



Advice Sheet

Gardening without peat

Why not use Peat?

Peat is a very versatile growing medium for container-grown plants, due to its capacity to hold good amounts of both air and water. It's naturally low pH and low nutrients suit a wide range of plant species. However there are very good reasons not to use peat in the garden, as this prevents the destruction of one of our most precious natural habitats.

Peat is made up of decaying remains of sphagnum mosses, growing in bogs. Almost all peat is extracted from lowland bogs. These are beautiful and magical places, home to a variety of species, such as the great sundew and many dragonflies, many found nowhere else. They are also a very fragile habitat. Harvesting peat from one part of a bog can cause water to drain away from the surface elsewhere, drying out the sphagnum so the moss dies, and letting scrub species invade.



Sundew, one of the plants only found on peat bogs

Demand for peat has resulted in the destruction, degradation and fragmentation of lowlands peat bogs and their wildlife, archaeological and landscape interests. The UK has lost 94% of its lowland raised peat bogs since the beginning of the 19th century. Much of the mere 6,000 hectares left hangs on tenuously in scattered fragments, severely degraded and still threatened by drainage, colonisation by scrub, forestry plantations, conversion to agriculture, development and peat extraction. The greatest threat is peat extraction for use in horticulture. Current demand is 3.4 million cubic meters per year, and two thirds of this is used by amateur gardeners.

We can help by not using peat in our gardens. We can also put pressure on nurseries and garden centres not to use peat in the growing medium of the plants we buy. Some organisations, such as the National Trust, have made a commitment to phase out the use of peat entirely. They are showing it is possible to grow a wide variety of plants without the use of peat.

A number of garden suppliers now market peat which is not harvested from SSSI's. This is a step forward, but does not solve the problem. Some peat comes from non-listed sites, which are still of wildlife and conservation interests, or degraded sites which could be restored with sympathetic management. Other peat is imported, much of it from Ireland, whose bogs are just as fragile and beautiful as ours, but further from the public gaze.



What are the Alternatives ?

There are now a number of good quality commercially-available composts which do not contain peat. The alternatives are usually based on timber products, coir, or composted materials. Remember, if it doesn't say "Peat Free" on the bag, it almost certainly contains peat!

Wood and timber industry residues. They are low in pH and in nutrients. They have to be "stabilised" by composting or maturing before use. Wood products are usually blended with other materials to improve their low water-holding capacity

Coconut fibre dust (coir). A waste product from the coconut processing industry, buying coir will help the economies of many developing countries (although there are environmental costs to the long distances it has to be transported). Coir has excellent air-holding capacity, but requires more fertilizer and needs more frequent watering as it does not retain water and nutrients well.

Green compost. Produced from garden and landscape waste from civic amenity sites. Micro-organisms break down organic material into "humus", to be used as a soil improver or mixed with wood residues or coir. Green composts should be diluted with low-nutrient material.

There are also several alternatives we can produce in our own gardens.

Leaf mould. An invaluable ingredient in home-made mixtures, mature – two years old – leaf mould can be used neat for seed sowing, or incorporated into mixes to improve structure. It is rich in micro-organisms helpful in suppressing diseases, and low in nutrients. It can contain weeds seeds.



Garden compost. Home-made garden compost is nutrient rich. It is useful for potting-on composts and long-term growing in containers. Timing of nutrient release can be very variable. It can contain weeds seeds.

Worm compost. Worm compost is ideal in mixes needing plenty of nutrients. It also has good water holding capacity, useful in hanging baskets. It can be spread on top of containers and watered in where additional feed is needed.

Manures. Well-rotted strawy farmyard manure provides bulk and nutrients. It is best used in rich mixes for long term use – such as tomatoes or peppers growing in pots.

Organic fertilisers. Bone meal, hoof and horn, seaweed meal and other organic fertilisers can be added to a mix to provide necessary plant nutrients. These are slow release materials so large amounts are not needed.



Using Alternatives to Peat

Often only “general purpose” peat-free composts are easily available. These are very useful, but it is easy to make your own mixes for particular purposes. This can also save you money, as mixes for most purposes can be made from your own garden compost and leaf mould.

Growing Seeds / Seed Sowing

Seed compost should be free draining and low in nutrients. Try using pure coir, mature leaf mould, or a mixture of leaf mould and loam

Potting on and growing cuttings

Use 100% coir to establish cuttings and pricked out seedlings. Feed the plants more frequently than with peat mixes. To boost nutrient and moisture retention add a little sterilised soil, leaf mould or green compost. To improve drainage add some grit or sharp sand.

Containers and hanging baskets

Peat free products may need more frequent watering and feeding than peat. To make your own mixture, blend 50% coir with 50% home compost or leaf mould. Adding some bark-based compost will improve drainage. Add water-holding beads or gels to hanging baskets, which can dry out quickly. For large plants growing long term in tubs and containers, use two parts loam to one part leaf mould. Adding manure gives a much richer mix for greedy fast growing plants.



Grow bags

Make your own mix by blending 30-40% garden compost or leaf mould into a bag of coir or bark/wood based proprietary product. Peat-free grow-bags are also sometimes available.

Soil Improvers

Soil improvers add organic materials to the soil, helping to boost soil biodiversity, add nutrients and improve moisture retention. Although frequently used as a soil conditioner peat is almost completely useless for this as it contains few nutrients. Composted organic products are much better. They last longer and have more nutrients. Use wood wastes, spent mushroom compost, composted farmyard manure or garden compost

Mulches

When used a mulch peat can quickly dry out, disintegrate and blow away. There are many better options. Commercial products based on composted or chipped bark, wood waste or cocoa shell will retain moisture and suppress weeds as well as looking attractive. A mulch of garden compost has the advantage of adding nutrients to the soil as it is incorporated into the soil. Leaf mould can also be used, but if in short supply is better used in compost mixes.

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