

14 Recycling Organic Materials

Organic materials – weeds, grass mowings, plant debris and other items of living origin – can be recycled in various ways. Traditional composting is perhaps the most obvious and well known of these, but there are other techniques that are also worth considering. Which is the most appropriate will depend on the materials to be recycled, and the space, equipment and labour available.

It's all quite natural

It is useful to remember that the decomposition and recycling of organic materials is an entirely natural process. Left to itself, nature just gets on with it – otherwise the countryside would be littered with dead creatures! When plants and animals die, their remains are broken down by naturally occurring organisms, most of which are microscopic. In this way the nutrients that went to make up the original plant or animal are made available to future generations – and so life continues.

When we make compost all we are doing is harnessing these natural processes – speeding them up, making them happen in a tidier, more orderly fashion, and producing more usable end products. As long as we supply the recycling microbes with suitable food, air and water, they will do the rest.

Methods of recycling organic materials

1 Traditional composting

Used to recycle mixed garden and other green waste. Can also include some kitchen waste. Works best with large quantities of mixed materials.

Make in: Free standing windrows, or compost bins

End products: Garden compost – used to feed and condition all soils. Depending on the grade produced, it can be used as a mulch, and also in seed and potting composts. A nutrient-rich peat alternative.

Timescale: From 6 weeks to 1 – 2 years.

Basic equipment: compost bins; hand tools; water. *Could also use:* tractor with front end loader; shredder; sieve or screen.

2 Leafmould heaps

Used to recycle autumn leaves. Leaves can be included in a traditional compost heap, but where large quantities are involved, they are best dealt with separately, to produce leafmould.

Make in: Wire mesh containers; black plastic sacks.

End product: Leafmould – an excellent soil conditioner and growing medium ingredient. A low nutrient peat alternative.

Timescale: 1 – 2 years, depending on species of leaves.

Basic equipment: wire mesh cages, or plastic sacks; water. *Could also use:* shredder.

3 Woody materials

A Community Composting project is likely to attract a fair amount of tough and woody material – conifer hedge clippings, branches. Raspberry canes and the like – as gardeners find this the most difficult to deal with themselves. These woody items will eventually break down, but the process is very slow. They can be made into separate long term heaps, or be broken up by shredding, crushing or chipping.

Any items that could be used for pea sticks, bean poles, or firewood, for example, should be put aside rather than composted

3.1 Woody heaps

Used to recycle tougher prunings and other woody material, without using a shredder. The only requirement is sufficient space for long term heaps.

Make in: Free standing heaps / windrows.

End product: A mixture of rough compost plus twiggy material for further recycling.

Timescale: Several years.

Equipment: None.

3.2 Shredded woody material

Woody materials can be chopped up in a shredder or chipper. This makes them much quicker to decay.

End product: shreds (small pieces of woody material). These shreds can be added to a traditional compost heap, composted on their own for 6 – 12 months, or used fresh to mulch paths or other surfaces where plants will not be grown.

4 Worm composting

Used to recycle kitchen and food waste. Worm composting works best with a regular, relatively small, supply of ingredients, which is why it is so good for processing kitchen waste.

Make in: A plastic dustbin, wooden box or proprietary worm bin. This can be kept anywhere relatively warm- in the garden, garage or shed. It does not need to be on bare soil.

End product: Worm compost, which is in fact worm manure. A rich fine material which is good for top dressing tubs and planters, but can also be used as traditional compost.

Timescale: worm compost is an ongoing process. How often you empty the container depends on the number of worms, and how often they are fed.

Equipment: Container, hand tools.

5 Manure stacks

Used to recycle larger quantities of manure. Strawy animal manures make a good compost ingredient, but they will also compost on their own. This can be useful where larger quantities are concerned.

Make in: Free standing, covered heap.

End product: Well rotted manure. An excellent soil feed and conditioner.

Timescale: 3 – 6 months.

Basic equipment: hand tools, water, cover.

Recycling at home

Ideally, all organic wastes would be recycled where they were produced. Realistically we are unlikely to be able to encourage everyone to make compost but it could be part of a Community Composting project's remit to encourage as much home recycling as possible.

Leafmould is an easy place to start, as it requires little effort on the part of the householder. Another area that could be tackled is that of grass mowings. Contrary to popular opinion, grass mowings can be left on the lawn without detriment. They are best removed at the beginning and end of the season when decomposition is slow; at other times the mowings will quickly disappear into the lawn, where they will feed the grass, and help to keep it green in the summer. Spare mowings can always be mixed into the leafmould heap – a great combination.

A simple leaflet on home composting, plus some practical training workshops could also be of value. Contact your local council to see if they have any initiatives – such as subsidising compost bins – planned.

Material	*Rotting rating	Notes
Ash, wood	-	Provides potassium and lime
Ash, coal, coke	x	DO NOT COMPOST
Brassica plants - old cabbage, broccoli etc	4	Smash with hammer, or chop with spade to break up first. <i>See also Diseased plants</i>
Cardboard	-	Tear up before use. Glue contains boron, which can be toxic to plants in excess.
Cat litter	x	DO NOT COMPOST <i>Cat faeces may contain toxiplasma – a disease that can be passed on to human beings handling the compost.</i>
Comfrey leaves	1	High in potassium
Diseased plant material	various	A reliably hot heap should deal with most diseases. Remove any obviously infected material, especially persistent diseases such as clubroot and white rot, at the quality control stage.
Dog faeces	x	DO NOT COMPOST <i>Dog faeces may contain eggs of toxocara, a parasitic worm that can cause blindness in humans.</i>
Grass cuttings	1 - 2	Tend to exclude air in any quantity – mix well with more open materials. May also be mixed into a leafmould heap. Try to encourage people to leave the mowings on the lawn!
Hay	3	New hay tends to be very dry; old is better. Best chopped first.
Kitchen scraps – fruit, veg, tea leaves, coffee grounds etc	2 - 3	Good ingredient for a worm composting system; can also be composted. Tend to be wet.
Kitchen scraps - cooked food, meat, fish		Best avoided, unless a specific process has been set up to deal with them. Can cause smells and attract vermin. Do not store.
Leaves, autumn	4 - 5	Can be useful in a mixed heap to balance out very sappy ingredients. Treat separately to make leafmould. Tend to be very dry. Take leaves from parks, gardens, cemeteries and quiet roads to avoid risk of heavy metal contamination.
Manures, horse or cattle, with straw bedding	2 - 3	Can be composted on its own in a covered heap (to avoid leaching out of nitrogen and potassium). When fresh makes a good activator.
Manures, poultry, pigeon. +/- straw	1	Very rich in nitrogen, so go well with slower materials. Can be stored if kept dry.
Manures, vegetarian pet, with or without bedding	3	Rabbit, gerbil, hamster etc. Tends to be very dry.
Nappies	x	DO NOT COMPOST
Newspaper	-	Best taken for paper recycling. Use in limited quantities, torn up first. Avoid glossy magazines – the coloured inks may contain heavy metals.
Waste paper – kitchen towels, paper bags, egg boxes etc	-	Mix well with other items.
Potato plant tops	2	
Soft green prunings, young hedge clippings	3	Should not need shredding.
Prunings, woody	4 - 5	Shred first, or make into separate slow heaps. Rose thorns tend to survive shredding and composting, so may be best left out. Yew clippings can be sold! Contact CCN for details.
Rhubarb leaves	2 - 3	Although these are poisonous to eat, they are quite safe to compost.
Sawdust, wood shavings	5	Use in relatively small quantities in nitrogen rich heaps.
Straw	3 - 4	Spoiled or old straw is best. Fresh straw is very dry.
Weeds, annual	1 - 2	A hot compost heap is required to kill weed seeds.
Weeds, perennial	2 - 3	Perennial weed roots, corms etc will be killed in a reliably hot heap. Alternatively, compost them separately in a slow heap for several years.

***Rotting rating** – an indication of how quickly a material will decompose. [1 = quickest; 5 = slowest] This depends on the proportion of carbon to nitrogen the item contains (C : N ratio). The older the plant and the tougher the material, the higher the C : N ratio, and the slower the decomposition.

To make compost with a good structure, in a reasonable length of time, use a mixture of types.

- 1.** Will decompose quickly. These materials, high in nitrogen, are natural compost activators. Because they rot so quickly, they should not be stored for any length of time before composting – otherwise they are likely to smell and attract flies.
- 2.** Good balanced materials. Should not need additional activators.
- 3,4.** Mix with increasing quantities of materials marked **1** or **2**.
Use in relatively small quantities

Other relevant sections

- Making Compost 1
- Shredding and Shredders
- Working without a Shredder
- Recycling Autumn Leaves

Further Reading

Worm Composting, HDRA