

COMPOSTING



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Composting

WHY?

Garden compost is simply decayed, organic matter. Not only is it an excellent way to use waste kitchen and garden materials, the end product is also a great soil improver helping retain nutrients, water and improve structure. The composting process itself creates a habitat for different munching and crunching creatures, attracted by their required temperature as the heat rises and falls. Grass snakes are particularly drawn to the warmth of larger compost heaps, rather than 'bins' although the latter are better for making compost more quickly.

HOW?

Understanding a few simple principles will help you to turn unpromising kitchen waste and garden clippings into dark, sweet-smelling, earthy, nutritious compost.

Conditions for successful composting must be favourable for the organisms acting as decomposers. Such organisms need air, a moist environment, and an appropriate balance of nutrients, especially nitrogen and carbon. In order to achieve a good mix it is helpful to distinguish between 'green' (leafy/succulent) and 'brown' (fibrous/woody) materials, which should be mixed in equal volume. Too many browns and the heap stays dry, too many greens mean the air is squeezed out and the good organisms die. This table provides likely sources of each:

Greens (providing nitrogen)	Browns (providing carbon)
<ul style="list-style-type: none"> • Grass cuttings • Kitchen fruit and vegetable waste • Coffee grounds and tea leaves • Young leaves or nettles (green) • Annual weeds 	<ul style="list-style-type: none"> • Cardboard • Dead flowers • Shredded paper • Autumn leaves or nettles (brown) • Twigs • Shredded woody prunings • Straw



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Be careful not to include the following items:

- Food proteins (including dairy products and meat) or cooked foods, which could attract vermin.
- Items such as dog waste which could be toxic to people or plants even after composting.
- Plastic wrappers (unless marked as compostable).
- Clippings from grass which has recently been sprayed with weedkiller.
- Plants recently sprayed with pesticides.
- Deep rooted or pernicious weeds such as ground elder or dandelions.
- It's also best not to add plant material which is diseased, or infested with pests.
- Leaves take longer to break down so if you have a lot, it can be worth composting them separately (see 'leaf mould' lower down).

As the organisms decompose the organic matter, they give off heat which also makes them more active, speeding up the composting process. So organic waste brought together in a large enough quantity heats up quickly. Small heaps of less than 1m³ have a disproportionately large surface area so heat is lost rather than retained. The process slows down as the available oxygen starts to be used up. Rather like stirring the dying embers of a fire to get oxygen into the unburnt fuel, stirring a compost when it starts to cool down improves aeration and restarts the process.

The simplest compost bin to make is a 1m³ cube using pallets, filled and turned over regularly to mix the materials. Compost heaps also need to be kept moist, but not wet, for the bacteria to function well, so a suitable cover, like some old carpet, helps keep the heat in and most of the rain out. This sort of 'cold' composting can take several months or a year or two to complete:

<https://www.gardenersworld.com/how-to/diy/how-to-build-a-compost-bin/>



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OTHER OPTIONS FOR COMPOST BINS

If you are unlikely to produce a large volume of organic matter, consider an alternative container such as a plastic compost bin, a rotary bin or an insulated bin which keeps the contents hot for longer. Gardeners' World magazine explained the pros and cons of different types of compost bin and reviewed 13 different ones in Jan 2021: <https://www.gardenersworld.com/reviews/which-type-of-compost-bin-is-best/>

WORMERY

An alternative, efficient way of recycling kitchen waste is a wormery, which is a multi-layered unit to which you regularly add vegetable peelings. See the weblink for more detailed instructions. A nutritious liquid is produced, which can be diluted and used as a fertiliser: <https://www.gardenersworld.com/how-to/maintain-the-garden/how-to-set-up-a-wormery/>

LEAF MOULD

If you have a lot of deciduous trees, collecting the leaves separately is a good idea, as they are slower to break down (the process needs less air). In the autumn, place the leaves into a wire cage or bin liners with holes pierced in them. Moisten the leaves if they become dry and after two years, you will have a highly nutritious leaf mould. For fuller information see the RHS website here: <https://www.rhs.org.uk/advice/profile?pid=478>

BOUGHT COMPOST

If you choose to buy compost, be sure it is peat-free as peat is an irreplaceable carbon sink. Multi-purpose peat-free compost can cover a range of uses, but you can also buy specific types of compost which meet the different nutritional needs of seeds, young plants, short term summer containers or established shrubs. The RHS profiles the importance of peat-free growing here: <https://www.rhs.org.uk/advice/profile?pid=441>



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LONGER READS & OTHER RESOURCES

Many organisations are keen to get you composting. Here is advice from two of them:

1. <https://www.wildlifetrusts.org/actions/how-compost-your-waste>
2. <https://www.discoverwildlife.com/how-to/wildlife-gardening/how-to-make-the-most-of-compost/>

Catherine Cutler from the Eden project, who is also one of our Volunteer Advisors, tells us about Eden project composting: <https://youtu.be/eObXJJZXOo>

Here is a longer explanation of the science of composting: <https://untamedscience.com/biology/ecology/ecology-articles/the-science-of-compost>

CASE STUDIES

Hazelnut Community Farm is an A Rocha UK Partner in Action. They ran a Zoom session on composting including some biblical reflections on composting. It is available here:

<https://hazelnutcommunityfarm.com/resources/snbjfp3bifz907t2uxyh9bmss9d9s>