

A simple guide to Composting

Composting is an amazing and simple thing that we can all do to help us better care for what God has given us. The term can feel intimidating but essentially all you are doing is feeding worms and microorganisms your scrap food and other garden waste and you get good, rich, nutrient heavy soil in return.

One of the many benefits of composting is it reduces methane gas. Food waste starts breaking down quite quickly and if it goes to landfill it is already breaking down, producing methane gas. Methane gas has more than 80 times the warming power than CO₂ (carbon dioxide) over the first 20 years it reaches the atmosphere. By composting food scraps we are helping to reduce our environmental impact and build life into our soil, helping what God has created to flourish.

Composting is not restricted by season, it is something that is effective all year round, but peak composting activity is often during mid-late summer through to early winter.

It is important to think through three things to start:

1. **The size of space you have available**
2. **Your location ie urban vs rural**
3. **The amount of material you produce, ie veg scraps, garden/yard waste, scrap paper/cardboard etc.**

The first thing you need to do when starting a compost system is assess what your space is capable of. Depending on your available space, you can increase or decrease the size of your compost system quite easily from what's written below. Plus there are a couple of specific systems (such as a worm farm or vermicompost) which would work better in a space that is very limited, such as a balcony or potentially a desert environment.

For the purpose of this guide I will predominately focus on what is known as open air or hot composting. The principles of creating compost are transferable, and you may find you have to adjust/adapt so they work better for your location's specific needs. Like with the YWAM values, the principles/values are the same but the outworking can look different depending on location.

1. **Pick a space for your compost, the best place for composting is somewhere that is not in direct sunlight and directly onto the soil if possible.** The organisms that break down the material ie. worms, bacteria, fungi etc prefer consistent conditions, so being in direct sun will cause extreme temperature changes and can cause the compost heap to dry out, as the little critters need moisture (as do we!). It is also advisable where possible to locate your compost away from buildings to limit potential pests entering where you live. By placing it directly on the soil all the organisms which help break down the material have easy access, don't worry if you can't, you can still help your critters access it by adding a starter (see point 4 below).
2. **Once you have picked your location then you can create your compost bin, for best results use a size of at least 1 cubic meter (1 meter long x 1 meter deep x 1 meter tall)** if it is smaller it will still work but it will be a bit slower. You can make the structure from wood, bricks or breeze blocks/cinder blocks, or recycled plastic. It is also helpful to have multiple bins if your space allows. One which is active where you are putting material, and 1 or 2 others which are 'resting' where you are not adding new material, just allowing the process of breakdown to finish.
3. After your bins are ready it's time to start adding material. This needs to be a mix of what is known as green and brown material at roughly a 50:50 ratio. **Green material is essentially anything which is alive/green when cut ie grass cuttings, vegetable peelings etc, brown material is essentially anything that is brown/dead when gathered ie fallen leaves, cardboard, paper, and untreated wood (although this one is a bit of a mix depending on how long it's been off the tree).** Green material is generally high in nitrogen and brown material is generally high in carbon and plants need both of these to grow well. The reason for this is that the nutrient mix and value of the compost you produce is directly related to what you add. Larger bits of material ie larger than your fist should be broken down into smaller bits. You can add other things like meat scraps, bones, old cooked food BUT only if your system is in an appropriate location ie rural and set up so that pests can't get into it, but if you are able to do this, it will dramatically reduce the amount of food waste you throw away. You can also add additional nitrogen rich material to your compost as the micro-organisms which help to break things down like to eat some of it themselves. Examples listed here:
<https://www.dummies.com/article/home-auto-hobbies/garden-green-living/sustainability/composting/nitrogen-rich-materials-for-your-compost-pile-188766/>

A note: if you put a lot of coffee grounds in, this can make the soil acidic which some plants, like blueberries need, but others do not, this can be balanced out by putting material high in calcium ie brassica leaves and stalks (broccoli, cabbage, kale, etc.) or if by the sea, kelp/seaweed, also leaves of ash, cherry, elm, hawthorn, linden, maple and rose or eggshells if you don't have to worry about pests.

4. **At this point if this is your first attempt at composting it is helpful to have a friend who has an established compost heap so that you can get what is called a 'starter' to kick start your heap.** If you have an established system then you already have a starter available. By adding 2-3 spade fulls of material from an already established compost you introduce both worms and micro-organisms giving your new heap a kick start. Starters can also be purchased if you are unable to do either of these.
5. **Once your compost is going it is really important to mix it regularly (at least twice a week) as oxygen is a vital part of the process.** Rapid breakdown happens when the system breaks down via aerobic breakdown, which just means the organisms need to be able to breathe oxygen (air), this will have a side effect of producing heat, which also helps to speed up the breakdown (this is why it is called a hot compost system). If you do not turn it and allow it to compress, it will squeeze the oxygen out and the system will switch from an aerobic breakdown to an anaerobic system, meaning it turns from a rapid breakdown to a slow breakdown (and is smelly). Hot compost means material can be ready to add to your garden in as little as 4 months but an anaerobic system can take 2+years to be ready to use (all these are approximates and will vary depending on the system).
6. **Stop adding material after 6 weeks - 3 months (depending on how full your bin is), it is time to allow it to rest. It is still important to turn the heap once or twice a week for the reason stated above.** At this time you should consider starting the next bin using some of the material from your current active bin. Over time you will notice that the resting bin does not produce much heat and the material looks much more like soil when turned than bits of veg peelings etc.
7. **When your bin gets to this point it is ready to use!** You can dig it out and add it to your garden, you can use a coarse garden sieve to remove any large bits that are left over if you want and they can be added to an active bin to continue to break down. (If you are not ready to use the soil that you have created you can put it somewhere to store or give it to a friend or neighbour! This will give you another bin to be able to start filling up and the process can continue!

Some DIY compost bin ideas

<https://www.diyncrafts.com/33618/home/gardening/35-cheap-easy-diy-compost-bins-can-build-weekend>

Not able to make your own compost or have too much space you can't use? Try this site, www.sharewaste.com

If you have more question feel free to get in touch through our contact form at ywamscotland.org/creation-care-hub



