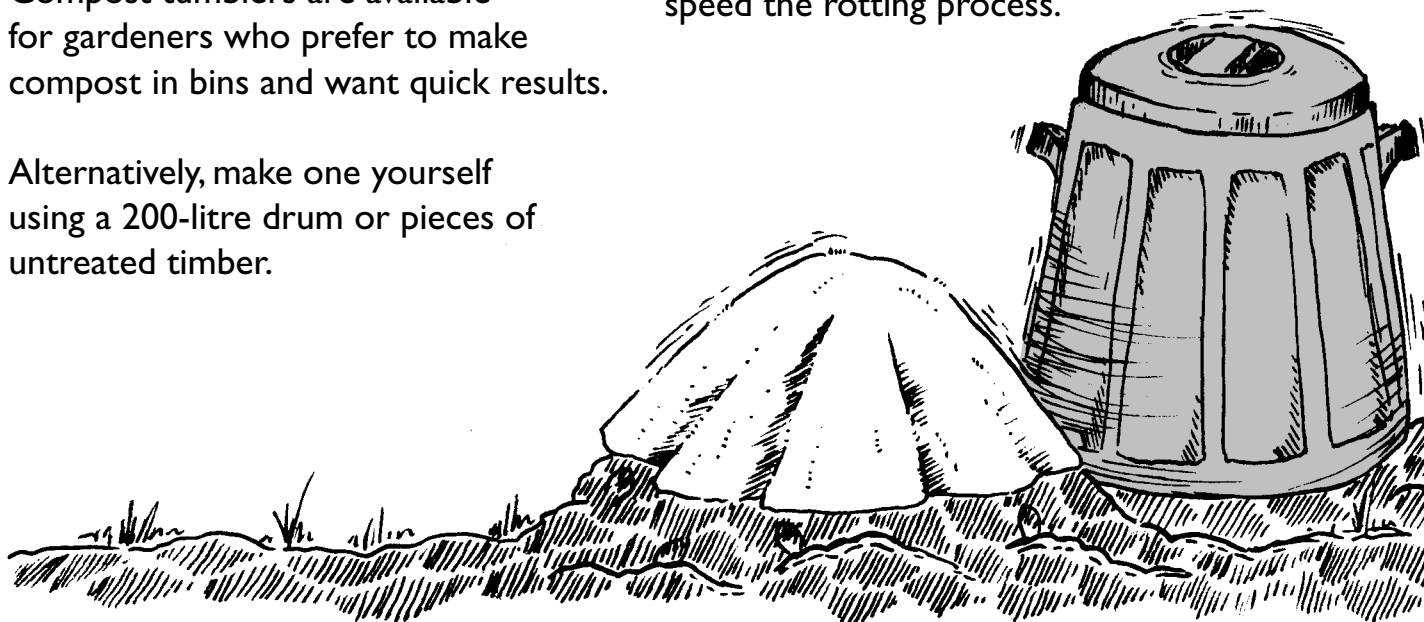
Alternatively, make one yourself using a 200-litre drum or pieces of untreated timber.

Bins should be open at the top and bottom. The top needs a tight-fitting lid. The other end is placed in contact with the soil to allow earthworms to enter. These little gardeners speed the decaying process by loosening the compost and allowing air to enter and circulate. Avoid placing the bin or heap too close to houses. Consider placing it directly on level soil in a garden bed.

Two bins or heaps allow material to accumulate in one while composting in the other. The heap should be protected from hot sun and heavy rain to prevent excess drying or moisture, which prevent effective composting.

Compost works best if you add a balanced mixture of rapidly decomposing “green” material (e.g. fruit and vegetable scraps) and “brown” material, which decomposes slowly (e.g. twigs). These can be added in any order.

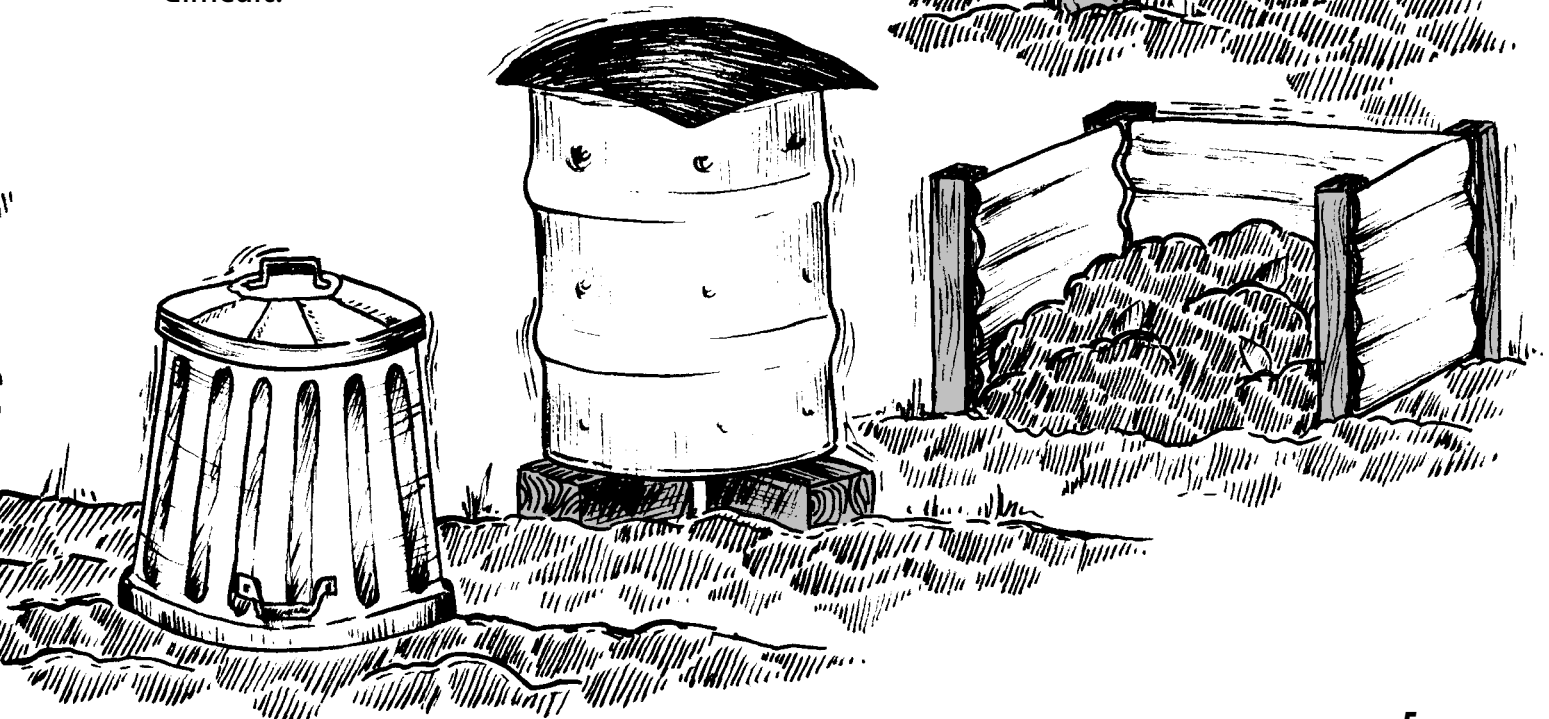
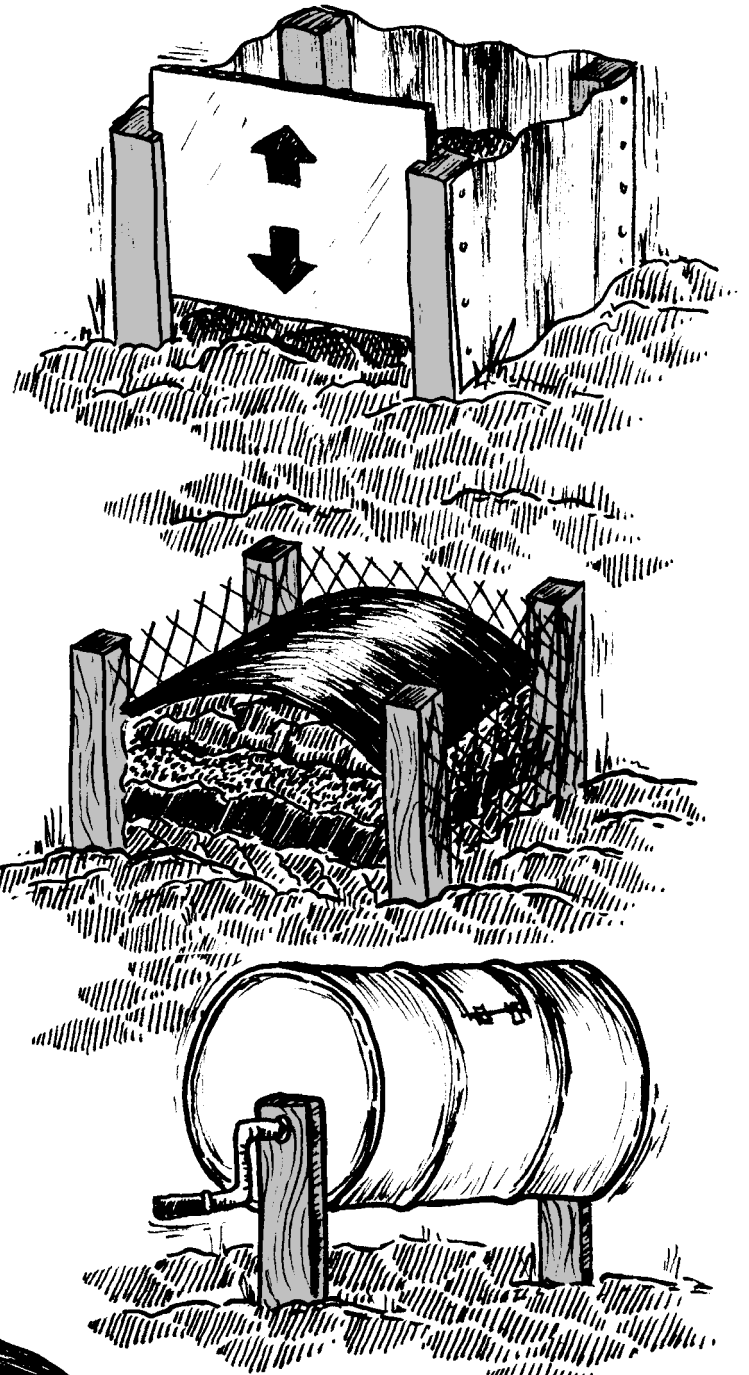
Once you have a mixture of materials, cover with a layer of soil, add some water and a lid to keep the heat in and speed the rotting process.



Composting matter should feel damp, but if waterlogged it will smell, attract flies and be inefficient. Control the moisture level by adding absorbent materials such as sawdust, newspaper, straw or dry manure.

Turning the heap with a fork will speed decomposition. The more frequently the material is turned, the faster it will decompose. Care should be taken to make sure that all material is turned into the inner, hottest part of the heap where weed seeds and pathogens are destroyed. If the heap is turned regularly, the compost should be ready for use in a month or two. Your compost can sometimes be smelly when you turn it, so set up your compost away from your neighbours! The heap may be left unturned, but the process could take an extra six to twelve months.

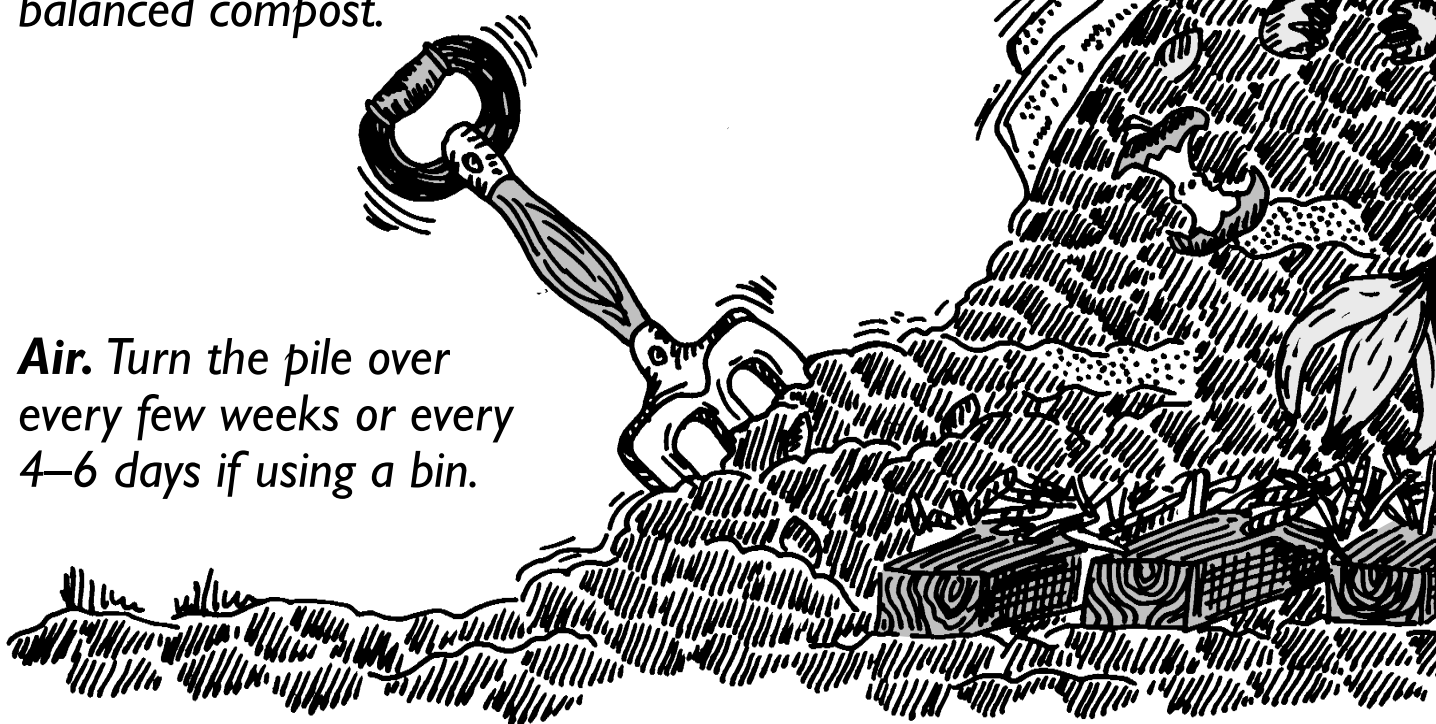
Compost is ready to use when it has a crumbly appearance, an earthy smell and identifying what things were is difficult!



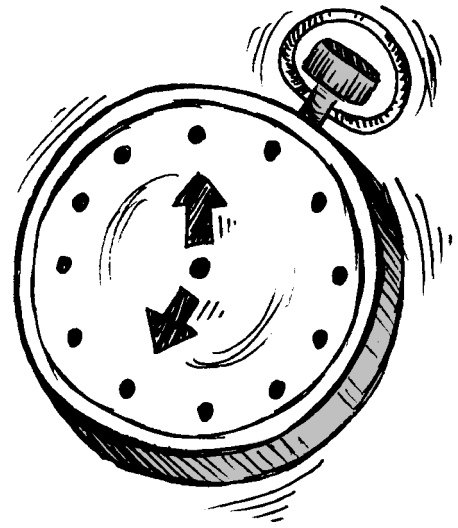


Water. Keep the compost just damp. Overwatering will ruin your compost.

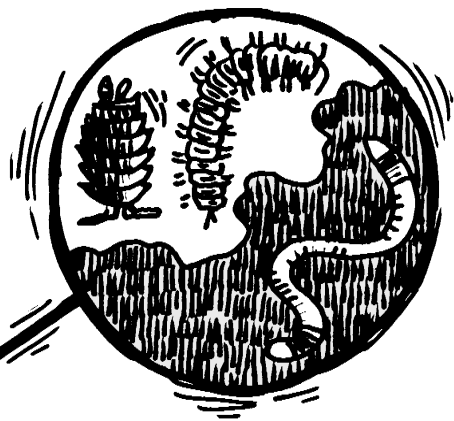
Balance. Add a mix of green and brown materials to make a well balanced compost.



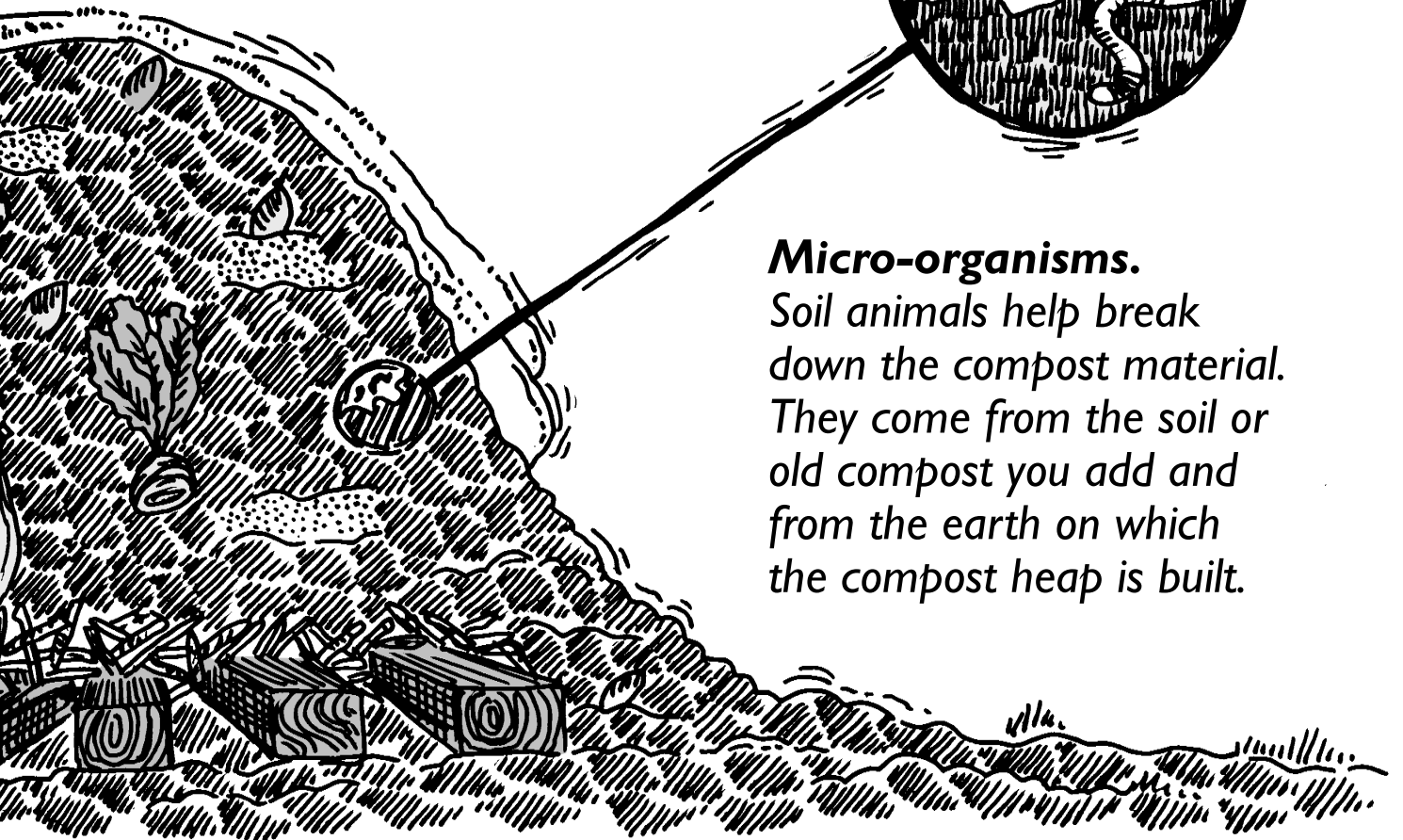
Air. Turn the pile over every few weeks or every 4–6 days if using a bin.



Size. A compost heap will mature quickest if it is at least one cubic metre.



Micro-organisms. Soil animals help break down the compost material. They come from the soil or old compost you add and from the earth on which the compost heap is built.



What should I put in my compost?



Most organic materials which decompose readily are suitable for use in a compost heap. For best results, chop or grind coarse material to speed breakdown.

Greens

Garden wastes

Grass cuttings, non-woody garden prunings, leaves, flowers and vegetable remains.

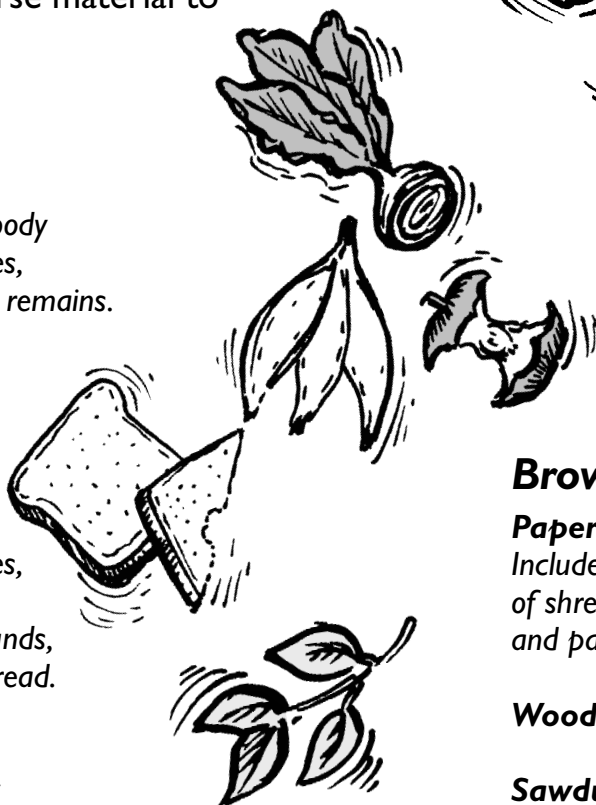
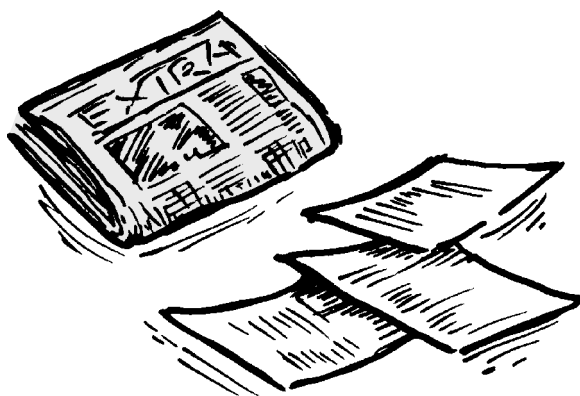
Seaweed

Kitchen wastes

Vegetable peelings, leaves and stalks, fruit peelings and cores, cooked table scraps, tea leaves, coffee grounds, egg shells and stale bread.

Animal manure

Horse, chicken or cow manure (but avoid other animal droppings—see “What should I leave out of my compost”).



Browns

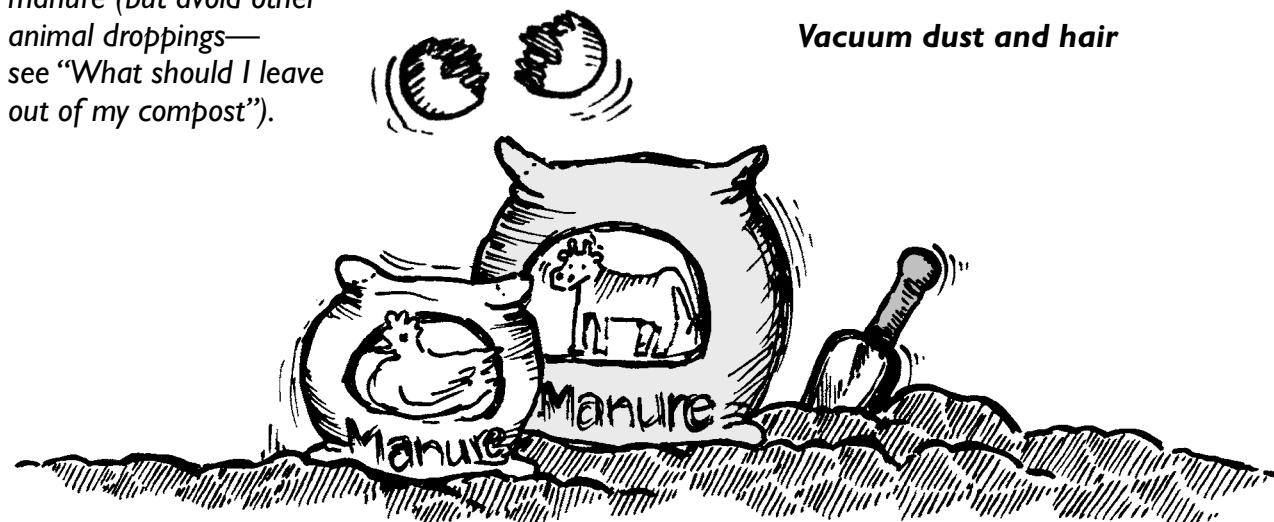
Paper and cardboard

Include small amounts of shredded newspaper and paper tissues.

Wood fire ash

Sawdust and wood shavings

Vacuum dust and hair



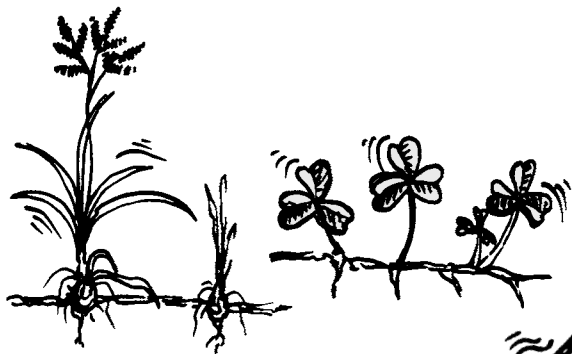
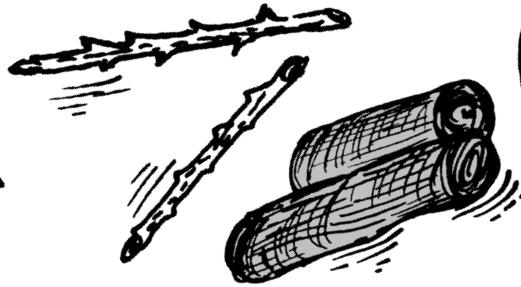
What should I leave out of my compost?



Woody garden clippings
Branches, roots (unless chipped), rose cuttings and other garden wastes with thorns or nettles, conifer prunings or pine needles.



Treated wood products



Weeds with bulbs such as nut grass and oxalis

Diseased plant material
Put these in the rubbish bin



Septic tank sludge or toilet waste



Meat scraps (which can attract rats and mice) and diseased animal carcasses

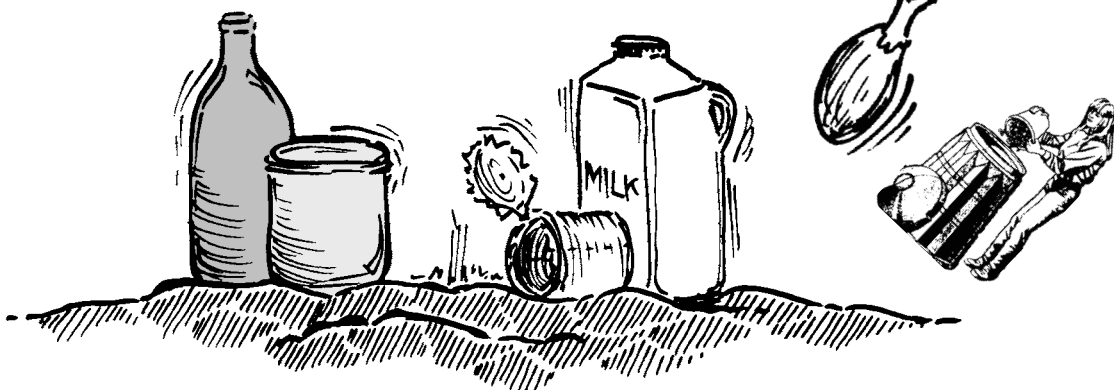


Animal droppings
Cat and dog droppings can spread disease



Any wastes that do not decompose
Metals, glass and plastics.

Materials that kill the composting bacteria
Fat, oil, salt, disinfectants, antibiotics, herbicides, pesticides, waste recently sprayed with pesticides.



How does composting work?

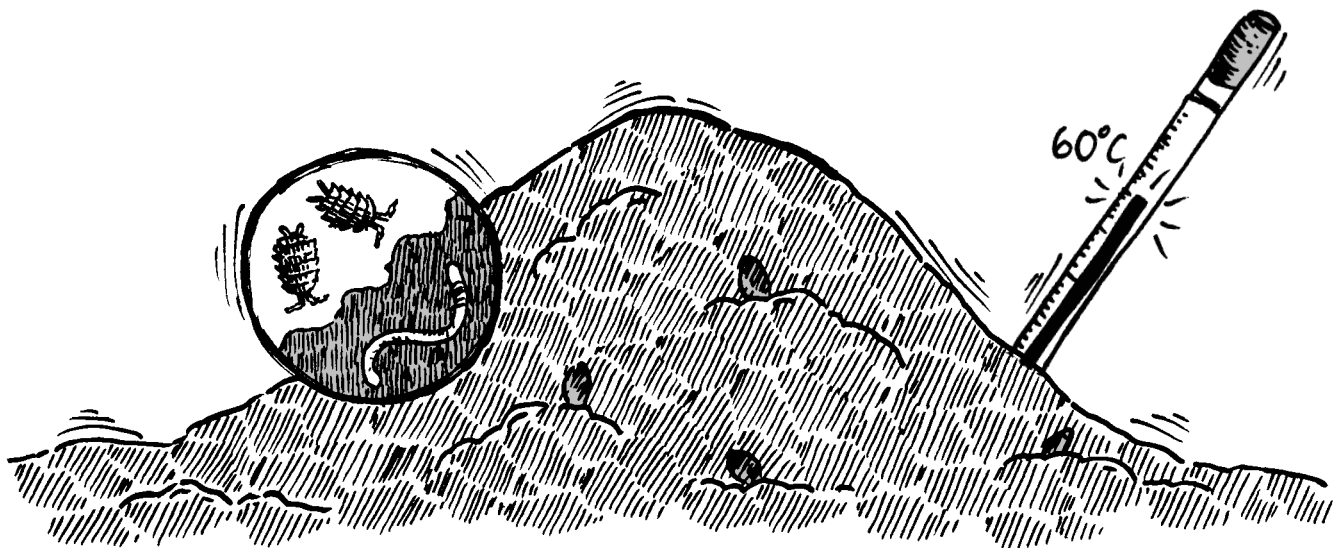


When making compost, the aim should be to provide air, some moisture and suitable food in the right proportions to keep micro-organisms busy.

When suitable material is collected in a loose heap, naturally occurring micro-organisms such as bacteria, fungi and algae start to feed on the softer, more succulent ingredients. At this stage, the heap can heat up to 60°C. This heat speeds the rate of breakdown and can kill diseases and weed seeds. It should also be too hot for cockroaches and flies to breed.

Once tender material is consumed, the rate of activity slows as the organisms work on tougher material. As the heap cools, worms, centipedes and beetles move in to help. By the end of the process, most of the ingredients have been broken down, mixed together and rebuilt into a balanced soil food.

When mixing materials for your compost bin, the carbon to nitrogen (C:N) ratio is important. Micro-organisms in compost consume carbon for energy, and absorb nitrogen to help them use protein efficiently. The proportion of carbon and nitrogen should be approximately 25 parts carbon to 1 part nitrogen by weight.



Most materials for composting do not meet the ideal 25:1 ratio, so different materials can be mixed to achieve the ratio required.

In general, the coarse, dried out “brown” material contains little nitrogen but is high in carbon. “Green” materials such as lawn clippings, vegetable scraps and manure contain high levels of nitrogen. Brown lawn clippings from a dry lawn will have less nitrogen than lush, green clippings. Clippings from lawns that have been extensively fertilised will have an even higher nitrogen content.

The correct blending of carbon and nitrogen helps ensure composting temperatures remain high long enough for the process to work efficiently.

Given a steady diet of around 25:1, micro-organisms can decompose compost rapidly. When the C:N ratio is too high, insufficient nitrogen slows decomposition. When the ratio is low, too much nitrogen leads to odour problems.

Blending materials to achieve a good C:N ratio is important to home composting. If you are composting high nitrogen materials such as lawn clippings, they should be blended with a high carbon material such as chopped leaves or mulched branches and twigs.

What if I have a problem with my compost heap?



Getting the right proportion of moisture and the right combination of ingredients in your compost may take a little practice, but most problems can usually be overcome.

Too wet

Add sawdust or shredded newspaper to help absorb moisture, and turn regularly.



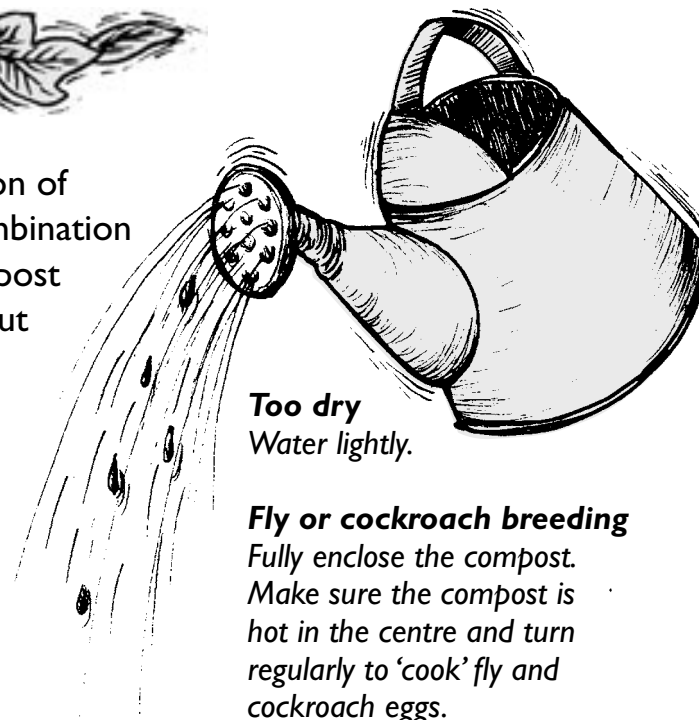
Not heating

Add a source of nitrogen, such as animal manure or blood and bone meal or vegetable scraps.



Too dry

Water lightly.



Fly or cockroach breeding

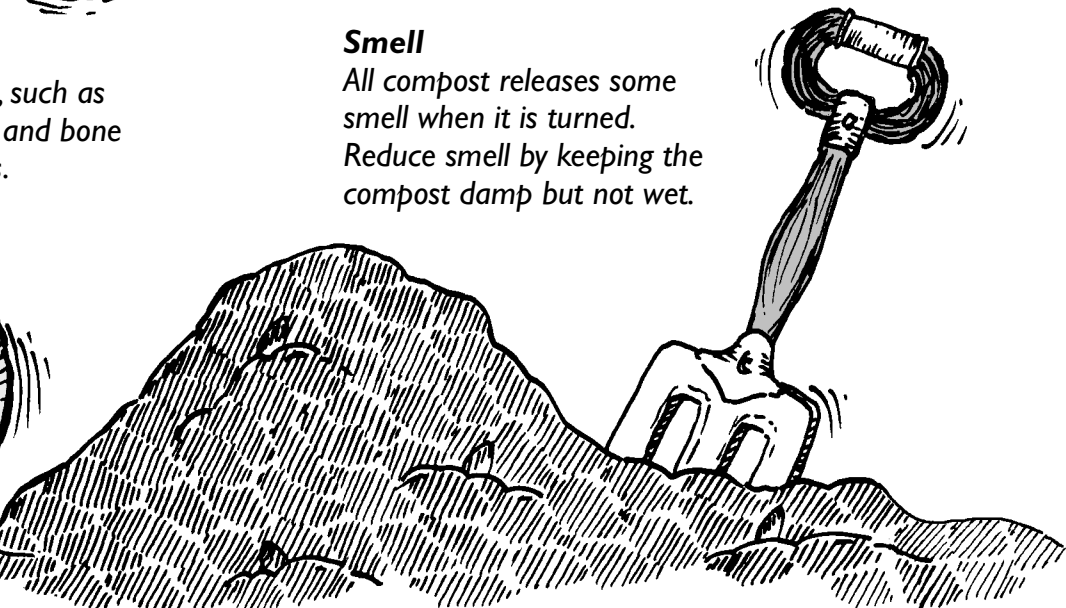
Fully enclose the compost. Make sure the compost is hot in the centre and turn regularly to 'cook' fly and cockroach eggs.

Too hot

If the mixture goes grey and smokes, turn and spread it out to cool the compost down.

Smell

All compost releases some smell when it is turned. Reduce smell by keeping the compost damp but not wet.



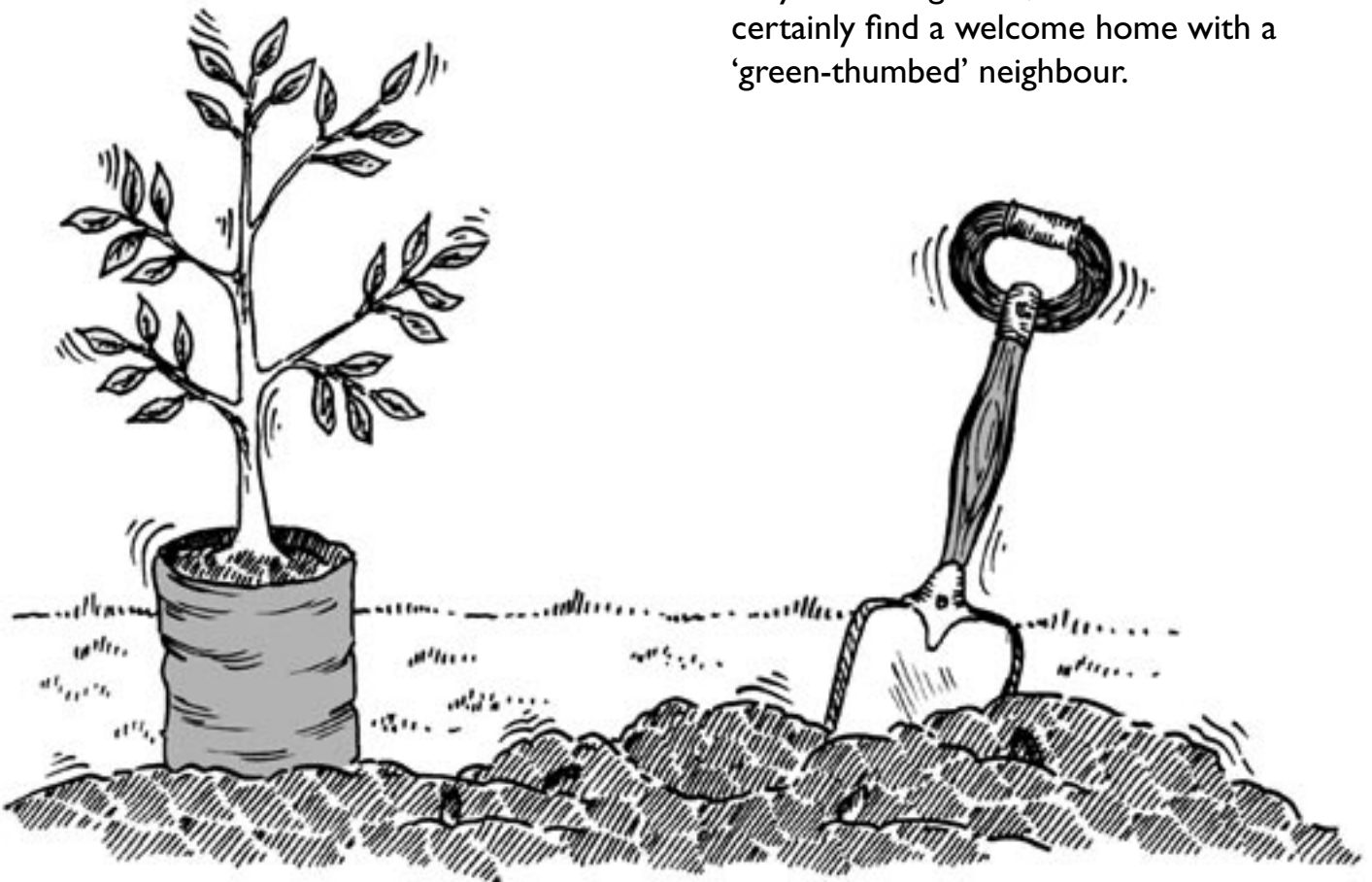
How do I use my compost?



Dig the compost into flower and vegetable gardens to a depth of about 5cm. It can be applied to the surface of garden beds as mulch or used as top dressing for lawns. When using compost on the garden, take care to keep it away from roots and stems to avoid burning.

No single chemical fertilizer or animal manure by itself can match the goodness of nutrient-rich, homemade compost. It boosts nutrient levels in the soil, helps control diseases in garden wastes, saves trips to the tip and backyard burning, and reduces garbage output significantly. Healthy, chemical-free flowers, fruit and vegetables are a bonus.

Even if you can't use the compost on your own garden, it will almost certainly find a welcome home with a 'green-thumbed' neighbour.



For further information



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