

# Composting at home

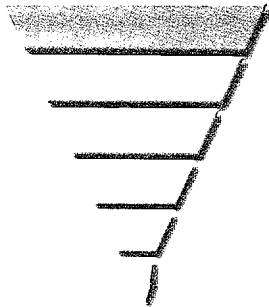
a beginner's guide

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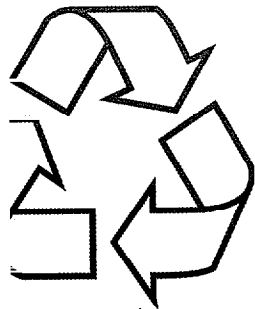
# What is composting?



Composting is the breakdown of organic material, such as kitchen or garden waste, by organisms in a controlled environment. Bacteria, fungi, worms and beetles are some of the organisms that cause breakdown or decomposition. These organisms bring about decomposition by feeding on organic material.

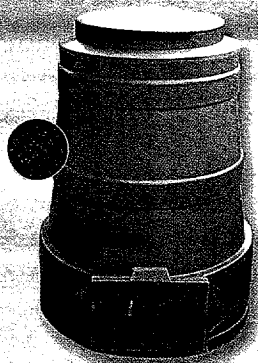
Organic material is anything that was once living. For instance flowers, trees, grass, fruit & vegetables, eggshells, tea, coffee, are all organic and will decompose. There is a comprehensive list later in the guide, which gives details of organic material for composting and details of certain organic material which should not be composted at home, and the reasons for their exclusion.

Composting of organic waste from your kitchen or garden is a relatively simple process that can be carried out in your own garden. The result is compost, a dark, nutrient-rich soil conditioner.





## Why is it a good idea?

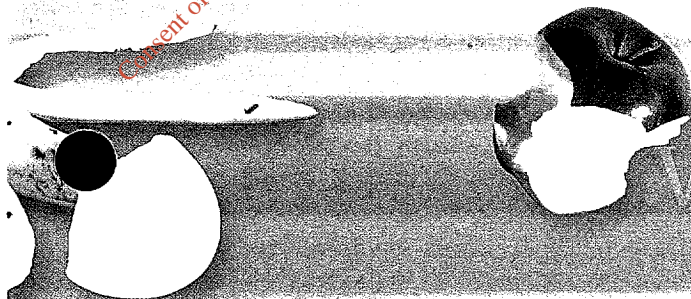


Approximately 33% of your household waste can be composted successfully. With a minimum of effort you can reduce the quantity of rubbish you send for disposal, and turn this part of your waste into a soil improver.

You can reuse the composted material in your garden, which recycles the nutrients back into soil and plant life.

Home composting aids new Government targets which require a 50% reduction in overall household waste being sent to landfill.

Using your own homemade compost means savings on peat and chemical fertiliser.



# waste

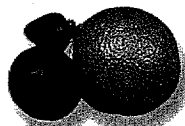
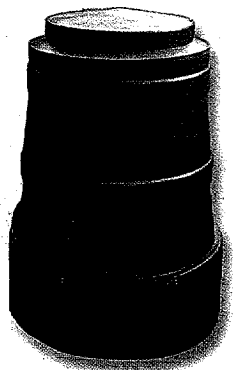
- **The Wormery** looks similar to the basic compost bin but with a solid base to contain the worms which are added to speed up the process. The wormery produces a high quality compost and liquid feed, and is only suitable for people who don't have garden waste but still wish to compost their fruit and vegetable waste. This system requires attention to keep the batch of Tiger worms that live in it happy.

This guide gives instructions for The Compost Bin, which is the simplest and least labour-intensive type of composting container.

It is useful to have a small container in your kitchen to collect your organic waste, and reduce the number of trips to the bin. You will also need a garden shovel or fork for turning and removing the compost.

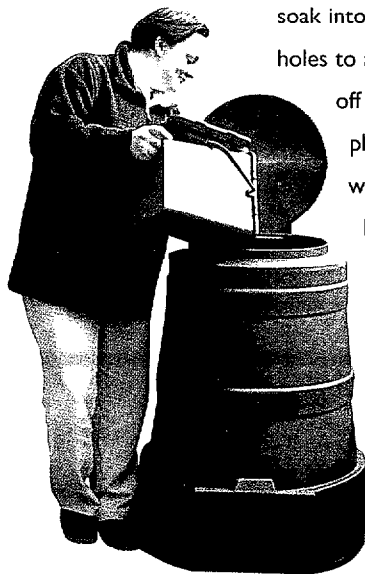
You can add activators to your compost bin to help establish the bin, or speed up the decomposition process, but these are not necessary to compost successfully.

Manufactured activators (accelerators) are available in garden centres. Good natural activators include grass, nettles, pondweed or seaweed, manure from vegetarian pets (such as hamsters), blood and bone meal and urine.



When deciding where to place the bin, there are a few guidelines to remember:

This allows worms to enter the bin from underneath - worms help to keep air circulating through the material, and plenty of air is needed to speed up the composting process and to avoid odours. Also, as the material decomposes, moisture seeps out and you'll need to allow this liquid to soak into your grass or earth. The bins with bases have holes to allow for worm entry, and should be raised slightly off the ground, 1 - 2cm. This can be achieved by placing a few flat stones under the base. The bins with bases are raised slightly to prevent the holes becoming blocked, which would prevent worm and oxygen entry.



Place the bin not too far from your kitchen door, so it is easily accessed, but far enough to allow bacteria, fungi, worms and beetles to work in peace.

The dark colour of the bin will absorb the sunrays, without risk of drying out the material in the bin.



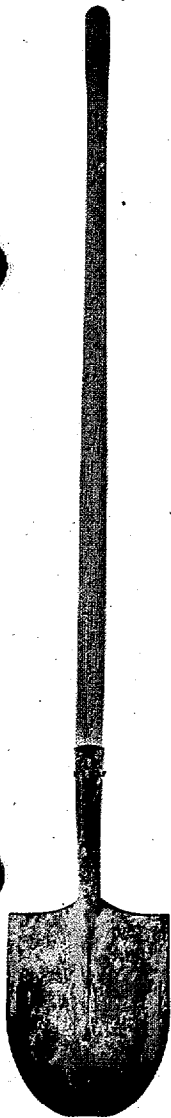
### Protect it from heavy rain-

Heavy rain may waterlog the bin, which will starve the bin of air and prevent composting.

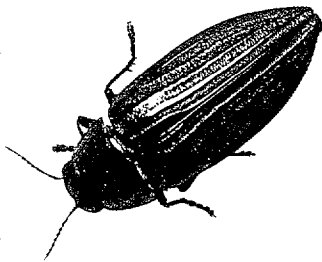
Once you've chosen your location, loosen the soil in order to help drainage and make it easier for the worms and bacteria to pass into the bin from the surrounding earth. Put the bin in place (on its base if supplied).

It is best to start a compost bin in the spring, summer or autumn, as the decomposition process slows or stops in winter.

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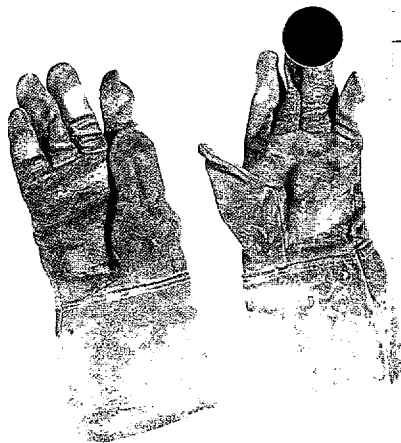


**"Green" "Brown"**

**"Green" "Nitrogen Rich"**

**"Brown" "Carbon Rich"**

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# What should I *put* in the bin?

What should I put in the bin?

The following is a list of materials that can be composted at home. It has been separated into **"Green"** and **"Brown"** for simple identification.

## Yes

### "Green"

- Coffee grounds
- Tea leaves and tea bags
- Fruit and vegetable waste (cooked or uncooked) - roots, cores etc
- Bread, pasta and rice
- Cut and dead flowers
- Manure from any vegetarian pets (good activator) ‡
- Grass cuttings and green leaves (good activator) ‡
- Weeds (avoid weed seeds)
- Old plants (not diseased)
- Seaweed or garden-pond cleanings (good activator) ‡

### "Brown"

- Egg shells
- Kitchen paper
- Newspaper \*
- Papers and light cardboard, e.g. cereal or shoe boxes (crumpled) \*
- Pet hairs and human hairs
- Wood/peat/peat ashes (no coal ashes)
- Tree prunings and woody material (chopped)
- Hay and straw
- Sawdust or wood shavings

\* Newspapers, cardboard and paper can be added to the bin in small crumpled amounts but it is better to recycle them if you can

‡ Activators are the primary food of the organisms, and help to establish the bin or speed up the process.



## What if it's not on the list, how do I know if it can be composted?

Once you have decided the material is organic - that is, was it once alive, ask yourself these questions to help you decide whether a material should be composted:

Will it take a long time to decompose?

Does it need high temperatures to be composted safely or fully?

Has it been chemically treated?

Could it attract vermin?

If the answer to ANY of these questions is yes, don't add the material to your compost bin.

In order to achieve a good circulation of air, it is best to begin the compost bin with a layer (approx. 5cm), of chopped wood or tree prunings. Once the first layer is in place add kitchen and garden material.

The organisms in the bin work best when given a mixed diet of kitchen and garden waste. If it is difficult to mix the materials before they go into the bin, work in thin layers: waste and waste (3" - 6" layers)- this way, your material will compost more quickly and more completely.

However, don't worry if you have a little more of one type of waste than another, or if you're not sure which is and which is

Although worms will enter your bin naturally through the base, you can add some when you're starting off your bin. It's also best not to overload your bin at first by putting in materials that are hard to break down - let the bin get established first.

To keep flies to a minimum, cover new material with lawn cuttings or sawdust. The lid on the compost bin should be opened periodically to allow air to circulate or alternatively a wooden stick can be placed between the lid and the bin to allow continuous air circulation.

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# How long does composting take?

In the bin organisms produce compost by decomposing organic material. Given a balanced diet of "Green" and "Brown" material, it takes 5 to 6 months to produce compost that is ready for use. The length of time composting takes depends on the following:

## **Air**

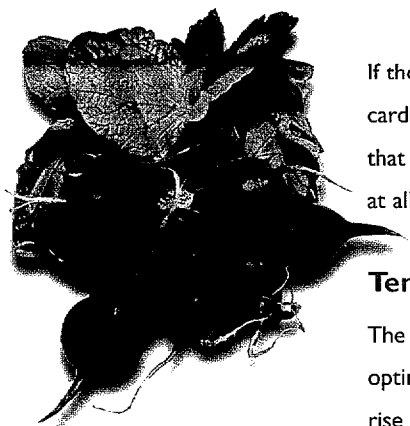
It is important to make sure that air can enter the bin from below, and that an excess of air can leave the bin through the lid. Also inside the bin the presence of air in all the layers is of the utmost importance. A good stream of air between the different materials allows for worms and other organisms to move around freely.

## **Moisture**

The organisms need a certain amount of moisture within the bin, some 50 to 60%. There is a simple test to check moisture in the bin, called the fist-test.

For the fist-test, take a handful of brown decomposing material and squeeze it in your fist. The bin is OK if only a few drops of water seep out and the material does not immediately crumble apart when opening your fist.





If the material is too wet, add some dry material, such as cardboard or tree prunings and turn the material in the bin so that the excessive moist can be soaked up. If there is no water at all and the material crumbles in your hand, add some water.

## Temperature

The higher the temperature, the faster the composting. The optimum range is between 30 and 60°C. The temperature will rise to its highest at the beginning of the decomposing-process, and then drop to approx. 30°.

## Size and volume of materials

Smaller particles of organic materials have more surface area for the organisms to work with, so composting is faster. Materials reduced to around two-inch pieces are ideal. The more material in the bin, the higher the temperature in the bin and the faster composting will take place.

## Turning of material in the bin

Turning increases the air in the bin and speeds up the composting process. To turn the material in the bin place a sheet of plastic or wooden board on the ground near the bin. Remove the body of the bin, and dig the material from the pile in the bin, onto the sheet of plastic or wooden board, turning it as you go. When all the material has been removed from the base of the bin, replace the body of the bin and refill the bin through the top lid. The amount air in the bin can also be improved by putting holes in the contents of the bin using a garden fork.

## How do I use the compost?

The compost is ready when it is brown and crumbly, and it is full of living organisms that are food for plants. You can use the compost in many ways, for instance:

It improves soil structure.

In clay soils it allows better drainage and aeration.

In sandy soils it helps retain moisture, preventing over-drainage.

It aids the establishment and growth of a new lawn.

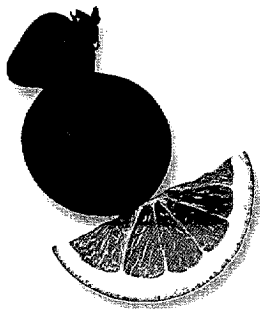
It promotes growth in newly planted trees and large plants.

It provides a good protection against weeds, and helps retain moisture when spread around the base of plants.

It recycles nutrients into the soil.

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### 3 Use it to make compost tea as a liquid fertiliser for plants

- 1 part of compost to 100 parts water. Leave it to soak over night, drain the liquid off and use as liquid fertiliser. If you leave it soaking longer than one night you may need to dilute the liquid further.

### 4 Use it in a potting mix

- 40% compost mixed with ordinary soil from your garden.
- Mix 20% compost with 'old' potting mixture. Never use soil from diseased plants.



## Troubleshooting

Problem		
Rotten odour	The bin is too moist	Turn the material and add dry, porous materials such as fallen leaves, sawdust, paper, cardboard or straw.
	No air getting to compost	Aerate the compost using fork
Ammonia odour	The bin has too much "green" (nitrogen-rich) material.	Add more "brown" carbon rich material such as fallen leaves, wood shavings or straw.
Low bin temperature	The bin is too dry	Add more water while turning the material.
	Pile is too small	Make pile bigger
	Poor aeration	Turn pile
	The bin has too little "green" (nitrogen rich) material	Mix in green sources such as grass clippings or food scraps
	Cold weather	Put activators into the compost to warm the bacteria into action
High Bin Temperature	Pile too large	Reduce pile size
	Insufficient ventilation	Turn pile
Pests	Meat and fatty food scraps have been added to the bin	Remove the unwanted materials and cover the top layer of the bin with fallen leaves, sawdust or soil.
Compost too dry	Evaporation of water due to hot weather	Add water until compost is moist. Close the lid on the composter