

Recycling

SUMMARY

Gardeners have many opportunities to reduce or recycle waste materials from their gardens and homes. The most important recycling activity in gardens is the composting of plant residues. This can be done in even the smallest of gardens where the resulting compost will improve soil fertility and plant growth. Composting and the recycling of other waste materials is actively practised at all Royal Horticultural Society Gardens.



Recycle plant waste by composting

RHS policy statements

- 1 The RHS actively supports initiatives to reduce the volume of garden waste disposed of through landfill, incineration and fly-tipping.
- 2 The RHS encourages the responsible disposal of waste materials by recommending:
 - (i) The composting of waste plant material, including appropriate kitchen waste, to produce organic matter for soil incorporation and ground mulching.
 - (ii) The shredding and chipping of woody plant material for use as a ground mulch and, where appropriate, as a potting compost ingredient.
 - (iii) The re-use or recycling of plastic-based materials, timber, waste paper and cardboard, scrap metal and glass wherever possible.
 - (iv) The careful disposal of items that cannot be reused or recycled, such as unwanted garden chemicals, by consulting the local authority's waste disposal department.
- 3 The RHS endorses local authority initiatives for the collation and composting of waste plant material from gardens, and the provision of subsidised compost bins for community or home composting.
- 4 The RHS promotes the re-use wherever possible of all materials used by exhibitors at its Flower Shows.
- 5 The RHS believes there are environmental and social disadvantages to bonfires. Where appropriate, composting or shredding are preferable alternatives.
- 6 The RHS adopts and demonstrates these policies in the management of its own Gardens and promotes the principles of recycling as a positive contribution to the care of the environment through its advisory services to gardeners.

Recycling

Recycling is one of the core principles of good environmental practice, and there are many opportunities for this in gardening. Incentives for recycling may be financial, as a form of cost reduction, or borne of necessity, or simply motivated by personal conviction. Once tried, recycling gives a sense of personal satisfaction of an increased involvement in the care and stewardship of the planet.

Numerous opportunities exist for gardeners to recycle or re-use both plant and non-plant waste products.

Plant waste

The advantages of home-produced compost made from composted plant waste have long been recognised. This fundamental element of the organic grower's garden is now increasingly recognised and used by the wider gardening community. Well-made compost is invaluable for the build-up and maintenance of soil fertility and for improving the soil's ability to absorb and retain water. It is often more readily and cheaply available than farmyard manure. It provides an ideal method of disposing of plant waste from the garden and kitchen.

Wormeries

Brandling worms will accumulate naturally in a compost heap that is in contact with the soil, and these worms both aid the composting process and increase the quality of the compost. Wormeries are smaller, purpose-built, enclosed containers into which kitchen and plant waste is regularly placed to be digested by brandling worms, introduced in small numbers initially. The unit is a self-contained eco-system, which will quickly build up a larger worm population, able to convert kitchen waste into high quality soil

conditioner, usually with the added bonus of a liquid run-off which is ideal as a concentrated liquid feed for the garden or pot plants. The use of wormeries is now actively promoted by manufacturers of domestic systems, and by some local authorities.

Non-plant waste

There is much scope for the gardener to re-use plastic pots from a range of sources. Yoghurt pots, supermarket ready-prepared meal trays and egg boxes only need the addition of drainage holes to make useful containers for raising seedlings or cuttings. One exception is for seed storage, as seeds stored in airtight plastic pots tend to go mouldy. Care should be taken that empty garden pesticide, herbicide and fertiliser containers are disposed of in an environmentally acceptable manner. Waste material must never be put down the drains. Local authority waste disposal departments increasingly provide information and services for the safe disposal of more difficult products, such as rigid and sheet plastic-based materials, waste engine oil, surplus and time-expired chemical substances, paper, cardboard, glass and scrap metal. By using local authority initiatives, the gardener can help reduce the need for landfill sites or other means of disposal that may threaten the environment. However, the most valuable contribution gardeners can make is to reduce their initial use of such non-biodegradable products and substances, thus eliminating the need for complex recycling and disposal systems.

Bonfires

The potential for composting plant remains largely removes the need for

garden bonfires except in special circumstances, such as destroying serious pest and disease-contaminated plant material. Bonfire smoke is potentially damaging to health, contributes to atmospheric pollution and can cause annoyance to neighbours. Plastic and rubber-based waste materials should never be disposed of on bonfires. Remember that hedgehogs and other wildlife may seek shelter in bonfire heaps. In some areas the lighting of bonfires is controlled or banned by local by-laws. Bonfire ash is a source of potash and can be scattered around plants or added to a compost heap. It is, however, alkaline so avoid using it around ericaceous plants.

Water

Britain's use of water increases annually and in some years the water companies struggle to meet demand during the summer months. Rain water can be collected in barrels or tanks and used for watering plants. Washing water can be reused in the garden but do not use water containing high amounts of detergents as this may harm some plants. There is a separate Guidelines leaflet on "Water supplies".

Use your initiative

Many scrap items from the house or elsewhere can, with a bit of ingenuity, find a use in gardens. Old window frames and scrap wood can be recycled into frames for protecting tender plants. Large plastic containers can be decorated and made into planters or mini-ponds. Old carpets are widely used as a soil cover to suppress weed growth prior to cultivation. Ice cream lolly sticks make good plant labels for use in greenhouses. Clear plastic drink bottles with the bottom cut off and

placed over transplanted seedlings will protect them from slugs and act like a mini-cloche.

Action points for recycling

- **Avoid creating waste materials** by reducing the amount of throw-away material that is acquired. When shopping, choose products without excessive packaging. Re-use plastic carrier bags or use the “bags for life” on offer at most supermarkets.
- **Repair items** that are still serviceable instead of throwing them away.
- **Consider** whether items that no longer serve their original use might be re-used in some other capacity in the house or garden.
- **Slim your bin.** Look at what goes into your dustbin and see how much can be recycled. In most parts of Britain, local authorities or charities maintain collection points for materials such as glass bottles and jars, aluminium and steel cans, aluminium foil, clothes, shoes, some plastic bottles, books, newspapers, magazines, other paper and cardboard. These collection sites are often at garden centres or supermarkets so delivery of the items for recycling can be combined with shopping trips. Contact your local authority for details of recycling facilities in your area.
- **Recycle waste plant material** from your garden and kitchen through a compost heap or wormery. Some local authorities have collection points for green waste and sell the compost that is made from this material.
- **Support recycling initiatives** by purchasing products which contain recycled materials.

Making garden compost

Making compost is a traditional horticultural activity that is a valuable means of recycling waste vegetation. Formerly of more importance than today was the associated practice of creating hot beds from the composting of organic waste, a system employed to encourage early fruit and vegetable production in glasshouses and frames.

In an ideal world, the amount of soft green nitrogen-rich materials added to a heap would occupy between 25-50% of the volume, the remainder being made up of tougher, drier woody materials. Remember to avoid letting one material dominate a heap as it will slow the composting. This is usually only a problem in the summer when grass mowings predominate, or when a large hedge is trimmed. Unfortunately, unless you have sufficient area to stockpile materials awaiting composting, there is no truly satisfactory solution to this problem, other than cutting lawns and hedges more frequently to provide fewer mowings and trimmings at any one time.

1. Two ways of making compost

The aerobic method encourages the natural development of decay organisms by a free flow of air and water within the heap, which is facilitated by regular turning of the compost material. During the process heat is generated which may be sufficient to kill some weed seeds and disease organisms. Compost made by this method is an odourless, dark brown, crumbly material, and it can be available within 3 – 6 months, according to the time of year.

The anaerobic method is achieved without free flow of air and water.

This may simply be by means of an unturned, uncovered heap, or by using proprietary sealed compost-making bins or plastic sacks to contain the waste. The production of good-quality compost by this method is a much slower process than by the aerobic method. The product is less easily managed and weed seeds and diseases are more likely to survive.

2. Building compost bins

Composting is made easier by the provision of well-insulated bins which allow ready access. They must be strong and constructed on three sides from materials with good insulating properties, such as breeze blocks, straw bales or timber. Dimensions should be not less than 1 metre (39in) tall, wide and deep, and the best plan is to construct two or even three compartments of this size, depending on likely input, to allow for turning. The front wall should be constructed of timber boards, which are progressively added as the heap is made and removed for turning the material. A rigid or plastic sheet cover is desirable to prevent saturation by rain and improve insulation.

The bins should be constructed on a level soil-based surface, with a foundation layer of shrubby prunings which will help drainage and aeration.

3. Materials suitable for composting

Most plant remains can be composted, with the exception of diseased plants, thick woody material and rooted or seeding perennial weeds. Grass mowings provide a useful activator but must be added in loose layers, not compacted. Mowings from lawns treated with selective

weedkiller should be composted only after reference to the herbicide manufacturer's recommendations. Woody prunings and thick brassica stalks can be composted after fine chopping or shredding. Soil adhering to roots or turf will contribute usefully as an activator but should be added sparingly so as not to impair aeration.

Kitchen waste, such as vegetable and fruit peelings, tea bags, coffee grounds, egg shells and so on compost well. Do not add meat, fish, fats or cooking oil as these materials can attract vermin and do not rot down well. Shredded newspaper can be composted but this material contains few nutrients and may be slow to rot if added in large quantities.

Fallen leaves can be composted satisfactorily when added to other materials, or they can be made into leafmould in separate heaps enclosed with wire netting.

Avoid materials which will not decompose, such as glass, metal, stones, plastic, glossy paper, thick card and man-made fabrics. Large quantities of sawdust or wood shavings have a compacting effect, and are slow to rot down. Cat or dog excrement should never be added to a compost heap, as there is a potential health risk.

4. Managing the heap

During the summer there is likely to be sufficient leafy material added to the compost heap to contribute a useful quantity of nitrogen. Because in autumn and winter the proportion of woody material will be greater, it is desirable to sprinkle on an activator such as dried blood, fish and bone, poultry manure, sulphate of ammonia, or a proprietary product, at each layer of added material.

The more frequently the heap is turned the better, and the aim should be to rebuild with outer layers put to the centre. This task is made somewhat easier where the turning is from one bin compartment to another.

Other leaflets in the RHS Guidelines series can be read and downloaded from www.rhs.org.uk/publications. They can be obtained by post by sending an A4 SAE to A W Mailing Services Ltd, PO Box 38, Ashford, Kent TN25 6PR (91p postage for the full set).



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