

# The Joy of Composting

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## 1. Benefits of making your own compost

*Garden compost* usually describes the compost that you make at home, in a heap in wooden or plastic bins by recycling waste such as kitchen and garden waste.

Whatever size your garden, if you can make space for composting, you'll reap many benefits:

- free and organically healthy growing medium or mulch that reduces the need to water, suppresses weeds and feeds the soil that feeds your plants
- waste reduction waste by recycling:
  - kitchen vegetable and other food waste
  - garden waste such as leaves, grass, weeds and other 'green' waste
  - cardboard, newspaper and other waste that would usually go in your bin
- money saving from buying compost and fertilisers
- knowing what's in your compost: no nasties like inorganic materials or chemicals
- in permaculture terms this is referred to as working a closed loop system where you use what you produce, reducing what you buy in and what you throw out. You can factor in the journeys to garden centres for purchases and the plastic bags the compost comes in (though they are useful for re-use).

Most gardeners need to buy bagged compost, and this can become quite an expense, so it's wonderful to be able to make your own, especially if you are diverting items from the bin to do so. There's a number of different methods that can be used.

## 2. Compost bins: Bought and homemade

Are you ready to turn all that garden and food waste into delicious, productive compost? Although you can just make a heap of all your wastes, it takes space, can be a bit messy and might attract vermin if you include food waste. So a bin is helpful. Listed here are lots of different kinds of bins, as well as methods that don't use bins at all. You can try just one method, or experiment. Don't feel overwhelmed by all the ideas, it's just to give you choices 😊

### These are compost-making containers you can buy

#### Plastic compost bin

The most common garden compost bins are the *daleks*, so-called because of their shape. They have a lid and no bottom as they are placed directly on the soil where worms can crawl in to help decompose the materials and transform the waste into compost.

Some local councils sell discounted compost bins or even supply them free of charge (not Manchester at the time of writing though). They are often available free on give-away sites so do also ask on Freecycle or in Facebook give-away/recycling groups.



### Hot bin

These are compost bins specially designed to heat the contents to create compost faster. Because of the heat generated they can have cooked food, even meat, added without attracting rats. They have a bottom to stop vermin, with holes in it to allow worms in and out. They are generally really pricy, but some local authorities offer discounts (not Greater Manchester at the moment).



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### Wooden slatted bins

These are popular especially where people have space for more than one. If you have three, one can have fresh waste added to it, a second can be full and left to rot down, and a third can contain rotted compost that can be used in the garden. They are then rotated in use. You can also just bag up the ready compost for future use.



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### Wormeries and bokashi bins

If you want to turn cooked food into compost and you only have a small space, look into wormeries and bokashi bins. It is possible to make a wormery, but quite complicated (Youtube will show you). These methods of composting can take raw and cooked food. As a bonus they make a liquid that is said to be a powerful fertilizer for your plants. With the bokashi bin, it comes out of the tap that you can see on the image on the right. They need layers of bran adding to them to help ferment the content so this involves a bit more expense and action. They tend to be rather smelly so you might not want to keep in your kitchen.



*Image from Amazon*

### Why buy a bin if you can make your own?

#### Pallet or recycled wooden bin

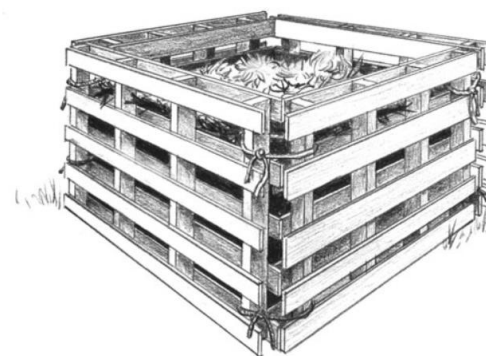
You can build your own compost bin from pallets or other used wood.

There's lots of guides online, for example:

- <https://lovelygreens.com/easy-wooden-compost-bin-using-pallets/>
- <https://www.gardenersworld.com/how-to/diy/how-to-build-a-compost-bin/>
- <https://www.dummies.com/home-garden/green-living/how-to-build-a-compost-bin-from-wood-pallets/>

There's also plenty of Youtube videos to watch.

You will, of course, need access to at least four pallets or pieces of wood! If you're using other wood, remember to have some gaps to let air in.



Build a compost bin from shipping pallets.

*Image from www.dummies.com*

### Dustbin conversion

A large plastic bin can be converted to a compost bin simply by drilling holes in the bottom and sides. Stand it on some bricks, ideally on soil rather than concrete for the worms to get in. It needs holes to let in worms and air. Without holes you'll get a smelly mush and no helpful worms or slugs will visit to help decompose the contents. Yes, slugs are your friend in the compost bin!



*Image from The Art of Simple*

### Wire mesh compost bin

If you've got four posts you can knock in the ground and some chicken wire, you can make a rough compost container. Line it with cardboard to help insulate the contents. Add a lid made from cardboard too - it will disintegrate but you can mix it in as a compost ingredient, then replace it with new cardboard. If you don't have cardboard yourself, do ask around as many people have trouble getting rid of it from online order deliveries. Wire mesh on its own, without cardboard, is best for making leafmould with leaves (see below).



### Just a heap!

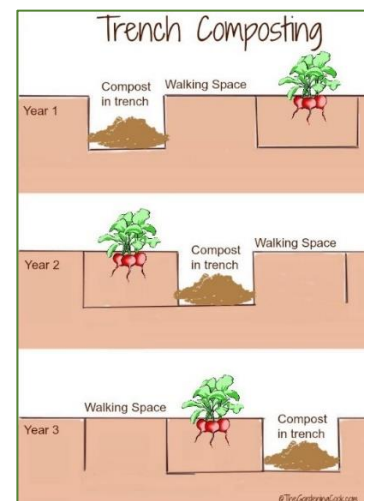
It's possible to create a heap in a corner of the garden without enclosing it in any kind of structure. You can start with some twiggy bits at the bottom to help get air in, then layer it up as described below with 'greens' and 'browns'. To help it heat, you can cover it with cardboard or tarpaulin. A really big heap can generate a lot of heat that will speed up the composting process – not bad if you've got the space and lots to compost. Beware of just piling up with branches and twigs though, as it will take too long to decompose on its own without the green layers.



*Image from wikihow*

### Trench composting

This is another no bin method: you simply dig a trench and fill it with kitchen vegetable and garden waste! You can either add the kitchen waste and cover with soil in one go, or dig a deeper trench, adding layers of kitchen scraps and soil over a period of time until it's filled. This is ideally done in late autumn or during the winter to allow time for the waste to decompose. It is then ready to grow on in the spring when the rotted veg has turned to nutritious compost. If you plant on it before the matter has rotted down, your plants may struggle as the process of decomposition uses nitrogen which plants need for growth. The good news is that beans take nitrogen from the air and fix it into the soil as they grow, so they are ideal for growing in your composting trench. One of the benefits of trench composting should be less watering as the compost in the trench helps retain moisture.



*Image from The Gardening Cook*



1. Dug trench 40cm deep 40cm across



2. Kitchen peelings, flower petals, deciduous tree leaves



3. Soil then more green waste



4. More soil from original digging



5. Grass layer



6. Final soil layer

*The start of my trench composting experiment in spring 2020*

**Trench composting without a trench** Here's an interesting video from an engaging gardening Youtuber on trench (or no trench) composting. He has a number of other videos worth watching.

<https://www.youtube.com/watch?v=DJpUVZyy06Q>

### Weed composting

It's worth raising a note of caution about putting certain weeds in the compost bin. Most annual weeds are fine, especially if the compost reaches a good heat and kills any seeds that would otherwise regrow where you use the compost. Perennial weeds like brambles, nettles, ivy, ground elder and many more, are more of a problem as they may take longer to rot and if just some tiny pieces stay alive, you will regret spreading them around your garden.

Perennial weeds can be composted in a couple of different ways that still put them to good use. They can be put in a plastic bag (chopped up if large), tied it up and left to decompose for several months before being added to your normal compost heap once they are definitely dead with no chance of regrowth.

Weeds such as nettles and mare's tail (horsetail) can be soaked in water for about three weeks then strained to make a great plant fertilizer. It does get very smelly, be warned! After straining and diluting the liquid 1/10 with water to use as a feed, the plant matter can be added to a normal compost heap.

### There is a separate guide for leafmould

### Loam compost

If you're digging up an area of grass, say to create your vegetable garden, don't throw away those pieces of turf as they can make excellent compost! Loam is rotted down turf, the top layer of soil. It contains silt, sand and clay. Here's your recipe for turning unwanted layers of turf into compost:

1. Stack the turf pieces upside down in a pile
2. Cover them with a material which will keep the light out, say, some polythene.
3. Leave for 6-12 months
4. Use directly on the soil, or sieve to get crumbly seed compost.





It's also possible to put turf in a bag and leave to rot down as shown below. This looked pretty good but in actual fact it when planted in it seemed to set like cement, so maybe would have benefited from some sand being added.

By the way, don't confuse composting slabs of turf with composting grass. The turf can be composted on its own as it's a combination of grass and soil. However, grass on its own would rot into a ghastly slimy mess as it is only composed of 'green' waste, and no browns – see below for more information on this.



*Slabs of turf and cardboard, covered to rot down over several months.*



## More ideas for the adventurous composter!

### Hügelkultur

Hügelkultur (German for cultivated mound) is a raised bed made from several layers that includes garden waste such as tree trunks, logs, branches, rotted leaves, woodchip and grass, as well as homemade compost and rotted manure. The layers are built up, either on the ground or starting with a pit in the ground.

The idea is that as the logs and lower layers rot and decompose, they act as a sponge retaining water so less watering is needed, and they slowly release nutrients for the plants growing on the mound. As it can initially be low on nitrogen due to the rotting wood, it helps to add nitrogen rich layers too, like grass, comfrey or nettles (or even urine). In the second and further years this changes so the whole mound feeds the plants effectively. The layers are less compacted than normal ground that is grown in, giving the plants roots' more aeration and encouraging growth.

Additional layers can be added each year. My vision of my hugel mound was at least waist high to me, but my dreams were bigger than my layers were thick, and each seemed to sink quite a bit.

You can find more information here <https://www.permaculture.co.uk/articles/many-benefits-hugelkultur>

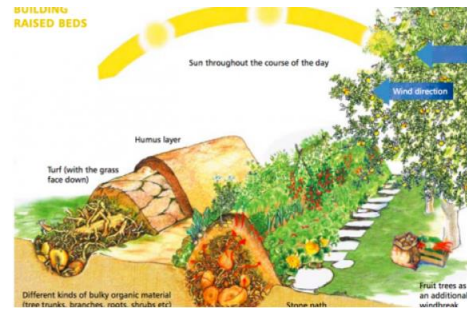


Image from [permaculture.co.uk](http://permaculture.co.uk)



Starting a hügelkultur in my garden with layers of logs, branches, twigs, woodchip and grass clippings so far (end March 20)

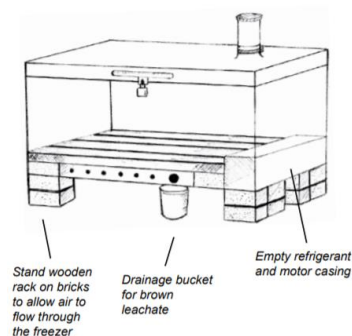


8 layers later, ready for planting up

### Converting a fridge or chest freezer into a hotbin

This is a great use of a broken fridge or freezer but must be prepared with great care as fridge compressors contain chemicals that are **very harmful** to the environment and need to be professionally removed. There are services in the UK to remove them. This is really just for info, but it's interesting how ingenious people can be.

Gardener Bob Flowerdew is also a fan of recycling fridges and freezers for different uses in the garden <http://bobflowerdew.com/tanks-taking-recycling-dead-refrigerators-freezers>



From the Centre for Alternative Technology

And the composting genius award goes to Natalie, a member of Chorlton Plant Swap, who lives in a first floor flat, for this resourceful method to get her kitchen scraps into her compost bin.

**A big thank you for contributing tips to members of *Chorlton Plant Swap***

[www.facebook.com/groups/Chorltonplantswap/](https://www.facebook.com/groups/Chorltonplantswap/)

and ***No-Dig Gardening***

<https://www.facebook.com/groups/Undug/>

These two groups are packed with inventive, creative, generous spirited gardeners, always happy to share their experiences.



### **3. What to put in the compost bin .../ next page**

### 3. What to put in the compost bin

You'll be amazed at how much you can put in your compost bin!

Here's a series of tips for helping your waste decompose successfully to create nutritious, well-balanced compost for your garden.

To start, you'll need a mix of materials, commonly referred to as **greens** and **browns**. The wetter greens are nitrogen-rich, adding protein nutrients to the mix and the drier browns are carbon-rich, adding structure and energy. Some people say to add 3 times as many browns as greens, others say an equal mix, so you might look at adding a 3cm layer of browns (carbon) to 1cm layer of greens (nitrogen). Too many browns slows down the composting, too many greens gives you a slimy, smelly mush.

Greens have nitrogen content	Browns have carbon content
<ul style="list-style-type: none"><li>• Kitchen vegetable waste</li><li>• Grass mowings</li><li>• Annual weeds</li><li>• Perennial weeds if they have been left to soak in water for a couple of weeks</li><li>• Leaves from deciduous trees</li><li>• Tea leaves, and bags if plastic free</li><li>• Coffee grounds (they're brown in colour, but have nitrogen content so count as green)</li><li>• Horse manure (its colour is brown, but its nitrogen content is green).</li></ul>	<ul style="list-style-type: none"><li>• Torn up cardboard from deliveries or food (but not shiny, coloured cardboard)</li><li>• Egg cartons</li><li>• Bedding from any vegetarian animal (eg rabbits and guinea pigs; but not cat litter)</li><li>• Twigs, chopped up unless very small</li><li>• Small amounts of scrunched up newspaper</li><li>• Paper bags (not glossy)</li><li>• Hair</li><li>• Wood ash</li><li>• Natural fibres like cotton or wool (not acrylic) eg really worn out clothes, cut up small</li><li>• Paper towels</li><li>• Cardboard tubes</li><li>• Woodchips and sawdust are good additions to the general heap, rather than putting directly on plants where they may attract slugs and woodlice.</li></ul>
What not to put in	
<ul style="list-style-type: none"><li>• Perennial weeds like brambles, marestail, bindweed etc that may not be killed in the compost unless you have pre-soaked as above as they make take root again</li><li>• Seeds – they may grow again</li><li>• Citrus peel and onions will rot down, but as they may be off-putting to worms who are your composting friends</li><li>• Coal or coke ash</li></ul>	<ul style="list-style-type: none"><li>• Glossy magazines</li><li>• Cardboard with shiny colour</li><li>• Packing tape from cardboard boxes. Here's tip: leave the box outside to get wet, then the tape will peel off more easily.</li><li>• Juice cartons (they have plastic, wax or foil coatings)</li><li>• Branches that are too big to decompose</li><li>• Dog, cat or human poo</li><li>• Disposable nappies</li></ul>
<p><b>A note on cooked food:</b> To keep rodents from being attracted to the contents of your compost, do not add cooked foods or any meat at all. Turn or stir the compost regularly as that would disturb any furry friends trying to make themselves comfortable. I have never in 20 years had any mice or rats in my various compost bins despite knowing they are in the area as my cats have brought them in as 'gifts'.</p> <p>Hot bins are the exception as they come with a solid base that prevents their entry. They do have small holes to allow worms entry and exit. Likewise, bokashi bins and wormeries can take cooked foods safely.</p>	
<p><b>Beware of greenwashing</b> from product suppliers who claim their packaging is so ethical you can compost it. Always double-check what the item's actual components are. For instance, I heard a dry</p>	



cleaner tell customers the plastic sheet over their clean clothes could go in their compost bin as it's biodegradable. In fact, it is made from plastic that would not decompose in a normal garden compost bin as it actually needs a high heat. Even if it did decompose in your garden compost bin, it's not made from natural materials that you would want to include in your compost, put on your soil or have vegetables that you will be eating growing in. Yik. Packaging such as some magazine bags that describe themselves as made from corn or potato starch should be suitable for inclusion in your garden compost. Read the ingredients carefully and do ask the supplier for full information.

**Some adventurous composters** go even further, composting anything that will decompose including cotton clothing, dead animals and even human poo, known as humanure. If you'd like to know more about the latter, you can download a free handbook <http://humanurehandbook.com/contents.html>. It also covers composting toilets. Who can resist a book with such engaging chapter headings as "A day in the life of a turd"?

**Tip:** You can also collect wild plants to bulk up your compost, for example nettles or comfrey or other plants. But it's really important that you only cut small amounts, just as you would if foraging. If it's on private property, you'll need to check with the landowner. These are great additions to the compost bin, adding lots of nitrogen. Don't pull up the whole plant, but just chop some off. Do be careful not to add anything that's been treated with herbicides, for instance collected from the roadside.

#### 4. How to start your compost and look after it

- Some people start off with a layer of twigs to help keep air circulating but if you turn your compost to heat it up, they will become incorporated without having rotted down.
- Layer a good mix of greens and browns, like a lasagna.
- Keep it warm with its own lid or a cover made from cardboard; don't be tempted to use an old carpet as is often suggested as it is likely to have synthetic components that will degrade and leach into your compost. You wouldn't want to eat old carpet, would you?

You can learn more about how to layer up and get other useful composting information on Charles Dowding's No-Dig website <https://charlesdowding.co.uk/advice-on-making-compost/>

**How to look after your compost heap.** The aim is to encourage your garden and kitchen waste to rot down well and become useful compost. This is helped by bacteria, worms and other soil organisms. Here's how you can help this process:

- Keep the heap moist (but not soaking)
- Make sure air can get in: the bacteria that help decomposition need oxygen
- Encourage decomposition by helping the heap to heat. Building the largest possible volume of compost will create the most heat. The heat also kills any weed seeds which is especially helpful. Putting it in a sunny spot will too, although that may be precious space to keep for yourself and your plants.
- To speed it up you can turn it around every 6-8 weeks. This will both help the compost to decompose and also deter mice and rats. Either stir it with a fork or empty it out and put it back in all mixed up.
- Welcome the worms and slugs (yes, slugs!) as they help the decomposition.
- If you're not too squeamish about it, adding human urine speeds up the composting too and it doesn't need diluting! Don't listen to any rubbish about only men's urine being suitable; although obviously the process may be more straightforward 😊
- Comfrey leaves are also a compost accelerant. You can grow the plant yourself or cut it from the wild; it also makes a great liquid fertiliser. If buying a plant, or getting a cutting from someone, try to buy one called *Bocking 14* as other ones may grow a bit rampant and self-seed!

**Tip:** If possible, have three compost bins or heaps

1. One to add fresh compost to.
2. A second that is filled and being left to decompose (you can mix and turn this one to speed it up).

3. A third that is rotted down and has usable compost in it. In practice you can also empty the finished compost into sturdy plastic sacks or other containers when it's ready if you're not going to use it immediately and want access to that bin space.

## **5. Are we nearly there yet? How long does composting take?**

So when will your compost be ready? That's a bit of a 'how long is a piece of composted string?' question as it depends on a number of factors such as the composting method used and the materials being composted. The right combinations in a hot composter in warm weather can produce usable compost in only three months, but other set-ups could take up to two years. The hotter the bin, the faster the decomposition process. Plastic bins will get the contents hotter than wooden ones. The larger the heap, the hotter it will get. The bigger and tougher the content items, eg woody stems, cardboard, the slower it will be. Most kitchen waste such as peelings will decompose quickly, but broccoli or cauliflower stems will take longer. It's worth tearing and chopping things quite small. Here is a link to a website that shows the time that different components can take to rot

<http://www.askorganic.co.uk/composting/Composting%20times.htm>

**Knowing when your compost is ready.** You'll know your compost is ready when it's dark and crumbly, like soil. There should be few or no worms as they generally leave when it's fully decomposed. If it's mainly ready, but with the odd item not fully decomposed, put them aside for adding back into the next batch of composting. It's worth ensuring your compost is fully decomposed to prevent any weed seeds hatching when the compost is used on your soil or in pots, but there will always be a few that appear, as well as new plants from your kitchen waste if you've left in seeds from your veg.

## **6. How to use your homemade compost**

- Mulch: homemade compost can be spread in your fruit and vegetable garden to use as a mulch, both around existing plants and before planting out. This nourishes the soil in which the plants' roots feed and grow. It also keeps the soil moist so you can water less. And it keeps weeds down. You should find you need less fertiliser or other plant foods with a good mulch. What a great job from a free product!
- Homemade compost can be used in raised beds in exactly the same way.
- For smaller containers it may be too lumpy, so will be better if sieved. Either discard what remains in the sieve, add it to the mulches above, or put back in the compost bin. See below for makeshift sieve suggestions.
- Your homemade compost is also too lumpy for sowing seeds, and too nutritious as seeds offer as much nutrition as a little seedling needs before it grows larger. However if you really need to use it for seeds, ensure it's well sieved and add some sand to reduce its strength and increase drainage. Homemade leafmould is less strong, so better for sowing seeds. It still needs sieving and benefits from having sand added.
- You may hear recommendations to heat or even microwave homemade compost to kill off weed seeds but that is also likely to kill off beneficial components in the compost. On the plus side, it may also scare off family members from expecting you to cook for them.

### Homemade compost sieves

Garden centres sell a variety of larger plastic or metal sieves for compost sifting, and you can also have a go at making your own.

**Chicken wire frame.** You'll need some wood off-cuts, chicken wire, and other tools to make this effective compost sifting frame. There's a number of guides online including this one <https://chickenscratchny.com/diy-compost-sifter/>

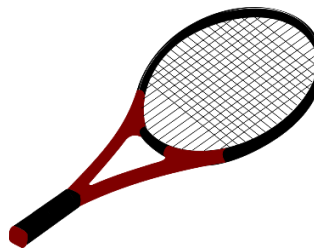
It may be possible to use a sturdy old picture frame and chicken wire too. Let us know if you try it!



**Plastic basket.** This is easy, peasy if you have a mesh basket available, or you can buy a cheap one from a DIY shop. This makeshift sieve image is from a video by *lifeinthailand* on Youtube.



**Tennis anyone?** At a push, an old tennis or badminton racket could make a serviceable, if not somewhat eccentric sieve substitute. Might not be the neatest method, but you'd build up some good upper arm muscles ...



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