

Written by Tessa Allen, professional lecturer & gardener.

Composting

Aim of composting is to use fresh organic matter to produce humified organic matter to add to the soil.

Composting is an environmentally friendly means of using waste material and is an invaluable source of soil fertility.

Materials for composting

- soft vegetable matter is high in readily available plant nutrients, especially nitrogen, and decomposes quickly.
Animal manures often contain high levels of urine → nitrogen
- woody material, such as shrub prunings, straw etc., should not be burnt as the humus in the soil comes largely from this material.
Woody vegetable matter takes longer to decompose – shred if possible

Good composting requires a balance between carbon (woody material) and nitrogen (soft growth) to produce rapid decomposition.,

Aim for approximately a 50:50 balance between 'browns' and 'greens'

Ideal ratio	Carbon 30		Nitrogen 1
<u>Materials high in carbon are :</u>	40-80	:	1
leaves		:	
straw	80	:	1
sawdust	130-500	:	1
<u>Materials high in nitrogen are:</u>			
food scraps	15	:	1
fresh grass mowings	19	:	1

Conditions required for composting

i.e. conditions for beneficial bacteria

- water moist, not waterlogged (60-80%)
- oxygen good drainage → good aeration
- accelerators high in nitrogen to encourage bacteria
- sufficient volume to generate heat (1m³)
- insulation to protect heap from extreme weather to conserve heat

Aerobic compost heaps ('hot')

Bacterial activity, requiring oxygen

- these need to be built all in one go
- decomposition is rapid, and compost can be ready in 3 months if turned regularly to add more air (oxygen)
- high temperatures kill off some weeds, pests and diseases

Anaerobic compost heaps (cold)

Largely fungal activity, not requiring oxygen

- these are built up slowly, as material becomes available
- the rate of decomposition is slower, so may take 1 year to produce 'compost'
- without heat weeds, pests and disease will not be killed

Making leaf mould

What to use

All leaves will eventually rot down into leaf mould, a wonderful soil conditioner. Oak, beech, hornbeam, hazel, birch and sycamore usually break down within 2 years and produce a good-quality product. Horse chestnut and sweet chestnut need to be shredded before adding to the pile.

Evergreens such as holly and laurel are better shredded and added to the compost heap, but only in small quantities, otherwise send to municipal recycling.

Conifer needles are best sent for municipal recycling.

Pine needles produce acidic leaf mould, place in a separate pile and use to mulch ericaceous plants when rotted.

Moisture is the key to success, as this is a fungal process.

Container

Make a square frame from chicken wire, supported at the corners with stakes or bamboo canes. Add leaves, remembering to fill the corners.

Moisten the heap periodically if it becomes dry.

Smaller quantities of leaves can be placed in black bin liners, loosely tied and then pierced with a garden fork; ensure the leaves are moist.

End product

Usable leaf mould will contain far fewer nutrients than garden compost, as trees take back most nutrients before leaf fall, will still be beneficial to the structure and moisture-holding ability of your soil.

Leaf mould finally decomposes to humus, which increases the cation exchange capacity (CEC) of the soil. In layman's terms this means that more nutrients are retained within the soil and fewer lost through leaching.

Tessa is a professional gardener. An RHS qualified tutor, lecturer at Coolings garden centre and all round nice guy!

Coolings (for those that don't know)
www.coolings.co.uk. Great plants
great courses.

Supplied by Lesley plot F2.