

Principles of Composting

Composting is the aerobic decomposition of organic matter into nutrient-rich soil, a valuable resource for improving poor quality soil or restoring nutrients taken up by plants as they grow. It requires a blend of microbes such as bacteria and fungi, air and the right moisture level. Fortunately these ingredients are available for free in the average garden.

You generally need about a 50 / 50 blend of what is commonly known as 'green' and 'brown' ingredients. Green ingredients are wetter, richer materials such as food waste, while brown ingredients are drier materials such as grass clippings, leaves and paper. They should be either mixed together or laid in layers. Moisture levels should be damp but not wet and air should be able to circulate through the mix. This can be done by manually mixing and turning the compost, or by using a product designed to aerate the mix, such as a tumbler.



Once the blend is right, all you need is time. The amount of time depends on the mix of ingredients and ambient conditions, tending to go a bit faster in Summer and take a bit longer in Winter, but is typically 6 - 8 weeks for a well-blended load. The decomposition will heat up the compost, which has been used for heating greenhouses and even domestic hot water by enterprising people with huge compost piles.

Another option is using worms to do the work for you, by eating and digesting the waste then excreting a high quality compost. A traditional compost bin or pile is usually in contact with the ground, allowing the worms to enter and leave as they like, or you can get a 'worm farm', specially designed to give the worms a controlled habitat and contain them.

The EnviroShop stocks a range of composting options, and we have the knowledge to help you choose the right product for your situation.

Drop in to see some demo units and discuss the options.



Shop locations

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COMPOSTING



Food Waste is a major contributor to greenhouse gas emissions. It's also a valuable resource that can easily be re-used to enhance your garden and grow more food.

Composting is easy if you have the right equipment and some basic knowledge. There are various systems available to suit your situation, whether that's a huge block with massive veggie beds and lots of garden clippings or a small apartment with only a couple of potplants.

Worm Farms

Worm farms are specially designed to create the perfect habitat for worms to thrive. The traditional style has layers of trays with holes in them. You put fresh food waste into the top tray and the worms gradually eat their way up, with liquid waste falling through to the bottom and solid waste building up in the lower trays. When the bottom tray is done you discard the contents into your garden and place the empty tray back on the top. The liquid is very high quality fertiliser and can be diluted and used to water garden beds and potplants.



Being living critters, worms are sensitive to their environment. They can't be allowed to get too hot or too cold, too wet or too dry and they can't be fed just anything. You should avoid feeding them acidic foods such as citrus and onions and anything that may encourage the growth of bad bacteria, such as meats and dairy. The top layer is usually covered with a blanket or a piece of cardboard to keep the moisture in.

Worm farms are great if you have young kids, it's like having several thousand pets in your yard! You need to make sure they're kept fed and watered when you're on holidays and if it's going to be a real scorcher of a day make sure they're located somewhere cool.

A simpler alternative is an **in-ground worm farm**.

These are a simple plastic moulding (made from recycled plastic!) that is buried in the ground, has a secure lid on top and is open at the bottom and sides to allow worms to come and go. You simply drop your food waste in and the local worms come and eat it and spread the nutrients around the area on their travels. You should dig them up and relocate every few months to make sure the whole garden benefits. If conditions



get too hot or dry, the worms simply go deeper into the soil, and there are always alternative food sources if you are going away for a while. You usually need a few of these to cope with the amount of food waste from a family, but they're also cheaper than a big worm farm.

Traditional Compost Bins

Traditional compost bins can be as simple as a pile in the corner of the garden or as sophisticated as a tumbler. They are designed for a roughly equal blend of food and garden waste. (If you have only food waste they don't work very well, and you should look at other options.) See the section on Principles of Composting for information on how they work.



Modern bin designs have secure lids, good ventilation and handy features like a door at the bottom so you can easily remove completed compost without tipping the whole bin over. Ours are made from 100% recycled, UV stabilised plastic. Simply layer up your food and garden waste and add the results back to your garden.

An alternative concept that can be handy in many situations is the **compost tumbler**. It's a barrel on wheels, with a door to load and unload easily. Ventilation holes ensure plenty of air, while the tumbling axis makes it easy to keep the contents mixed, resulting in faster composting. Wheels and a handle make it simple to move around, so you can unload directly onto a garden bed rather than using a wheelbarrow. Compost tumblers tend to work best when they are loaded up and then left for a few weeks, turning them every couple of days, so if you have a bigger garden consider getting two, or plan for somewhere else for waste to collect while you're waiting for the load to finish.



Traditional composting systems can be complementary to worm farms and bokashi buckets. Add the garden waste directly to the bin, then add worm castings or bokashi waste when they're ready and they'll super-accelerate the process, being rich in good microbes.

Bokashi

Bokashi is a system that uses anaerobic (air-free) fermentation to break down the food waste in a special bucket. It's kind of like pickling the food. You collect your daily food scraps as normal, then add them to the Bokashi bucket, add a sprinkle of Bokashi Mix, drain off any liquid that has built up and then close the lid.



Because it's air-tight smells stay in and bugs stay out, although the contents barely smell when the process is running correctly.

When the bucket is full, either add the contents to your outdoor compost bin, bury them in the soil or take them to a friend's house (or friendly community garden). Once it's in contact with the soil and other organic matter

it breaks down quickly into high quality compost. The liquid is also very rich and can be diluted and used as fertiliser, or tipped down your drains to help keep them clean. (the microbes love eating the gunge that builds up in the U-Bend)

The micro-organisms in Bokashi Mix build a healthier, stronger and more disease-resistant soil, rather like pro-biotics do in the human digestive system.

Disposing of food waste from an apartment can be a major issue. Bokashi bins are an ideal solution, as they are small and air-tight, meaning they can be kept inside. They're also easy to transport, being spill-proof with a sturdy handle.

If you don't have friends or family nearby with a garden to drop your Bokashi in, try talking to your local community garden or see if your local school has a big veggie patch.

There is also a version designed for **composting pet waste** safely. It uses an in-ground container similar to the worm farms and a tweaked blend of microbes designed to overwhelm the bad bugs.

