Composting

garden organic
the national charity for organic growing

A Garden Organic guide

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Why make compost?

Read this guide and you will learn how to save money, grow healthy plants, help clean up the environment, reduce pollution and protect endangered peatland habitats. How? Simply by recycling garden debris and kitchen scraps to make compost.

Compost makes your garden grow

Compost, a rich soil-like material, works wonders around the garden;

- lightens heavy soils
- helps light soils hold more water
- feeds plants
- helps control diseases

Compost saves you money

Home-made compost, helps cut down on buying garden products;

- soil improvers
- fertilisers
- mulches

Compost helps reduce pollution

Making compost contributes towards a cleaner environment;

- reduces the need for bonfires
- cuts down on waste going to landfill
- less need for manufactured and packaged products

Compost saves wildlife

The use of peat is causing the destruction of fragile peatland habitats, and the rare plants and animals that live there. Ninety-four per cent of the UK's lowland peatbogs have been damaged or destroyed. Composted kitchen and garden waste can be used in place of peat - giving the remaining peatland wildlife a better chance of survival.

What can I compost?

If it can rot it will compost, but some items are best avoided. This page gives you some ideas on what, and what not, to add to your compost heap.

Some things, like grass mowings and soft young weeds, rot quickly. They work as 'activators', getting the composting started, but on their own will decay to a smelly mess.

Activators, quick to rot

- comfrey leaves
- nettle leaves
- grass cuttings
- poultry manures
- young weeds

Slower to rot

- fruit and veg scraps
- tea bags and coffee grounds
- old straw and hay
- vegetable plant remains
- strawy manures
- old flowers and bedding plants
- young hedge clippings
- soft prunings
- perennial weeds
- gerbil, hamster, rabbit and other vegetarian pet bedding

Older and tougher plant material is slower to rot but gives body to the finished compost. Woody items decay very slowly; they are best chopped or shredded first, where appropriate.

For best results, use a mixture of types of ingredients. The right balance is something you learn by experience. A good rule of thumb is to mix equal amounts of 'green' material (grass cuttings, fruit and veg scraps, young weeds, etc) with 'brown' materials (cardboard, paper bags, woody prunings, straw, autumn leaves etc).

Very slow to rot

- autumn leaves
- tough hedge clippings
- woody prunings
- sawdust and wood shavings

Other compostable items

- wood ash
- cardboard
- paper towels, bags and packaging
- cardboard tubes and egg boxes
- junk mail

Best avoided

- meat, fish and dairy products
- newspaper
- cooked food

DO NOT compost

- coal and coke ash
- cat litter
- dog faeces
- disposable nappies

Turn the page for more information about these ingredients.

Hints and tips

Autumn leaves

Store some dry leaves to mix with grass mowings and other soft green materials. Make large quantities into leafmould - stuff wet leaves into black plastic sacks (loosely tied), or a wire mesh container. Use after a year or two. Mow leaves on a lawn to chop and collect them up.

Grass cuttings

Compost ingredients such as grass cuttings, comfrey leaves or young weeds will turn into a slimy mess unless they are composted together with some browner materials like cardboard or autumn leaves. Grass cuttings can be left on the lawn whenever possible, they will soon disappear and feed the grass: this will not cause 'thatch'. Alternatively they can be used as a mulch on bare soil helping to retain soil moisture.

Diseased plants

Persistent diseases, such as white rot and clubroot, are best avoided. A hot heap (see p. 11), turned several times should deal with everything else. Diseases that don't need living plants to survive - grey mould, mildews, wilts - may survive in a slow, cool heap. But heat is not the only factor that will kill diseases - the intense microbial activity will also help to dispose of them.

Perennial weeds

Some perennial weeds will be killed in a hot heap; avoid really persistent horrors such as celandine, bulbous buttercup, ground elder and bindweed. Don't burn or dump these weeds - they are rich in plant foods. Mix with grass mowings in a plastic sack. Tie it up and leave for a few months until the weeds are no longer recognizable, then add to the compost heap.

Weed seeds

Weed seeds may survive a cool heap (see p. 10), but should be killed in a hot one. If your compost tends to grow weeds, dig it in rather than spreading it on the soil surface.

Hedge clippings and prunings

Chop or shred tough prunings and clippings from evergreen hedges before adding to a mixed compost heap. Compost large quantities separately; even unshredded they will rot eventually. Mix with grass or other activating material; water well. Tread down the heap, then cover. In anything from a few months to years you will have a coarse mulch which can be used on perennial beds.

Animal manures

Strawy horse and cattle manure composts well. Keep a sack on hand to bulk up other ingredients. Manure mixed with wood shavings should be left to rot until the shavings are no longer visible. If it is dry, water well and mix with grass mowings, poultry manure or other activating material. When rotted use as a surface mulch. Wood shavings incorporated into the soil can lock up soil nitrogen, making it unavailable to plants for a year or more.

Paper products

Newspaper can be added to a compost heap, but in any quantity it should go for recycling into more paper (as should good quality flat paper). Cardboard cereal or egg boxes, and toilet roll tubes are useful compost ingredients. Always scrunch up flat paper and card to help keep air in the compost heap.

Kitchen and household waste

Fruit and vegetable peelings and uncooked food are good compost ingredients. Meat, fish, dairy products and cooked food are more likely to attract rats and flies, and so are best avoided. Cat and dog faeces can contain dangerous pathogens and should not be composted at home. Likewise, coal and coke ash contains many impurities and should not be composted.

Choosing a compost bin

Compost can be made in a simple heap on the ground; covered with plastic to keep it moist. Most people use some form of compost container. This looks neater and easier to manage. Compost bins can be home-made or purchased; low cost or expensive; tasteful or tatty - the choice is yours.

What is it made of?
A compost box should keep rain out, moisture and heat in. You will find ideas for making your own bin on the following pages. Wood, preferably recycled, is the most commonly used material. If you must use a preservative, choose a plant-friendly one. Most bins on sale are plastic (often recycled); wooden and metal bins can also be purchased.

How strong is it?
A sturdy container is essential. It will have to withstand battering with forks and spades as you fill and empty it.

Gaps in the sides?
Opinions differ widely on this question, but most compost bins have solid sides these days. Gaps in the sides of a container, said to be essential to allow air in, in fact let the compost dry out at the edges. Enough air is usually mixed into the heap as it is made or when it is turned.

Weight
If you will have to lift the container off the compost, or move it round the garden, make sure it is not too heavy. On the other hand, if it is too flimsy it may blow over, and will not last long.

Size
A volume of around 700litres [0.7 cu m/l cubic yard] is usually suggested as a minimum for hot composting. Most bins on the market are smaller than this - around 300 litres - which is good for cool composting. Choose the largest container you think you can fill. Check the height - some models are too tall for many people to use comfortably.

They can be made of wood, plastic or other materials, preferably recycled. There are various points, such as size and design, to consider when buying or making a compost container. Above all it should suit you and your garden. Only then will it be guaranteed a permanent place.

Lid and base
A rainproof lid is useful. It should also be easy to remove and replace, and should not easily blow away. Compost boxes are usually open at the bottom to allow the compost, which may produce quite a lot of liquid, to drain.

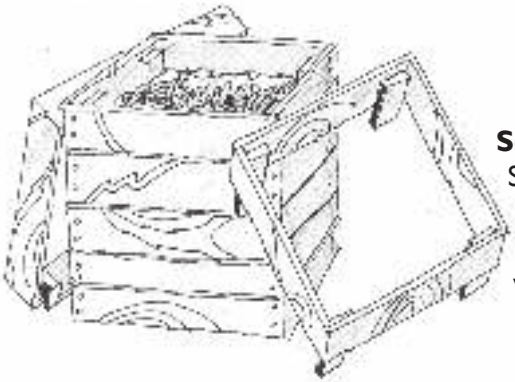
Access
The top opening should be large enough to take a fork full of green waste comfortably. For turning, or extracting finished compost, a removable front is ideal; alternatively simply lift the container off.

Where to put it
If possible, place your compost bin straight on the ground, rather than on concrete or other hard surface. This allows for drainage and lets worms move in easily. Don't hide it in an inaccessible spot down at the bottom of the garden if you intend to use it! It should have space around it for storing and mixing ingredients, and for turning the compost. You may choose to have a permanent site, or to move the bin(s) around the garden. The ground where a compost heap has been will be very rich.

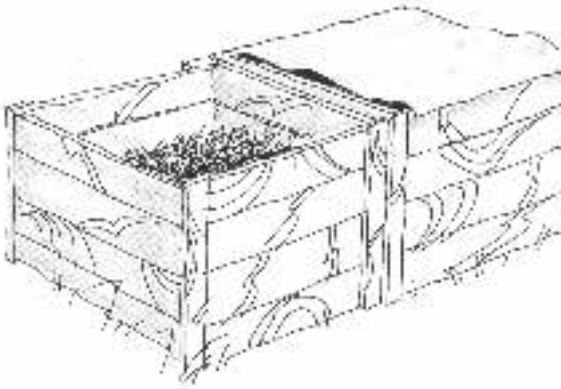
Compost bins

Wire mesh with cardboard
Cheap and easy to make. Drive four posts into the ground, then staple wire mesh to them. Make it easy to open one side for access. Line with cardboard cartons, and top with a plastic sack.

Old dustbin
Cut the bottom out of a large, plastic dustbin; turn it upside down and replace the lid.



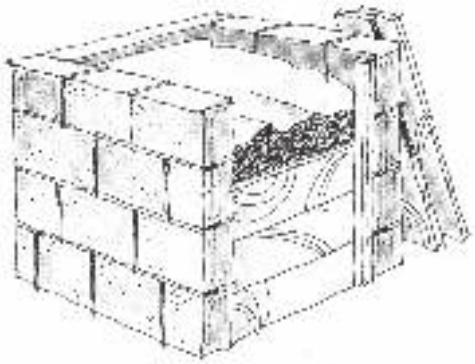
Sectional wooden bin
Sections are stacked up, or removed as required. Individual sections can be made out of different widths of wood. Easily moved.



Double New Zealand box
Two strong, static wooden boxes with removeable slatted front. The second bin can be smaller, to take the reduced volume of material that is turned out of the first bin.

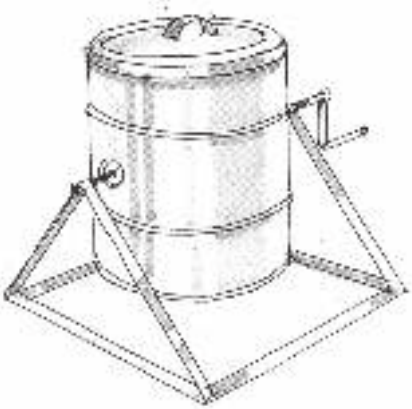
Breeze blocks with wooden slatted front

A sturdy bin can be built out of breeze blocks. A wooden front that can be removed makes for easy access.



Purchased bins

A good selection of bins is available these days. Your local council may sell them at a reduced price to encourage home composting. A good selection is available, mail order, from The Organic Gardening Catalogue.



Compost tumbler

A compost tumbler is designed to be turned every day. This regular mixing and aerating can make compost in three to four weeks.

To obtain a compost bin from your local council please see www.recyclenow.org.uk

Making compost

You can make compost simply by adding compostable items to a compost heap when you feel like it. It may take up to a year to produce useable compost but it doesn't require much attention and you don't need to turn the material.

Cool heap route

Cool Step 1
Collect together a batch of compost materials. Try to get enough to make a layer of at least 30cm or more. Weed the garden, mow the lawn, empty the kitchen bucket! Aim for a mix of 'green' ingredients like kitchen waste and 'brown' items such as cardboard, egg boxes or woodier garden waste too. This helps to give the heap some structure and maintains air within it, reducing the need for turning the material. Go to Step 2, or call by Hot Step 2 if you have time.

Cool Step 2
Start filling the bin. Spread the ingredients out to the edges and firm down gently. Alternate 'green' and 'brown' items, or mix them together first. Unless ingredients are already wet, water well every 30-60cm.

Cool Step 3
Continue to fill the container as and when suitable compost ingredients are available. Items can be added individually, but a bigger batch is preferable; for example, a batch of vegetable peelings from a kitchen caddy. Try to spread the ingredients out to the edges. Go to Cool Step 4, or take a detour via Hot Step 4 on the way if you feel like turning it...

Cool Step 4
When the container is full - which it may never be as the contents will sink as it composts - or when you decide to - stop adding any more. Then either just leave it to finish composting or go to Step 5

Cool Step 5
Remove the container, or everything from the container. If the lower layers have composted, use this on the garden. Mix everything else together well; add water if it is dry, or dry material in the sun for a while if it is soggy. Replace in the bin and leave to mature (see p 14).

If you are in a hurry for compost or require an end product with few or no weed seeds, then taking the 'HOT HEAP' route may be better for you. It requires more attention and physical effort than the 'COOL HEAP' route, but the results may make it worthwhile.

Hot heap route

Hot Step 1
Gather enough material to fill your compost container at one go. Bring in manure, scraps from the market, neighbours' weeds and so on to make up the bulk. Make sure you have a mixture of soft and rough materials.

Hot Step 2
Chop up tough items using shears, a sharp spade (lay items out on soil or grass to avoid jarring) or a shredder.

Hot Step 3
Mix ingredients together as much as possible before adding to the container. In particular, mix items, such as grass mowings that tend to settle and exclude air, with more open items that tend to dry out. Fill the container as above, watering as you go.

Hot Step 4
Within a few days, the heap is likely to get hot to the touch. When it begins to cool down, or a week or two later, turn the heap. Remove everything from the container and mix it all up, trying to get the outside to the inside. Add water if it is dry or dry material if it is soggy. Replace in the bin.

Hot Step 5
The heap may well heat up again; the new supply of air you have mixed in allows the fast acting aerobic microbes, ie those that need oxygen, to continue with their work. Step 4 can be repeated several more times if you have the energy, but the heating will be less and less. When it no longer heats up again, leave it undisturbed to finish composting.

Some questions answered

What is garden compost?
Compost looks like rich, dark soil. It is made of recycled kitchen and garden wastes. It is used to feed and condition the soil and in making potting mixes.

Is it the same as multipurpose compost?
No. Sowing, potting and multipurpose composts, that you buy in garden centres, are mixtures of various materials such as sand, coir and fertilisers. These are used for raising seedlings and growing plants in pots.

Do I have to be an expert to make compost?
No. Composting just happens, it is nature's way of keeping our planet clean. Just follow the few basic rules in this leaflet.

Is it a lot of work?
Making compost can be as easy as putting a few weeds and vegetable scraps onto a compost heap, or you can put a lot of effort into it. It's up to you.

How long does it take?
Compost can be made in six to eight weeks, or it can take a year or more. In general, the more effort you put in, the quicker you will get compost.

Will a compost heap breed pests?
Compost is made by a host of small and microscopic creatures. These are not pests and will not overrun your garden.

Do I need any special equipment?
A garden fork is the only essential item. A compost bin keeps everything neater but it is not essential.

Does a compost heap smell?
A working compost heap should not have an unpleasant smell.

Will a compost heap attract rats?
Rats may visit a compost heap if they are already present in the area. Don't site your compost heap too near water, visit it regularly, and avoid adding meat or cooked food.

Is compost safe to handle?
Yes, if the usual garden hygiene rules are followed. Keep cuts covered, wash hands before eating and keep your anti-tetanus protection up-to-date.

Will it attract flies?
As long as meat scraps are not put on the compost heap, it should not attract houseflies or bluebottles. Tiny fruit flies may be present in the summer if a lot of fruit and vegetable peelings are added, but these flies are more of a nuisance than a problem. They can be deterred by covering fresh materials with a thin layer of soil, newspaper or finished compost.

Does a compost heap have to get hot?
No. A medium sized compost heap can heat up to 70°C in a few days. The heat helps to make quicker compost, and to kill weeds and diseases. But your compost may never heat up, especially if it is made over a long period. The compost can be just as good, but it will take longer to be ready for use.

Does compost spread weeds and diseases?
Weed seeds, roots, and plant diseases are more likely to be destroyed in a compost heap than in your garden soil. Some weed seeds and roots will survive in a cool compost heap, and some diseased plant material is best avoided altogether in a compost heap (see page 4).

Do I need a shredder to make compost?
No. A shredder can be very useful where there is a lot of woody material to be composted, but it is not essential.

Using compost in your garden

When the compost is dark brown and has an earthy smell the composting process is complete. It is then best left for a month or two to "mature" before it is used.

How much to use
As a rough guide, use one wheelbarrow full of compost per five sq m (six sq yd) of ground. This should be ample for one season, or for a crop that likes a rich soil.

When and how
Compost should be applied in the spring and summer. It is either dug into the top 15-20 cms (6-8in) of soil (no deeper) or applied as a surface mulch. It can be spread over the soil, around established plants or spread out well over a lawn. Compost can be used on all soils where feeding and conditioning is required.

Herbs
Use compost where succulent herbs such as chives, parsley and mint, which need a good supply of food and water, are growing. Do not use on herbs that prefer a poor, dry soil.

Shrubs
A compost mulch applied every three years should be ample for most shrubs. Those, such as roses, that are pruned hard every year, may need more regular feeding.

Herbaceous perennials
Mulch with compost every three years if required.

Don't worry if the compost is not fine and crumbly. It may be lumpy, sticky or stringy, with twigs and eggshells still evident - but it will be quite usable. If you want a finer compost, let it dry then put it through a coarse sieve.

Annual flowers
Do not apply compost if the soil is already in reasonable condition. Feeding tends to encourage leafy growth at the expense of flowers.

Vegetables
The lion's share of any compost should go to beds growing potatoes, tomatoes, brassicas and other leafy crops, leeks, pumpkins and courgettes. If a crop rotation is used this means that the whole vegetable plot will have received compost over the course of the rotation.

Fruit
Strawberries: add compost to soil before planting.
Apples, plums, pears, cherries, redcurrants, gooseberries: mulch with compost every four to five years, more frequently if growth is poor.
Blackcurrants, raspberries and hybrid berries: mulch with compost every three years.

Lawns
Top dress with fine compost in spring or summer.

Tubs and planters
Top up with a layer of compost each spring.

Using more compost

Potting composts
Garden compost should be diluted with other ingredients if it is to be used for raising seedlings or potting plants. For example, use two parts (by volume) of compost with one part of loam/good soil and one part leafmould or coir.

Garden compost will vary in its structure and in the plant foods it contains. You may have to experiment with different mixtures before you find one that makes a good growing medium.

Books and contacts
All About Compost, Pauline Pears, Garden Organic / Search Press
The Rodale Book of Composting, Rodale Press
Create Compost, Pauline Pears, Green Essentials - organic guides, Impact Publishing Ltd.

Garden Organic
Tel: (024) 76 303 517
enquiry@gardenorganic.org.uk
www.gardenorganic.org.uk
www.homecomposting.org.uk

Recyclenow
Tel: 0845 331 3131
www.recyclenow.com

Community Composting Network
Tel: (0114) 2580483
info@communitycomposting.org
www.communitycomposting.org

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