

The Recycle Works No Nonsense Guide to Home Composting



'COMPOSTING - MAKE IT EASY FOR YOURSELF'

Mother Nature - Nobody does it better!

Eventually everything Mother Nature produces returns naturally to earth and is recycled to provide land nourishment for future generations. It has happened for millions of years.

Left alone all organic waste will eventually compost itself. Favourable conditions will shorten the time needed for complete breakdown of materials.

This booklet explains how you can simply and easily create good composting conditions and is laid out in a way that can be used for easy reference. There is a Quick Knowledge section on page 8 with more detailed information given in the inside pages.

The Reward is a plentiful supply of friable, nutritional Garden Compost, delivered free on site to enrich the soil of your garden and provide material that can be used for seasonal planting. It will reduce or replace the need for chemical fertiliser.



One of our triple bin composters

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Making Compost

All compost processing needs a mixture of Essential Ingredients. (Pages 3 & 4)
Organic Materials, Moisture, Air (oxygen)
Naturally created warmth speeds up the process,
Time to mature.

How to Compost

First create a space in which to do your outdoor composting. This should be an open space preferably direct on the ground, otherwise on hard standing, (see page 7: Siting your Compost). Compost can be made in a heap or a suitable container can be used, (see page 7 Equipment). When composting kitchen waste it is essential to use a secure container.

Gather together as much Organic Waste as possible and make a loose pile (see page 3 Organic Materials). These organic materials soon begin to heat up as the composting process starts. The volume then quickly shrinks. At this stage it is important to dig over the compost using a pitchfork, to introduce more Air into the middle of the pile. This should be done a few times at the early stages of composting as natural compacting occurs.

The Heat naturally generated quickly builds up again as microbes resume composting in the improved conditions. The temperature will quickly reach 130-160F in a large well-mixed pile. This will help destroy weeds, seeds and disease and the materials will decompose much faster (pages 3 & 4 Essential Ingredients).

Turning also subjects insect larvae and spores to lethal temperatures inside the pile, which later cools as the microbial activity is succeeded by that of worms and beetles. Add more materials at any time until the pile is as big as the space will allow or the bin is full. Check regularly. Compost should be Moist to give the best results. If it is dry add a bucket of water. If it is too wet mix in some brown or dry materials and cover to prevent more rain getting in. A well-balanced mixture of green and brown materials produces good compost. Compost will mature at less than half the original volume.

Once the composter is full and the contents have stopped shrinking quickly, the compost is left to mature. At this point you can start a new compost pile. In time the contents will become unrecognisable and the mixture is then ready for use (see page 6 Using Compost). A big well-managed mixed pile can be ready for use in a few months. An unattended pile may take about a year. Large quantities of specific garden waste are discussed on page 5. It is traditional to use 3 separate units, one mature and being used on the garden, another maturing and one currently being filled.

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Essential Ingredients

Organic Materials

What will you find to put into your compost bin? The possibilities are extensive.

1. From the garden

Green materials:

Leaves, flowers, grass cuttings, weeds, moss, non-woody plant material, wood ash.

Brown materials:

Twigs, bark, tough plant stems, dry roots, and shredded hedge trimmings. You may have lots of some, none of others. A mixture will produce quality garden compost.

2. From the kitchen

Any fruit or vegetable waste, cooked and uncooked.

Dead flowers, eggshells, coffee grounds, tea bags and small amounts of natural fabrics, paper, wood ash. (See below for materials to avoid)

3. Other

Vegetarian animal litter from horses, small pets and poultry, not cat or dog, can be composted. Small amounts of bedding such as straw, hay and wood chippings. Hair, feathers and urine. Seaweed.

How the seasons affect available garden materials.

- Spring:** Dead die back, prunings, twigs, leaves and vegetable patch gleanings.
Summer: Herbaceous dieback, grass, dead flower heads, weeds and shredded hedge trimmings.
Autumn: Shredded hedge clippings, herbaceous dieback, prunings dead leaves and grass, vegetable garden waste, dead annuals.
Winter: Small shredded branches, leaves, twigs & dead plants, vegetable garden waste.

Unsuitable Organic Materials

Grease, fats and cooking oil. Raw and cooked meats. Nappies, coal ash, soot, glass, plastic, metal, man made fabrics, large amounts of paper. Materials that have been treated with herbicide or pesticide. Plants infested with persistent disease should be burnt.

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Moisture

Moisture helps decomposition. Dry materials take far longer to compost. Conversely the natural bacteria and worms cannot work well in sloppy conditions and the compost will rot rather than decompose. It may then develop odours. The ideal conditions are moist. If you squeeze a handful, water should not run off. If it does, add dry materials to correct the balance. Conversely if the compost is dry, add a bucket of water. A close fitting lid or cover on top of the compost will help to maintain favourable conditions - prevent drying out or too much rain getting in. A cover will also conserve the heat; further, if you are adding kitchen waste a lid is essential to keep out vermin.

Air

Air is essential for the microbes and bacteria, which develop naturally. They do the initial breaking down of the material before worms take over the heavy work. Air tends to be compressed out during the initial stages when the compost reduces quite dramatically in volume. Side openings in the compost bin only tend to dry out the materials nearby and slow up composting in this area of the bin. They do not aerate the whole of the contents. Aeration is best done by turning the compost in the early stages and incorporating the air evenly and thoroughly. This helps to give an evenly balanced result. Use a pitchfork to make the job easy.

Warmth

The composting process begins with the action of naturally occurring microbes. When they are active warmth builds up very quickly. The volume of materials drops quite dramatically. At this stage, the compost begins to compact and a shortage of adequate air can slow down the composting process. It is advised to turn over the compost at this stage to reintroduce air. The compost will quickly reheat as before. Turning can be done a few times with benefit in the early stages of decomposition. A pitchfork makes the work easy. If the compost reaches and maintains a temperature of 150 Fahrenheit weeds and weed seeds will be destroyed. Heat occurs naturally only when soft 'green' materials are present in the compost. One quarter to one half green material is sufficient to build up heat.

Particle Size

The smaller the size of the pieces of material waste the faster they will compost. This goes especially for woody trimmings. The regular use of a shredder will speed up the process of decomposition of dry materials considerably. However, when using a shredder it should not be used as a pulveriser for soft waste. (See page 8 equipment and Page 5 Woody Trimmings)

Dealing with large quantities

Leaf Composting

If you have a substantial quantity of leaves they are best composted separately. Leaves produce leaf mould very satisfactorily when bundled together in an open bin. Because they are tough and tend to be dry, they take longer to compost. They benefit from a heavy shower or additional water and do not need to be covered or enclosed. Composting leaves can be turned over with a pitchfork to mix and encourage even decomposition. Leaf mould adds good texture and nutrients to the soil enabling it to retain moisture better. Leaves can take about a year to decompose, so having a separate container for them makes sense for it can be reused when last year's leaf mould has been used for digging into the soil in Autumn.

Hint

Leaves can be left whole or shredded by spreading out on the grass and running the mower over them, allowing the pieces to collect in the bag. Shredding will help them to decompose more quickly. The wind will also do much of the collection work by running dry leaves into piles for you.

Grass

Because grass has no structure it doesn't decompose well on its own and goes slimy, but when mixed with other compostable materials it will enrich the mixture.

Short Cuts

Short grass cuttings can be left on the lawn to decompose and return the nutrient back to the garden. These will not show on the lawn if the cuttings are short. Work in carrying the grass cuttings to a suitable composting place will be eliminated and time saved too. Grass that has been chemically treated is best left on site to avoid contamination in the compost.

Woody Trimmings and Tough Vegetable Garden Waste

By their very nature these materials are tough and compost more slowly. If you are to add them to your compost bin they will compost faster, and at a closer rate to the rest of the materials, if they are shredded into small pieces (see page 8 Equipment).

Hint

When shredded and well rotted, woody branches can be used directly as a top mulch or dug into the top soil to improve the structure of the soil. One word of warning when using this type of material alone on, or in the soil, it should be well rotted first. If this is not done the fresh wood of the trimmings will temporarily rob the soil of nutrient which it then uses for decomposing, and only when fully decomposed releases its own nutrients to the soil.

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Using Compost

When the compost has changed to a soil like substance and the ingredients are unrecognisable it is ready to use. At this stage you have gained credits:

**Free Mulch • Free Top Dressing • Free Potting Medium • Free Soil Conditioner
• Free Delivery on site • Free Leaf Mould**

Mulching

Apply thickly to the surface of the beds and around the bases of trees, fruit, vegetables and shrubs. This will help the soil to retain moisture, preventing drying out. It is important to remember that whilst mulching a moist surface will help to keep the surface soil moist, mulching a dry surface will help to keep the soil surface dry. Mulching should be done when the soil moisture conditions are good. It may be necessary to water before mulching. Coarse compost, such as well-rotted woody material, is very suitable for mulching.

Top Dressing

A rich well rotted compost or leaf mould will release nutrients to the soil below. Apply thinly or loosely dig into the topsoil. Fine or sieved compost can be used on lawns as a top dressing.

Soil preparation and conditioner

Compost can be dug into the surface soil to improve quality and texture before planting. Dig compost or leaf mould into the trench when preparing vegetable beds. When planting or transplanting shrubs and trees put a layer of compost into the hole or trench before putting in the plant. This will improve soil texture and give the plant a really good start by encouraging deep roots. It will also give the plant easy access to the nutrients in the compost promoting strong and sturdy growth. Heavy soil will be made lighter and light soil will retain moisture better.

Potting Compost

Compost can be sieved and mixed 15% with 85% loam to make potting compost. If it originally contained a good balance of green waste the plants should not need extra feeding.

The benefits of modular composting

A very efficient and durable structure for fast composting is a three-chambered bin. It holds a considerable amount of compost. It works on an assembly line idea, having three batches of compost in varying stages of decomposition thus giving easy access to a regular supply of uniform mature compost in rotation. It benefits from the economy of add-on modules at a much-reduced price from the original compost bin.

Bin 1: For collecting the fresh organic material. This bin will fill to the top as more materials are added.

Bin 2: For organic material, which is in the process of decomposition. The contents of this bin will be shrinking as the contents mature.

Bin 3: Decomposed compost, ready and currently being used for the garden. The contents of this bin will have shrunk to less than half the original size and when empty this becomes the container for fresh organic materials, thus restarting the rotation.

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Siting the Compost Bin

Place the compost bin near to the source of materials to avoid unnecessary extra work. Similarly a container can be sited close to where the compost is to be used.

Good drainage is important and a bin placed directly onto the soil will have the benefit of soil microorganisms for decomposition. Avoid a situation that will generate adverse conditions, such as too much sun or excess wind. If possible find a warm spot with good air circulation.

Equipment

When composting household waste it is important to use a compost bin to prevent unwanted scavengers. The choices are vast and your first decision may be material, most commonly wood or plastic.

A compost bin should be easy to use.	Look for good instruction and educational booklet.
Easy to erect.	Assembly pieces should slot into place. Attractive to the eye. It will get a lot of wear in time.
Easy to fill.	Large top opening, and removable lid for access. Low top opening, kind on the back. Cover or lid provided.
Easy to empty.	Removable sides, or can be dismantled then reassembled. It is important to have good access to the contents in the bottom of the bin otherwise you will not be able to use the majority of the best compost at the bottom of the pile.
Durable.	Treated with preservative. Robust.
Size.	Minimum 150-250 litres. Suitable for a small family garden. Can size be increased by adding a cheaper module?
Environmentally friendly.	Wood is a natural material which will eventually return to the earth. All wood used should be recycled or come from certificated managed forests. Has it been treated with a water-based preservative and not strong chemicals? Plastic should be constructed of recycled plastic. If the walls are too thin it will not be well insulated. The contents of a plastic bin can sweat and should be checked regularly.
Other useful items:	
Compost fork.	Essential
Shredder.	Extremely useful for utilising hedge trimmings and woody stems. A word of warning, do not expect a shredder to cope with soft garden waste - a shredder should not be used like a kitchen food grinder.
Compost thermometer.	Non essential.
Compost Accelerator.	Not necessary, but useful if not many greens are available for composting. Can be home-grown.
Kitchen Waste Container.	Dedicated to collection of organic waste.
Old piece of Carpet:	To cover wide mouth bins, e.g. wooden. (These can usually be obtained free from carpet dealer disposing of outmoded carpet samples, thus contributing to the recycling system).

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Quick Knowledge.

- Organic material will decompose by itself if left alone.
- Time taken for materials to decompose depends upon the conditions, which prevail during the composting process.
- Managing organic waste releases the garden space sooner as the resulting valuable compost is available more quickly.
- If you have substantial quantities of a particular material, e.g. leaves, grass or vegetable waste they compost better when added to the pile in layers.
- Very dry organic waste takes much longer to decompose. Moist conditions are ideal. Squeeze a handful of compost, it should be damp but not drip. There should be enough texture to allow for the presence of air.
- Very wet or sloppy compost is not good. Worms cannot work in the slimy conditions. The mixture could begin to stagnate and smell, it will not be much use. It can be improved by mixing with plenty of shredded brown (woody) materials. This is unnecessary hard work. It is best to inspect the compost regularly to avoid particularly wet or dry conditions.
- Activity from the natural microbes can quickly build up substantial heat, which later reduces as the initial processes recede.
- Turning compost at the early stages when it noticeably compacts in volume enables the reintroduction of air, which the microbes need for their digestive contribution to the process. Naturally generated heat builds up again very quickly
- The heat which builds up during the initial stages can destroy weed seeds and diseases. Some will decay naturally.
- Regular turning with a pitchfork during the early stages not only hastens the process but also gives a more uniform end product
- A small heap may not heat up at all. The contents will make quality compost more slowly, depending on the mixture.
- Kitchen waste should be buried to 6" to avoid attracting vermin. It is important to use a covered container to deter scavengers particularly rats and squirrels. In their endeavours to get at the contents they can leave an awful mess which in turn attracts more vermin. Always keep kitchen waste closely covered, if smells develop add brown 'woody' materials to balance the mixture. Mix well.

Avoid organic materials that have been exposed to chemicals as these will not be destroyed during decomposition. They may be transmitted to the microbes involved in the composting process. Insecticides can kill the organisms too and may remain in the resulting compost.

- Slow decomposition may be due to the pile being a) too small b) too wet c) too dry d) no air e) poor mixture of green and brown material.
- Aerobic composting is that which occurs in the presence of air(oxygen) and natural organisms.
- The ground where a compost bin has rested directly on the soil will be rich in nutrients which have seeped into the soil below
- Soil with a mixture of compost is healthy and has better resistance to pests and diseases.

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Our Products.

The Recycle Works manufactures all its own compost bins from wood from sustainable sources. The bins are all pre-treated with a non-toxic preservative.

You have the option of single, twin or triple composters with the option for buying additional modules. Replacement parts and our non-toxic preservative are also available to maintain your composters.

We also supply other useful accessories such as compost pitchforks and award winning Scheppach shredders. Information on all these products are on our website.

Recommended Reading

If you want to learn more about composting there are many books that go into the subject in more detail.

The Recycle Works stocks a number of very good composting books, be it for the serious gardener, the novice or for children. These can be purchased on-line from our secure website www.recycleworks.co.uk or by phoning the office on 01254 820088.

These include:

All about compost by Pauline Pears. Searchpress

The Rodale book of composting. A definitive guide to making and using compost

Composting with worms by George Pilkington

The Pee Wee adventure books by Lorraine Coulston – wonderful books for teaching children about worms & composting.

Garden centres and bookshops have choices. Helpful information is available on the Internet too! The Henry Doubleday Research Association at Ryton Organic Gardens are the experts. There they carry out scientific research into organic methods and have a large demonstration of compost bins. They have a shop where they sell books on organic gardening and fresh organic produce. Advice on composting and organic gardening is available.

The Recycle Works Worm Forum

If you are new to composting, we have a very informative forum on our website www.recycleworks.co.uk/forum which you can either use as a source for useful tips on composting or post a question, which the members will respond to.

The forum covers a wide range of topics including wormeries, composting, organic gardening and much more.

Should you have any questions about composting, please call, e-mail or write to us at:

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