

Composting and peat-free gardening



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Compost is made up of decayed plant material and can be used in a variety of ways in gardening and horticulture. This leaflet gives advice on the different types of compost, where and how to use it, and how to make your own. At present, peat is heavily used in domestic and commercial horticulture. However peat comes from a declining resource and its extraction causes damage to rare habitats in the UK and abroad. This leaflet sets out ways to avoid using peat, listing alternatives. Firstly some of the commonly used terms are explained opposite.



Organic garden at Birmingham Botanical Gardens.

Soil improvers are added to the soil to improve texture and structure. Adding garden compost or leaf mould will help enrich your soil.

Mulch is a layer of material placed on top of the soil to keep down weeds, conserve moisture or insulate the soil.

Growing medium is what you grow your plants in. If your existing garden soil is not suitable for your needs, you may want to use specialist products such as potting mixes or seed compost.

Garden compost is made from recycled kitchen and garden waste. It is best used as a soil improver to feed and condition soil. Apply in the spring and summer, either dig into the top 15-20cms of soil or apply as a surface mulch. You can also top up tubs and planters with a layer of compost. Best of all use compost in vegetable beds particularly for potatoes, tomatoes brassicas and other leafy crops. A compost mulch applied every three years is enough for most shrubs and herbaceous perennials but you will not need it for annual flowers. Use as a mulch for fruit crops every three to five years depending on the type of fruit. Use for herbs such as chives, parsley and mint, which need a good supply of food and water. If you want to use garden compost for raising seeds or potting plants you will need to dilute it by adding other ingredients to

make a growing medium (for example two parts compost, one part loam/good soil and one part leaf mould or coir).

Green Waste Compost Lots of councils are now recycling local garden and commercial waste to make peat free compost which they use in local parks and gardens. They often sell it to the public for use in their own gardens and allotments. The Government is trying to reduce waste produce sent to landfill sites and increase the amount of recycling. Green waste compost helps deliver against these Government targets as well as producing a useful by-product. Check what they sell to see what it can best be used for.

Multi-purpose compost is what you commonly see for sale in garden centres. It is often a mixture of materials used for raising seedlings and growing plants in pots (ie as a growing medium). Many of us, often unknowingly, buy peat-based composts. Products are not always clearly labelled for their content. There are many good peat-free products on the market. Always ask if the compost you have picked is peat free and encourage garden centres to label products clearly.

Leaf mould is made up of old rotted leaves and is great as a soil improver, lawn conditioner or mulch.



Round-leaved sundew - a common inhabitant of peat bogs. Peter Roworth/English Nature 22,852.

What is peat?

Peat forms in waterlogged conditions where a lack of oxygen prevents dead plants from decaying fully. Each year new plants such as *sphagnum* mosses, bog cotton and heathers grow and die, and layers of plant material gradually accumulate over hundreds and thousands of years to form peat.

Peat bogs form some of England's most scarce habitat and provide a unique home for a wealth of plants, animals and insects. They also provide an important feeding and stopping-off point for native and migrating birds. Because peat bogs

can be thousands of years old (and pre-date our Stone Age ancestors!) they contain layers of historical data. By examining a section of peat, scientists can tell what our landscape was like, what type of animals colonised the area, and what weather conditions prevailed.

Peat has been very popular in gardening as a growing medium. Some people also use it as a soil improver or mulch but there are much more suitable products for these purposes such as well rotted manure and garden compost as soil improvers and wood chip as a mulch. At present 66% of all peat harvested in the UK is used by domestic

gardeners. Increasingly peat is being imported from other countries such as Ireland and the Baltic. If we continue to destroy these peat habitats we will ruin a vital part of our natural heritage, lose dozens of rare plants, animals and insects and miss out on the chance to look into the past. We don't need to keep destroying our

own and others' wildlife. There are lots of peat-free products on the market and the quality has improved markedly in recent years. Specialist products have been developed for raising seedlings etc. What can you do to protect wildlife sites in England and other countries? Check out the Action Plan below.

Action Plan

Don't buy peat!	This will help prevent destruction of rare bog habitats in England and other countries.
Buy peat-free seed and potting compost	Increasingly quality peat-free compost products are available for specialist purposes. Try them out, or give them another go if you tried a few years ago.
Make leaf mould	This is free and a great way to tidy away those autumn leaves!
Buy green waste compost	Many councils now sell green compost made from locally recycled waste.
Make your own compost	This is fun and a great way to slim you bin! Some councils have a free bin scheme.
Use shredded prunings/woodchip as a mulch	This helps reduce waste and can cut down on transport costs to the local landfill site.
Only buy pot and bedding plants which are grown in peat-free compost	Ask you garden centre to stock more plants grown in peat free medium. Check out www.peateringout.com/plant.html for a list of places already stocking them.
Ask your garden centre to clearly label the peat content of products	Asking retailers to label products properly helps us know what we are buying. Some labels say the peat is from a sustainable source, this still results in destruction of a natural habitat.

Making your own compost

Do I have to be an expert to make my own compost?

No. Composting just happens - it is nature's way of keeping our planet clean. 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. One method is outlined opposite.

What can I compost?

If it can rot, it will compost. Some things, like grass mowings and soft young weeds, rot quickly. They work as 'activators' or 'hotter rotters', getting the composting started, but on their own will decay to a smelly mess. Older and tougher plant material is slower to rot but gives body to the finished compost - and

usually makes up the bulk of a compost heap. Woody items decay very slowly; they are best chopped or shredded first, where appropriate. For best results, use a mixture of types of ingredient. Avoid using meat and fish, newspaper, coal and coke ash, dog or cat litter, disposable nappies or glossy magazines.

When the ingredients you have put in your container have turned into a dark brown, earthy smelling material, the composting process is complete. It is then best left for a month or two to 'mature' before it is used. Don't worry if your compost is not fine and crumbly. Even if it is lumpy, sticky or stringy, with bits of twig and eggshell still obvious, it is quite usable. The method shown opposite will take a year or more. If you are able to put in more effort, you can make it quicker. Check out the internet for more information.

- 1 Collect together a batch of compost materials. Try if possible, to get enough to make a layer of at least 30cm or more in the compost bin. Weed the garden, mow the lawn, empty the kitchen bucket! Aim for a mix of soft and tough items. It may help if you place a few woody plant stems or small twigs on the bottom first, especially if using a plastic bin, as this will improve the air circulation and drainage.
- 2 Start filling the bin. Spread the ingredients out to the edges and firm down gently. Alternate soft and tough items, or mix them together first. Unless items are already wet, water well every 30cm - 60cm.
- 3 Continue to fill the container. Items can be added individually, but a bigger batch is preferable. If most of what you compost is kitchen waste, mix it with egg boxes, kitchen paper, toilet roll middles and similar paper products to create a better balance.
- 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 just leave it to finish composting or go to step 5.
- 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 if it is soggy. Replace in the bin and leave to mature.



Making your own leaf mould

Leaf mould is a humus-rich substance which will add bulk and organic matter to the soil, improving its structure. It also makes a good seed compost and can be mixed in with potting compost. It is slower to make than ordinary garden compost but a good use of all those autumn leaves. Just pile them up in a wire mesh enclosure or in bags with holes punched in the sides. Deciduous leaves are best, but if you want acid

compost for acid loving plants, evergreens can be used. If it is dry when you collect them add a bit of water to get things going. A year on will provide you with well rotted leaves but you can leave them longer. Use on your vegetable patch for winter cover, as a mulch on container plants in the autumn or as a mulch for the fruit garden.

Year-old leaf-mould can be sieved to give a fine compost to add to potting composts.



Making leaf mould.



Compost bins.

Choosing a compost bin

There are lots of different types of compost bin on the market. You do not need a fancy or expensive container. Compost can be made using a simple heap on the ground covered with plastic or old carpet to keep it moist. If you want to make your own bin, an easy option is an old dustbin with the bottom cut out. You can also make a simple bin by driving four posts into the ground and stapling wire around them, leaving one side easy to open for access. Line with cardboard and top with a square of carpet or a plastic sack. Another type of sturdy bin can be made by building three sides from breeze blocks with a wooden removable front. There are a wide range of recycled plastic bins on the market. Choose one which

will suit your garden. Things to bear in mind are: how sturdy is it? It will have to be able to withstand battering with forks and spades as you fill and empty it. The top opening should be large enough to take a fork full of green waste comfortably, so remember to make sure its not too high for you to use. Also check it is not too heavy if you want to be able to lift the container off the compost to get it out to use. A minimum recommended volume is 700 litres (0.7 cubic metres or one cubic yard). Pick one you feel you can fill from your waste. Whatever you choose, make sure you have easy access and space around to use the compost heap. Its best to site it straight on the ground as opposed to a concrete or hard surface, allowing for drainage and worm access.

How to make your own garden compost box

These instructions show how to make a 75cm square, moveable, wooden box, consisting of identical interlocking sections, stacked one on top of the other. These dimensions can be adjusted to suit your requirements and the materials available, which makes it ideal for using reclaimed timber such as floorboards or pallets. We would not recommend a smaller box. As the compost decreases in volume, the top sections can be taken off and used to start building up a new container. Make a few extra sections and you will have a very flexible composting system. Keep the rain out with a wooden lid or square of old carpet or polythene.



Materials and equipment

- 2 of 75cm wooden boards, 7.5cm wide*, minimum 1.5cm thick.
- 2 of 72cm wooden boards, 7.5cm wide*, minimum 1.5cm thick.
- 4 of 5cm x 5cm wooden corner blocks, 5.5cm long*.
- 20 of 3.6cm screws, size number 8.
- 1 screwdriver, 1 drill, and 1 saw.

Total materials for 10 sections: 30m of 7.5cm x 1.5cm timber; 2.2m of 5x5cm timber; 220 of 3.6cm number 8 screws.

* wider or slightly narrower boards may be used, as long as the size of the corner blocks is adjusted to suit. There is no need to keep to the same width for each section if the timber available is variable. Length and thickness should be constant.

Building the box

- 1 Cut two boards, each 75cm long.
- 2 Cut two boards, each 72cm long.
- 3 Cut four lengths of 5.5cm from the 5cm x 5cm timber. These will make the corner blocks.
- 4 Take one of the two shorter boards and place it in position on two of the corner blocks. The ends of the board should be flush with the blocks; the blocks should be offset so that they project 2cm beyond the edge of the board.
- 5 Hold the board in position on the blocks. Drill three holes, 3cm deep at one end of the board, through the board and into the block below. Fasten with three screws.
- 6 Repeat steps four and five at the other end of the board.
- 7 Now repeat steps 4-6 with the second shorter (72cm) board. For the next stage you may need someone to help hold the pieces while you fix them together.
- 8 Stand the two shorter boards (with blocks attached) on their ends, approximately 75cm apart, with the protruding ends of the blocks away from you. Place a 75cm board on top of these vertical boards to form the third side of the section.
- 9 Ensure that the ends of the longer board are flush with the outer edges of the vertical boards. Drill and screw each end of the 75cm board, as in step 5. Use two screws only this time.
- 10 Turn the section over so that the unfinished side is uppermost. Place the second 75cm board across between the shorter boards as before. Position squarely and drill and screw as in step 9.

You have now completed the first section of your compost box. Continue making sections until you have as many as you want.



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